EFFECTS OF INFORMATIONAL AND EMOTIONAL SUPPORT ON THE ANXIETY AND SATISFACTION OF ACCIDENTAL PATIENTS' RELATIVES DURING THE WAITING PERIOD AT THE ACCIDENT AND EMERGENCY DEPARTMENT

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ABSTRACT

This quasi-experimental research examined the effects of informational and emotional support on the anxiety and satisfaction of relatives of patients who had had an accident, during the waiting period at the accident and emergency department. The conceptual framework was based on the stress, appraisal and coping theory of Lazarus and Folkman. Sixty relatives of the patients involved in accidents, who were waiting for the patients during the emergency treatment period at the accident and emergency department of Somdejphraputthalerdlha Hospital, during the period April-August 2003, were selected by purposive sampling technique. The relatives were randomly divided into control and experimental groups daily, with 30 relatives in each group. The relatives in the control group received routine nursing care provided by the staff nurses, while the relatives in the experimental group received routine nursing care plus nursing intervention according to the informational and emotional support guidelines provided by the researcher. The relatives in both groups were asked to evaluate their anxiety using the Numeric Scale of Anxiety and answer the satisfaction questionnaire. Data were analyzed using the computer package for Windows Program.

The results of this study revealed that the post-test anxiety scores of the relatives in both groups were statistically significantly lower than the pre-test scores (control group $p < .01$; experimental group $p < .001$). The mean of differences in anxiety scores for the pre- and post-test of the relatives between the two groups were not statistically significantly different ($p > .05$). The satisfaction mean score of the relatives in the experimental group was statistically significantly higher than the control group ($p < .001$).

These findings provide information that can be used as a guideline for improving the nursing care of relatives during the waiting period at the accident and emergency department, to promote the satisfaction with nursing care and the quality of healthcare service.

KEY WORDS: INFORMATIONAL AND EMOTIONAL SUPPORT /
ANXIETY / SATISFACTION / RELATIVE /
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ผลของการสนับสนุนด้านข้อมูลและอารมณ์ต่อความวิตกกังวลและความพึงพอใจของญาติผู้ป่วยอุบัติเหตุขณะรอผู้ป่วยรับการรักษาที่แผนกอุบัติเหตุและฉุกเฉิน

(EFFECTS OF INFORMATIONAL AND EMOTIONAL SUPPORT ON THE ANXIETY AND SATISFACTION OF ACCIDENTAL PATIENTS' RELATIVES DURING THE WAITING PERIOD AT THE ACCIDENT AND EMERGENCY DEPARTMENT)

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บทคัดย่อ

การวิจัยกึ่งทดลองครั้งนี้มีวัตถุประสงค์เพื่อศึกษาผลของการสนับสนุนด้านข้อมูลและอารมณ์ต่อความวิตกกังวลและความพึงพอใจของญาติผู้ป่วยอุบัติเหตุขณะรอผู้ป่วยรับการรักษาที่แผนกอุบัติเหตุและฉุกเฉิน โดยใช้ทฤษฎีความเครียดของลาซารัสและโฟล์คแมนเป็นกรอบแนวคิดในการศึกษา กลุ่มตัวอย่างเป็นญาติของผู้ป่วยอุบัติเหตุขณะรอผู้ป่วยรับการรักษาที่แผนกอุบัติเหตุและฉุกเฉิน โรงพยาบาลสมเด็จพระพุทธเลิศหล้า ระหว่าง เดือนเมษายน ถึง สิงหาคม 2546 จำนวน 60 ราย เลือกกลุ่มตัวอย่างแบบเฉพาะเจาะจง ตามคุณสมบัติที่กำหนดไว้และสุ่มแบ่งกลุ่มเป็นกลุ่มควบคุมและกลุ่มทดลอง กลุ่มละ 30 ราย ญาติผู้ป่วยในกลุ่มควบคุมได้รับการพยาบาลตามปกติ ส่วนญาติผู้ป่วยในกลุ่มทดลองได้รับการพยาบาลตามปกติร่วมกับการสนับสนุนด้านข้อมูลและอารมณ์จากผู้วิจัยตามรูปแบบที่สร้างขึ้น เก็บรวบรวมข้อมูลโดยให้ญาติผู้ป่วยตอบแบบวัดความวิตกกังวล (Numeric Scale of Anxiety) และตอบแบบวัดความพึงพอใจของญาติผู้ป่วยต่อการพยาบาลที่ได้รับ วิเคราะห์ข้อมูลโดยใช้โปรแกรมสำเร็จรูปทางสถิติ

ผลการศึกษา พบว่า ความวิตกกังวลของญาติผู้ป่วยภายหลังได้รับการพยาบาลทั้งในกลุ่มควบคุมและกลุ่มทดลอง ต่ำกว่าก่อนได้รับการพยาบาลอย่างมีนัยสำคัญทางสถิติที่ระดับ .01 และ .001 ตามลำดับ ค่าเฉลี่ยของความต่างของคะแนนความวิตกกังวลก่อนและหลังการทดลองของญาติผู้ป่วยในกลุ่มทดลองแตกต่างจากญาติผู้ป่วยในกลุ่มควบคุมอย่างไม่มีนัยสำคัญทางสถิติที่ระดับ.05 และเมื่อเปรียบเทียบความพึงพอใจต่อการพยาบาลที่ได้รับ พบว่า ญาติผู้ป่วยในกลุ่มทดลองมีค่าเฉลี่ยของคะแนนความพึงพอใจต่อการพยาบาลที่ได้รับสูงกว่าญาติผู้ป่วยในกลุ่มควบคุมอย่างมีนัยสำคัญทางสถิติที่ระดับ .001

ผลการศึกษาครั้งนี้สามารถนำไปใช้เป็นแนวทางในการพัฒนาการดูแลญาติผู้ป่วยขณะรอผู้ป่วยรับการรักษาที่แผนกอุบัติเหตุและฉุกเฉิน เพื่อเพิ่มความพึงพอใจในการพยาบาลที่ญาติผู้ป่วยได้รับและส่งเสริมคุณภาพการบริการในภาพรวมที่ดียิ่งขึ้น

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CHAPTER 1
INTRODUCTION

Background and Rationale

Injury caused by an accident is a crisis event for people because it is unpleasant and occurs suddenly and unexpectedly. It is a leading cause of death among young adults and leads to permanent disabilities in many patients (Champion, et al., 1990: 1356; Laskowski-Jones, 1999: 1088; Van Der Sluis, et al., 1995: 681).

The impact of accidents is disruptive not only to the person who is injured, but also to the family as a whole, because the family is a dynamic system. Therefore, any changes in a family member affects the other members (Doherty, et al., 1999: 55; Gaglione, 1984: 427). The relatives have to face many problems threatening the patient, who is their loved one. It also precipitates stress for relatives, especially when they have just confronted the event. Normally, people are not prepared for the emergency situation. Thus, they think about the pain, suffering and disability, or death of the victim, especially if the patient needs to attend a hospital emergency unit.

When a patient who has suffered an accident is taken to the hospital, the unfamiliar environment of the emergency room usually distresses the relatives. It is a closed room that separates the patients for rapid first-aid. The relatives must wait outside without seeing the patient for some time. Sometimes all they can see is the hurried manner of the healthcare providers. Lack of interaction between nurses and relatives usually occurs. All of these factors contribute to increasing the anxiety of the relatives. They may imagine that the patient is comatose. They feel extreme levels of uncertainty and fear any danger befalling the patient. For these reasons, during the first exposure to the accident and emergency department, relatives may experience feelings of fear, shock, disbelief, and anxiety (Hallgrimsdottir, 2000: 611; Halm, 1990: 62; Washington, 2001: 30; Wichittra Kusum, B.E. 2544: 22).

The relatives of the patients who have experienced a sudden life-threatening injury are sometimes unable to manage or deal with the changes in responsibility caused by the crisis, and find that previously effective methods for solving the problems they are facing are now ineffective (Aguilera, 1994: 1; McQuay, 1995: 541). They often need help or support from other people. The results of several studies have shown that the nurse is the person who is in close contact with the patient, and provides care to meet the relative's needs (Aree Boonbarwornrattanakul, B.E. 2538; Chuthamas Panchavisut, et al., B.E. 2535; Leske, 1998: 182; Niphawan Samartkit & Junporn Yodying, B.E. 2541: 41; Redley, et al., 2003a: 614; Uraiporn Phongpatanawut, B.E. 2532; Woolley, 1990: 1405).

Nowadays, healthcare providers in critical care are increasingly concerned about taking care of the family. However, there are limitations in formal interaction with relatives in crisis situations, especially in the accident and emergency department. Taking care of the patient is the first priority, and the relatives are mostly overlooked (Halm, 1990: 63). Many studies have been conducted into the needs of relatives in crisis situations. It has been found that, in a crisis situation, relatives need to see the patient within the first hour of arrival and know about the status of the patient. They need to talk to the patient's doctor and get genuine and honest answers. They also need to be reassured that the best care is being given to the patient while they are waiting outside the emergency room. Moreover, they need to know what the doctor or nurse is doing for the patient, why it is being done, and how it is being done. The relatives need to participate in taking care of the patient and also need to receive comfort and support themselves, especially emotional support (Campbell, et al., 1995: 377; Gaglione, 1984: 428; Picton, 1995 cited by Hallgrimsdottir, 2000: 612; Redley, et al., 2003a: 606-615; Washington, 2001: 30). If all these needs of relatives are met, they will better understand the situation and can appraise it realistically. Thus, their anxiety, confusion, and uncertainty will decrease.

In the literature review of nursing care for decreasing the anxiety of relatives in crisis situations, it was found that many forms of informational and emotional support could help to moderate the anxiety and fear of relatives (Kanungnit Bureetes, B.E. 2540; Kathol, 1984; Kongsuwan, 2001; Leske, 1995; Leske, 1996; Marayart Vacharakiat, B.E. 2536; Rattana Yooplao, B.E. 2543). Informational support helps the

relatives understand and accept the patient's situation and its results, while emotional support makes the relatives feel cared for by the healthcare providers. These types of support help relatives feel better, and they come to believe, trust and feel impressed by the healthcare provider. Furthermore, support helps them control themselves during the crisis. However, the interventions in previous studies were usually designed for reducing the relatives' anxiety in other situations, such as the critical illness of patients in a critical care unit or during the perioperative period. No studies were found that focused on the relatives of patients who had an accident.

An assured model of nursing intervention to meet the needs of relatives at the accident and emergency department has not been found. It varies between healthcare providers. Most attention and time are paid to the condition of the patient, so that the needs of relatives may not be addressed, especially information about the patient. They may not know about any change in, or progress of, the patient. Thus, the most numerous complaints by the relatives of emergency department patients are about lack of support by emergency department staff and lack of information while they are waiting (Cross, et al., 1996 cited by Washington, 2001: 30). Their anxiety increase and they may feel unimpressed or distrustful of the hospital staff, leading to noncompliance with the treatment regimen, anger, and dissatisfaction with the quality of the healthcare service (Leske, 1998: 129-139). This can lead to important problems for the hospital, because the stress on health care service among healthcare customers today has changed. Service quality on professional standard is the customer's need or expectation. If the healthcare provider can provide services or care that meet customers' needs or expectations, the customer will feel impressed and satisfied with the healthcare services. It is critical for the success of the healthcare provider (Hiidenhovi, et al., 2001: 697). Thus, satisfaction has been used as an indicator of quality of care.

For these reasons, the researcher was interested to develop an informational and emotional support program for decreasing the anxiety and increasing the satisfaction of relatives of a patient who has had an accident, during the waiting period at the accident and emergency department. This program would emphasize satisfaction of the needs of relatives in a crisis, and help them to adjust to and face the crisis situation appropriately. The results of this study may provide guidelines for emergency nurses in taking effective nursing care of the relatives of accident patients.

Conceptual Framework

The conceptual framework of this study was based on the stress, appraisal and coping theory of Lazarus and Folkman (1984). According to this theory, stress is a relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being. Factors influencing appraisal are from both the person and situation. Important personal factors are commitments and beliefs. Situational factors are novelty, predictability, uncertainty about events, temporal factors, and ambiguity. The stress appraisal is made up of three types: harm/loss, threat, and challenge. Harm/loss is defined as some damage to the person that has already been sustained, for example, an incapacitating injury or illness, or loss of a loved or valued person. Threat is concerned with harm or loss that has not yet taken place, but is anticipated. When harm/loss occurs, it is always fused with threat, because every loss connotes negative implications for the future. Challenge is called for the mobilization of coping effort. It has much in common with threat. If people appraise their event as a challenge, they will be characterized by pleasurable emotions, such as eagerness, excitement and exhilaration, whereas if they appraise their event as a threat or harm/loss, they will be characterized by negative emotions, such as fear, anxiety, and anger.

When stress occurs, people manage the stressful situation by using coping strategies, i.e. problem-focused coping and emotion-focused coping, and the way people cope also depends on the resources that are available to them. Lazarus & Folkman categorized coping resources as health and energy, positive beliefs, problem-solving skills, social skills, material resources, and social support.

Social support refers to helpful acts performed for an individual by significant others, such as family members, friends, co-workers, relatives, and neighbors (Thoits, 1985: 53). People will have a better adaptive outcome if they receive, or believe that they will receive, social support when it is needed (Lazarus & Folkman, 1984: 250). Schaefer, Coyne and Lazarus distinguished three types of social support, i.e. emotional, tangible, and informational support (Schaefer, Coyne & Lazarus, 1982 cited by Lazarus and Folkman, 1984: 250). Emotional support includes attachment, reassurance, and being able to rely on and confide in a person. Tangible support involves direct aid, such as loans or gifts and services (for the example, taking care of

someone who is ill, doing a job, etc.), while informational support is providing information and advice and giving feedback about how a person is doing.

Through this coping process, an adaptive outcome will occur. It is seen in immediate effects, or short-term adaptive outcome, and long-term effects, or long-term adaptive outcome. The three major long-term adaptive outcomes are social functioning, morale, and somatic health. The counterparts in short-term outcomes are effective social functioning to manage the demands of a specific encounter, the positive and negative effects on morale a person experiences during and after an encounter, and somatic health involves the physiological changes that are generated by a stressful encounter (Lazarus & Folkman, 1984: 182-183).

Applying this theory in the current study, patient's injury from an accident was a situation the relatives appraised as stressful, because it happened suddenly and unexpectedly. The relatives had never prepared for the event. Furthermore, when they arrived at the accident and emergency department, it was an unfamiliar environment in which the patient was separated from them. The relatives could not immediately see the patient. Relatives usually think that the accident is a serious injury, which endangers and threatens the life of the patient, who is their loved one. The relatives feel uncertain about the welfare of the patient, so that the stress appraisal of the relatives is harm/loss, characterized by anxiety about the patient. Then they seek ways to deal with their anxiety. An informational and emotional support program, which was developed for this study, may be another process relatives can use to deal with their anxiety. It is considered a social support coping resource, according to Lazarus and Folkman. The program will help relatives in their coping process, resulting in a better short-term adaptive outcome for their morale.

The motivation for this study is based on a belief that informational and emotional support can help decrease relatives' anxiety and also promote relatives' satisfaction with nursing care. This conceptual framework is shown in Figure 1.

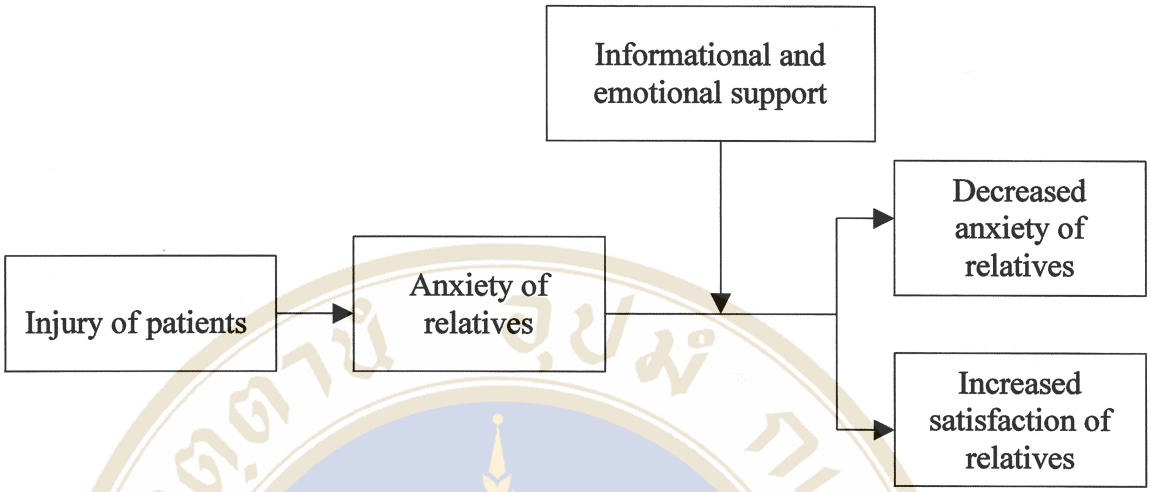


Figure 1 : Conceptual framework of this study

Research Question

Is the informational and emotional support program effective in reducing the anxiety, and increasing the satisfaction, of relatives of patients who have had an accident, during the waiting period in the accident and emergency department ?

Research Objectives

1. To compare the pre-test and post-test anxiety scores of relatives, within the group who received informational and emotional support, and within the group who received routine nursing care.

2. To compare the mean of different in anxiety scores for the pre- and post-test, between the group of relatives who received informational and emotional support, and the group of relatives who did not.

3. To compare the satisfaction mean scores, between the group of relatives who received informational and emotional support, and the group of relatives who did not.

Research Hypotheses

1. The post-test anxiety scores of the relatives who received informational and emotional support will be lower than the pre-test anxiety scores.

2. The relatives who received informational and emotional support will have a higher mean of difference in anxiety scores for the pre- and post-test, than the relatives who did not receive informational and emotional support.

3. The relatives who received informational and emotional support will have a higher satisfaction mean score than the relatives who did not receive informational and emotional support.

Scope of the Study

This study focuses on the effects of informational and emotional support on the anxiety and satisfaction of relatives of patients who have had an accident, during waiting period at the accident and emergency department. The subjects were the relatives of patients who had had an accident who were waiting for the patient during the emergency treatment period at the accident and emergency department of Somdejphraputthalerdlha Hospital, Thailand, during the period April-August 2003.

Expected Outcomes and Benefits

1. This study should serve as a guideline for nursing staffs to demonstrate their concern and provide care, to reduce the anxiety of relatives of patients who have had an accident, while the relatives are waiting in the emergency treatment period at the accident and emergency department.

2. This study should serve as a guideline for further research focusing on the effects of the informational and emotional support program on clients and their relatives in other crisis situations.

Definition of Terms

The Informational and Emotional Support Program refers to a set of informational and emotional support strategies developed and provided by the researcher to support the relatives of patients who have had an accident, during the waiting period in the accident and emergency department. Informational support includes providing information about the patient and advising the relatives, while emotional support includes attachment, reassurance, and being able to rely on and confide in a person.

Routine nursing care refers to normal activities or nursing care that emergency nurses provide for relatives during the waiting period in the accident and emergency department. It consists of providing information and advice, which vary according to the situation.

Anxiety refers to a subjective feeling of apprehension, uneasiness, uncertainty, or dread of the relatives at the accident and emergency department, resulting from their appraisal the situation of the patient during the time of emergency treatment period at the accident and emergency department. It was measured by Numeric Scale of Anxiety. Possible scores ranged from 0-100. Higher scores reflected the relative's higher anxiety.

Satisfaction refers to a pleasurable feeling by the relatives in response to the services that they receive from the healthcare provider during the waiting period in the accident and emergency department. It was measured by the satisfaction questionnaire developed by the researcher. Possible total scores ranged from 0-80, with higher respondent scores indicating higher levels of satisfaction.

Waiting period refers to the time in the accident and emergency department when emergency treatment is provided for the patient. It starts when the patient is taken into the emergency room and ends when the patient is discharged from the department.

CHAPTER 2
LITERATURE REVIEW

The purpose of this quasi-experimental research was to determine the effects of informational and emotional support on the anxiety and satisfaction of relatives of accident patients during the waiting period at the accident and emergency department. The literature review is presented in following sequence:

- Effects of the accident on the family
- Crisis of the family
- Concept of anxiety
- Anxiety of the relatives of the patient with accident at the accident and emergency department
- Interventions for reducing the relatives' anxiety at the accident and emergency department
- Relatives' satisfaction with nursing care

Effects of the Accident on the Family

An accident is "an event, independence of the will of man, caused by a quickly action extraneous manifesting itself by injury to body or mind" (World Health Organization cited by Medical Institute of Accident and Disaster, B.E. 2544: 3).

In the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10), type of accident was divided into two groups: transport accident and other external causes of accidental injury, such as falling, drowning, electric shock, burn, animal bite, injury by enemy, etc. (Medical Institute of Accident and Disaster, B.E. 2544: 3).

Traumatic injury is the main cause of death of young people. It is the number one cause of death for persons under 45 years of age and is the fourth leading cause of death in the United States overall (U.S. Bureau of the Census, 1996 cited by Laskowski-Jones, 1999: 1088). The highest risk group statistically is males

aged 15-24 years (National Safety Council, 1996 cited by Laskowski-Jones, 1999: 1088). A report from Thailand also found that accident was the second cause of death of Thai persons in the year 1999, and transport accident was the main cause. The prevalence was higher in males than females (ratio 4 : 1) and the age groups were mostly 20-24 years and 25-29 years, respectively (Medical Institute of Accident and Disaster, B.E. 2544).

Death is only one measure of trauma's impact; permanent disability and varying degrees of physical impairment are other potential outcomes (Laskowski-Jones, 1999: 1088). However, the term of mortality is well known, there is little information on the extent and severity of permanent disabilities resulting from trauma (van der Sluis, et al., 1995: 681). If the victims survive, they may never be the same. Trauma changes their lives. All victims bear emotional scars. Many bear physical scars and worse as they face a life changed by disfigurement, paralysis, or loss of function (for example, blindness, cognitive impairment). The patient may face a future of dependence on others, which means the family faces a future of being depended upon (Solursh, 1990: 159).

Although the patient was obviously identified as the major victim of a traumatic event, families are victims too. They are not physically shattered like the body on the stretcher, but they can be emotionally shattered, psychologically shattered, and their lives can be shattered, as well (Solursh, 1990: 159), because critical injury and sudden hospitalization often give the family little or no opportunity to prepare themselves emotionally. They may have limited or no experience of such an event. Some of the problems the family may experience are an uncertain patient outcome, fear of death, role changes, financial concerns and an unfamiliar environment (Hallgrimsdottir, 2000: 611). All of these may upset the equilibrium of the family system because the maximum stress is being placed on them. They will exhibit behaviors that are not characteristic of them in normal circumstances. For example, the initial response of family members to the news of a traumatic event is shock, disbelief, numbness, and a sense of unreality or depersonalization (Halm, 1990: 62; Solursh, 1990: 156). The whole situation is obviously worse if more than one family member is hurt and it is inevitably an event of profound significance and meaning to everyone involved (Solursh, 1990: 156). Families may be unprepared to deal with the anxiety and tension

created by the stressful and threatening illness event. Therefore, a traumatic event may precipitate a state of crisis for the patient's family members.

Crisis of the Family

Caplan defined crisis as an upset in a steady state. It occurs when a person faces an obstacle to important life goals that is, for a time, insurmountable through the utilization of customary methods of problem-solving. A period of disorganization ensues, a period of upset, during which many different abortive attempts at solution are made (Caplan, 1961: 18). In essence, the individual is viewed as living in a state of emotional equilibrium, with the goal always to return to or to maintain that state. When customary problem-solving techniques cannot be used to meet the daily problems of living, the balance or equilibrium is upset. There is a rise in inner tension, there are signs of anxiety, and there is disorganization of function, resulting in a period of emotional upset (Aguilera, 1994: 5).

Types of Crisis

The events in our lives that may generate crises can be classified into two categories: situational crises and maturational crises (Hickey, 1993: 92).

Situational crises result from stressful events that are unexpected, occur without warning, and threaten the individual's equilibrium. Accidents, physical illness, bankruptcy, and divorce are examples of this crisis. They require immediate adjustment responses to restore equilibrium.

Maturational crises are considered normal processes of growth and development and occur at specific times in life. Examples are birth, marriage, adolescence, and death. Maturational crises usually evolve over time and allow gradual adjustment by the individual over time. Although usually not disrupted, the individual's equilibrium is also vulnerable during maturational crises.

Family's Response to Crisis

The relatives of injured accident patients usually experience an acute psychic shock when confronted with the sudden event. In an attempt to deal with their stress, the relatives often express many characteristics that may be different in each

individual. However, in a study of families in sudden crisis by Epperson (1977), it was found that the process that families in the acute crisis stage undergo when the family unit has been disrupted because of traumatic, life-threatening injuries to one of their family members, appear to go through six phases before they can reorganize and restore equilibrium. Phase one, *high anxiety*, is most often the phase families go through first. It is characterized by acute physical anxiety, such as physical agitation, high-pitched voice, fainting, tightened muscles, and gastrointestinal upset. This phase may last from a few minutes to several hours. *Denial* is exhibited in phase two and it seems to act as a coping behavior that softens any bad news the family may receive. This phase usually lasts until the family sees the patient. The third phase comprises *anger* on the part of families. It appears in many different shapes and dimensions. During this phase, anger can be directed toward oneself or another family member in an attempt to place blame. Sometimes, it can be directed toward others, such as the patient, physicians and nursing staff, the police, and the many circumstances that may have contributed to the tragedy, such as high speed or lenient drunk-driving laws. In the fourth phase, *remorse* is expressed by the family. It includes both *guilt and sorrow*. Families feel guilty about the part they may have played in contributing to the event and feel sorrowful not only that the event occurred, but that they did not do something to prevent it. *Grief* is experienced in the fifth phase when families sense that they almost lost their family member, which may result from critical illness. In the last phase, *reconciliation* takes place after families have gone through the earlier phases and are ready to cope with and adapt to the stress (Epperson, 1977: 265-273).

Factors Affecting the Family's Vulnerability to Crisis

A family's vulnerability to crisis is determined by three factors: the family's perception of the event, their available situational supports, and the type and availability of their coping mechanisms (Aguilera & Messick, 1982 cited by Hickey, 1993: 93).

Perception of the event. If the event is perceived realistically, there is a realistic awareness of it, and the associated feelings of stress are usually appropriate. Coping behaviors and problem-solving strategies will probably ameliorate the effect of the threat. If the event is perceived unrealistically, however, coping and problem-

solving techniques will probably be ineffective. Critical care nurses have a responsibility to provide family members with the information necessary to understand the situation at hand realistically.

Situational supports. Throughout life, individuals and families use a variety of situational supports to maintain or restore equilibrium. Situational supports refer to those persons, places, or things in the environment that assist individuals or families to solve problems. The availability and quality of situational supports, as well as the ways in which individuals use them during stressful events, will affect how well individuals or families cope during a crisis. Critical care nurses must assist family members to find and utilize adequate situational supports and coping behaviors during crises.

Coping mechanisms differ in each person and family. Most individuals and families have a limited repertoire of coping behaviors to draw on during stressful situations. If a coping behavior that had always been successful in the past is no longer effective, new coping behaviors will need to be utilized to thwart the crisis. Equilibrium is greatly threatened when the coping behavior employed is unsuccessful in helping individuals deal with the crisis.

In summary, an accident or a sudden trauma is a situational crisis that may generate a crisis for the relatives of the patient. However, not all individuals faced with the same event will be in crisis; it depends on their perception of the event, the available situational supports and the type and availability of coping mechanisms. However, the initial response to the event of the relatives is often high anxiety. The relatives usually express the characteristics of physical anxiety caused by their feelings of anxiety about the patient, such as physical agitation, high-pitched voice and fainting.

Concept of Anxiety

Anxiety is an emotional response to a stressful situation (Lazarus & Folkman, 1984: 33; Varcarolis, 1998: 343). The definition was defined or explained by many authors.

Spielberger, et al. (1983) distinguished anxiety into state anxiety and trait anxiety and defined state anxiety as a response to a particular situation or set of circumstances while trait anxiety was an intrinsic characteristic of the person.

Kim, et al. (1984: 9) defined anxiety as a vague and uneasy feeling, the source of which is often nonspecific or unknown to the individual.

Carpenito (1987: 120) explained anxiety as a state in which the individual experiences feelings of uneasiness (apprehension) and activation of the autonomic nervous system in response to a vague, nonspecific threat.

Wilson-Barnett & Batehup (1988 cited by Shuldham, et al., 1995: 88) argued that anxiety may be a temporary response to a situation that is new and possibly unclear.

Shives (1998: 283) defined anxiety as a feeling of uncertainty, uneasiness, apprehension, or tension that a person experiences in response to an unknown object or situation.

Varcarolis (1998: 343) stated that anxiety can be defined as a feeling of apprehension, uneasiness, uncertainty, or dread, resulting from a real or perceived threat, the actual source of which is unknown or unrecognized.

Fortinash & Holoday-Worret (1999: 22) explained anxiety as a vague, subjective, nonspecific feeling of uneasiness, apprehension, tension, insecurity, and sometimes dread or impending doom. It is a normal alerting and protective response to threats to a person's biologic, psychological, or social integrity, esteem, identity, or status. The experience of anxiety is universal and an integral part of human existence; everyone becomes anxious at some time.

According to the definitions, anxiety is concerned with a person's feeling of uncertainty, uneasiness, apprehension, or tension. It is a subjective experience and the source of it is often nonspecific or unknown to the individual. However, it may be influenced by many risk factors. Kim et al. (1984) listed the etiology of potential causative factors related to anxiety, including: 1) unconscious conflict about essential values and goals in life, 2) threat to self-concept, 3) threat of death, 4) threat to, or

change in, health status, 5) threat to, or change in, socioeconomic status, 6) threat to, or change in, role functioning, 7) threat to, or change in, environment, 8) threat to, or change in, interaction patterns, 9) situational and maturational crises, 10) interpersonal transmission and contagion, and 11) unmet needs. The intensity of anxiety varies depending on the severity of the threat as perceived by the person and the success or failure of their efforts to cope with their feelings (Carpenito, 1987: 120).

Level of Anxiety

Peplau (1963 cited by Stuart, 1995: 328-329) identified four levels of anxiety and described their effects on the individual:

1. **Mild anxiety** is associated with the tension of day-to-day living. During this stage the person is alert and the perceptual field is increased. The person sees, hears, and grasps more than previously. This kind of anxiety can motivate learning and can produce growth and creativity.

2. **Moderate anxiety:** the person focuses only on immediate concerns, involves the narrowing of the perceptual field as the person sees, hears, and grasps less. The person blocks out selected areas but can attend to more if directed to do so.

3. **Severe anxiety** is marked by a significant reduction in the perceptual field. The person tends to focus on a specific detail and not to think about anything else. All behavior is aimed at relieving anxiety, and much direction is needed to focus on another area.

4. **Panic** is associated with awe, dread, and terror. At this stage, details are blown out of proportion. Because of a complete loss of control, the person is unable to do things even with direction. Panic involves the disorganization of the personality. A person can no longer function as an organized human being. There is increased motor activity, decreased ability to relate to others, distorted perceptions, and loss of rational thought. Panic is a frightening and paralyzing experience. The person in panic is unable to communicate or function effectively. This level of anxiety cannot persist indefinitely because it is incompatible with life. A prolonged period of panic would result in exhaustion and death.

Types of Anxiety

Types of anxiety are described as signal anxiety, anxiety trait, anxiety state, and free-floating anxiety (Shives, 1998: 283).

Signal anxiety is a response to an anticipated event. An example of this type of anxiety is a mother who normally is relaxed but exhibits tachycardia, dizziness, and insomnia when her child attends school for the first time.

Anxiety trait is a component of personality that has been present over a long period of time and is measurable by observing the person's physiologic, emotional, and cognitive behavior. The person who responds to various non-stressful situations with anxiety is said to have an anxiety trait. For example, a 25-year-old secretary frequently complains of blurred vision, dizziness, head aches, and insomnia in a relatively stress-free job.

Anxiety state occurs as the result of a stressful situation in which the person loses control of her or his emotions. An example is a mother who is told her son has been injured in a football game and has been taken to the emergency room, she may exhibit an anxiety state by becoming hysterical, complaining of tightness in the chest, and insisting on seeing her injured son.

Free-floating anxiety is anxiety that is always present and accompanied by a feeling of dread. The person may exhibit ritualistic and avoidance behavior (phobic behavior). An example of this anxiety type is a woman who is unable to sleep at night because she is certain someone will break into her home, who goes through the ritualistic behavior of checking all the windows and doors several times. She also avoids going out after dark because she fears coming back to a dark, empty home.

Responses to Anxiety

Anxiety can be expressed directly through physiological and behavioral changes or indirectly through the formation of symptoms or coping mechanisms developed as a defense against anxiety. The nature of the changes or behaviors displayed by the patient depends on the level of anxiety. The intensity will increase with increasing anxiety.

Table 1 Responses to Anxiety

Anxiety Level	Physiologic	Cognitive/Perceptual	Emotional/Behavioral
Mild	Vital signs normal. Minimal muscle tension. Pupils normal, constricted.	Perceptual field is broad. Awareness of multiple environmental and internal stimuli. Thoughts may be random but controlled.	Feelings of relative comfort and safety. Relaxed, calm appearance and voice. Performance is automatic; habitual behaviors occur here.
Moderate	Vital signs normal or slightly elevated. Tension experienced; may be uncomfortable or pleasurable (labeled as "tense" or "excited").	Alert; perception narrowed, focused. Optimum state for problem solving and learning. Attentive.	Feelings of readiness and challenge, energized. Engage in competitive activity and learn new skills. Voice, facial expression interested or concerned.
Severe	Fight or flight response. Autonomic nervous system excessively stimulated (vital signs increased, diaphoresis increased, urinary urgency and frequency, diarrhea, dry mouth, appetite decreased, pupils dilated). Muscles rigid, tense. Senses affected; hearing decreased, pain sensation decreased.	Perceptual field greatly narrowed. Problem solving difficult. Selective attention (focus on one detail). Selective inattention (block out threatening stimuli). Distortion of time (things seem faster or slower than actual). Dissociative tendencies; vigilambulism (automatic behavior).	Feels threatened; startles with new stimuli; feels on "overload". Activity may increase or decrease (may pace, run away, wring hands, moan, shake, stutter, become very disorganized, or withdrawn, freeze in position/unable to move). May seem and feel depressed. Demonstrates denial; may complain of aches or pains; may be agitated or irritable. Need for space increased. Eyes may dart around room, or gaze may be fixed. May close eyes to shut out environment.

Table 1 Responses to Anxiety (Continued)

Anxiety Level	Physiologic	Cognitive/Perceptual	Emotional/Behavioral
Panic	Above symptoms escalate until sympathetic nervous system release occurs. Person may become pale, blood pressure decreases, hypotension. Muscle coordination poor. Pain, hearing sensations minimal.	Perception totally scattered or closed. Unable to take in stimuli. Problem solving and logical thinking highly improbable. Perception of unreality about self, environment, or event. Dissociation may occur.	Feels helpless with total loss of control. May be angry, terrified; may become combative or totally withdrawn, cry, run. Completely disorganized. Behavior is usually extremely active or inactive.

Fortinash & Holoday-Worret,1999: 23

Assessment of Anxiety

Several methods can be used to assess anxiety. Assessment may rely on listening and talking to patients, questioning, and discussion through interview, observation or the use of tools. According to the response to anxiety, it can be expressed through physiological, behavioral, and psychological changes. Thus the anxiety can be assessed by using all of these changes (Shuldham, et al., 1995: 87-93).

Physiological assessment: a range that has been used to assess anxiety, including heart rate and blood pressure, plasma and urinary catecholamines, plasma cortisol and galvanic skin response.

Behavioral assessment: five characteristics that were identified by the patients in the study of Young (1986) as being critical indicators of anxiety were difficulty sleeping, fatigue/weakness, body ache and pain, frequency of micturition, and restlessness. Besides, the result of the study of Shuldham, et al. (1995) suggested that there were six characteristics adequately discriminating anxious subjects. These were sweating, faintness, a tendency to blame others, continual review of things in their mind, focus on self, and a lack of self-confidence.

Psychological assessment: there are many psychological tools to measure anxiety. Examples include the state trait anxiety inventory (STAI), the hospital anxiety and depression scale (HAD), the graphic anxiety scale (GAS), the anxiety defining characteristics tool (ADCT), and the linear analog scale (LAS) or visual analog scale (VAS).

The state trait anxiety inventory (STAI) was developed by Spielberger and colleague. It is comprised of two parts, to measure state and trait anxiety, respectively. It can be used first as a self-completion questionnaire, asking respondents to indicate from a choice of four responses how they feel at that moment in respect of 20 descriptor statements. Secondly, it asks for their description of how they generally feel. It has been used to assess the anxiety of hospitalized patients and non-clinical subjects. The reliability and validity of this tool are well documented.

The hospital anxiety and depression scale (HAD) was developed by Zigmond & Snaith, in 1983. It was initially validated against formal psychiatric interviews with hospital out-patients. It is comprised of seven items each for anxiety and depression. These are based on the psychic symptoms of anxiety and depression and not on those found in emotional and physical disorders. Each response is weighted with a score from 0 to 3. A range of responses appropriate to each statement is given and the respondent is asked about how he or she has felt over the "last few days"

The graphic anxiety scale (GAS) was developed by Lo Biondo Wood & Haver, in 1986. It asks the patient to rate the amount of anxiety they are experiencing "right now" on the scale that includes calm, slightly anxious, moderately anxious, very anxious, and extremely anxious. Each point is given a numerical value. Young (1986) used this in a sample of 40 patients and found that there was a positive correlation between the GAS and STAI completed by the patient.

The anxiety defining characteristics tool (ADCT) was developed by Young, in 1986. She drew extensively on the defining characteristics for anxiety from the literature and generated a questionnaire comprised of 52 statements and a 4-point Likert scale, with responses ranging from never (0) to frequently (3). Content validity was established by submission of the tool to a panel of 11 nurses involved in research related to the nursing diagnosis of anxiety. This tool was compared with the STAI and GAS in a sample of 40 anxious hospital patients and 39 nurses. A positive correlation

was found between ADCT, STAI, and GAS, individually when completed by both nurse and patient. Young concluded that the defining characteristics of anxiety are representative of anxiety in hospitalized patients, as observed by nurses and patients themselves.

The linear analog scale (LAS) or visual analog scale (VAS) is described as a simple, sensitive and reproducible tool. It has been repeatedly tested and validated. It is reported a scale that is easy to mark and quantify and people are not distracted by a description of the amount of anxiety. This instrument was used in the study by Brown (1990) for measuring the anxiety of patients undergoing surgery for renal calculus disease. In the study by Gaberson (1991), it was also used for measuring the preoperative anxiety of patients waiting for surgery. It is a 10-centimeter horizontal line with defined ends representing the extreme limits of anxiety. The left end of the line was labeled with "no sensation" and the right end of the line was labeled "as much as could possibly be". The subject was instructed to mark the line at the point that represented his or her current level of worry. The score was the distance in centimeters from the left end of the line to the subject's mark. This instrument was reported to be a valid and reliable self-report measure of preoperative anxiety in the study of Vogelsang (Vogelsang, 1988 cited by Gaberson, 1991: 1260). In that study, it was used with forty women admitted for ambulatory surgery. Vogelsang found that the subjects' scores on the Visual Analog Scale (VAS) and the Spielberger State Anxiety Inventory (SAI) were highly correlated ($r = 0.84$). Besides, the subjects reported that the VAS was easier to use than the SAI and the oral directions for the VAS were easy to understand. The subject could respond to this instrument in seconds. Furthermore, this instrument also has the ability to measure an infinite number of points between extreme ends

In this study, the visual analog scale (VAS) was chosen to measure the relatives' anxiety; however it was modified to a numeric scale for more practical use.

Anxiety of the Relatives of the Patient with Accident at the Accident and Emergency Department

The sudden life-threatening illness or injury of a patient, requiring admission to an accident and emergency department, has the potential to precipitate a crisis of the family system because the family is a dynamic system. Any change for one results in changes for all other family members (Gaglione, 1984: 427). The patients enter the hospital with a biological crisis, whereas the relatives enter with a psychological crisis (Hudak & Gallo, 1994 cited by Tracy, et al., 1999: 121).

The relatives have little or no opportunity to prepare themselves emotionally and may have limited or no experience of such an event. Thus, when they first confront the event, among the many problems they may experience are an uncertain patient prognosis and outcome, fear that the patient will experience intense pain, disability or death, role changes, and financial concerns (Hallgrimsdottir, 2000: 611; Halm, 1990: 63). Moreover, in the unfamiliar environment, especially the hectic environment of the accident and emergency department where the patient is the priority, relatives may be present but separated or forgotten in the waiting area. The relatives typically respond with feelings of fear, guilt, and confusion, followed by anxiety (Warren, 1994: 67; Washington, 2001: 30). Many cry and appear nervous and tense, and it is usual for some relatives to faint. When interacting with the nursing staff, some relatives may display a short attention span and repeatedly ask the same questions (Warren, 1994: 67).

They may be ambivalent, on the one hand, they feel relieved that the loved one is receiving the best possible care, but on the other hand, they sense a loss of control over what is happening to their sick family member (Hickey, 1993: 91). Thus, the greatest complaints from the relatives of emergency department patients often include lack of support by the emergency department staff and lack of information while waiting (Cross, et al., 1996 cited by Washington, 2001: 30). This was congruent with the "golden hour of trauma" that applies to the trauma victim and also applies to the relatives: *They need to see him within that first hour of arrival and get information about his status* (Washington, 2001: 30).

Therefore, the crisis of a sudden trauma and subsequent visit to the accident and emergency department creates many anxieties and different needs for the patient's relatives. Especially, if their needs are unmet, their anxiety will increase. This can be

supported by the study about needs and anxiety levels in relatives of intensive care unit patients of Rukholm, et al. (1991) which demonstrated that family needs and situational anxiety were significantly related ($p < 0.0002$).

Family Needs Related to Anxiety

Nursing research on family needs has appeared in the literature since the late 1970s. One of the first studies that identified the needs of relatives of critically ill patients was conducted by Molter, in 1976. This research had a strong influence on further nursing research studies on the needs of family members. In 1983, Molter and Leske developed the Critical Care Family Needs Inventory (CCFNI), which is a structured questionnaire of need statements. It has been used or adapted in many studies investigating the needs of families of critically ill patients (Kleinpell, 1991: 34). However, most of them were studies examining family needs during critical illness in the intensive care unit (ICU) setting (Aree Boonbarwornrattanakul, B.E. 2538; Hickey, 1990; Kleinpell, 1991; Lopez-Fagin, 1995; Niphawan Samartkit & Junporn Yodying, B.E. 2541; Patitas, 2000; Pornthip Kosolwat, B.E. 2541; Thitima Wataneeyawate, et al., B.E., 2541; Uraiporn Phongpatanawut, B.E. 2532).

A limited number of studies have examined family needs during the time prior to arrival in the ICU and the initial time spent in the accident and emergency department.

Campbell, et al. (1995) described the needs of fifty family members of critically ill/injured patients present during the emergent treatment period at the accident and emergency department. The results showed that the top five needs identified as being very important by at least 90% of the sample were: 1) to know the prognosis (94%), 2) to have questions answered honestly (94%), 3) to talk to the doctor (93.8%), 4) to be assured the best care is given (91.8%), and 5) to know the specifics of the condition (90%).

Picton (1995) argued that research-based evidence of family needs for care after critical illness injury, which was drawn from many studies in critical care settings, could make some general points about families' care needs when the patients' conditions are critical. It could be transferred to accident and emergency department settings. The needs identified as important were categorized into five categories: 1) reassurance, 2) proximity, 3) information, 4) convenience, and 5) support. *Reassurance*: is

the need to have questions answered honestly and to be reassured that the best possible care is given to the patient. If this need is met, it can promote accurate assessment of the situation and reduce feelings of uncertainty that can avert a crisis situation. *Proximity*: the relatives need to be physically and emotionally close to the patient. It may comfort the relatives and help them to validate the seriousness of the situation. *Information*: the relatives want to know exactly what is being done for the patient, why it is done, and how. They also need to know about any changes in the patient's condition and their progress. Information tells the relatives what to expect and avoids fantasy taking over. It can decrease stress, anxiety, and disorganization among family members. *Convenience*: this includes comfort and privacy, and facilities such as a telephone and drinks. *Support*: which can be emotional, instrumental, and appraisal support. If extended family members and friends are available they can be important sources of support. However, nursing support is a quality intervention that can create an atmosphere of mutual trust (Picton, 1995 cited by Hallgrimsdottir, 2000: 612).

A pilot study of Redley, et al. (2003a) was conducted to test a tool modified from the CCFNI for use in examining the perceived needs of sixty-one relatives accompanying critically ill patients in the emergency department. The results showed that the relatives perceived meaning as the most important theme, followed by proximity, communication, comfort and support. Their need to know about the expected outcome was classed as very important by over 90% of participants. It was the most important need and the highest ranked for meaning. The need to see the patient as soon as possible was the need reflecting the theme of proximity needs. It was ranked as very important by over 70% of participants. The theme of communication found that need to talk to a doctor was the first ranked by the relatives, followed by the need to have explanations given in understandable terms. However, the need to find out about the patient's condition before being asked to sign papers was also placed as important by 91% of the relatives. The theme of comfort, to be assured of the comfort of the patient was the first ranked need. Finally, for the theme of support, the item "need to have a doctor or nurse meet on arrival at the emergency department" was the first ranked as important or very important by 80% of the relatives.

Besides, Redley, et al. (2003b) reviewed thirty studies of the family needs and interventions to meet the needs of family member who accompanied critically ill persons into the emergency department. Family needs were described based on the categories of the CCFNI: assurance and meaning, proximity, information and communication, support, and comfort.

Assurance and meaning: family needs related to assurance and identifying their own meaning of the situation included: knowing what to expect, alleviation of uncertainty, feeling hopeful for survival or dignified death, honest answer, knowing that staff care about the ill person, and assurances of the best possible care. Besides, family members have also expressed the need to protect and maintain the dignity of the critically-ill patient.

Proximity: the findings suggest that the need to be with or near the patient was most intense during the initial stages of the critical illness and lasted until the patient had shown signs of stabilization, improvement, or recovery. Family member proximity needs incorporated interaction with the patient through touch, talk or intimacy, and included not only being with or seeing the patient, but also being close by and aware of the whereabouts of the patient at all times.

Information and communication: the findings consistently identified the need for information and communication with staff as important to family members. Information needs included: frequent information, specific facts concerning treatment, specific facts regarding progress, exactly what was performed for the patient and why, prompt notification of changes in the patient's condition, what to expect, and anticipatory guidance about appropriate behaviors. Family members in emergency departments have expressed a strong desire to find out about the condition of their ill relatives before being asked to sign papers.

Support: family members did not rank support needs as highly on the CCFNI as they did proximity, assurance and informational needs. Support needs identified in the included studies were to have someone concerned with the relative's health, encouragement to express emotions, directions about what to do at the bedside, explanations of the environment, and a place to be alone. These people commonly sought support from family, friends or neighbors.

Comfort: comfort needs were ranked low in importance by family members when compared with other needs. Those more likely to rate comfort as important were older family members and those with previous experience of critical illness.

In conclusion, the important needs that the relatives of critically ill patient at the accident and emergency department consider to be a priority are the need for information about the patient, followed by emotional and physical needs. Meeting these relatives' needs may help to improve communication and increase understanding about the situation, and finally it may lead to decrease the relatives' anxiety.

Interventions for Reducing the Relatives' Anxiety at the Accident and Emergency Department

A sudden and unexpected injury occurring to a loved one leaves the relatives faced with a stressful situation. They may be immobilized by feeling of fear, shock, disbelief, and anxiety about the patient. The relatives are frequently unable to deal with the stress and change in role responsibility caused by the event. Sometimes they feel vulnerable and helpless. Their responses depend upon previously learned behaviors and previous life experiences (McQuay, 1995: 541). The emergency staff nurses, who work with these patients and relatives, must be skilled and knowledgeable to manage their care effectively and support them during their time of crisis.

Epperson (1977) suggested three things that should be done to help diminish the family's high anxiety when they are faced with a sudden crisis:

1. Give brief and accurate information about the patient. The family is told where the patient is at the moment, such as the admitting area, operating room, or the critical care area. They are also told the general condition of the patient. Besides, the family should be assured that a physician and nurse will be in to give a complete medical report as soon as the process of initial care is completed.

2. Explain the life-saving methods and advanced technology of the hospital. This seems to reassure the family that the patient will be taken care of with modern medicine.

3. Encourage the family members to ventilate their emotions and feelings about the initial impact of the news of this sudden catastrophe.

Blumenfield & Schoeps (1993) proposed some important initial aspects of support for the relatives of the patient at emergency room, as follows:

1. Give realistic information directly to the relatives as it becomes available. The information needs to be short and to the point such as "We don't yet know the full extent of the injuries but we are evaluating".

2. Provide an opportunity for the relatives to see the patient. An actual visit or view of the loved one helps the relatives to clarify the situation. However, telling them beforehand what they will see in the emergency room is necessary and should be specific, such as "There will be blood on his hand" or "There will be a tube in her mouth".

3. Be alert to clues of psychological risk factors of the relatives.

McQuay (1995) suggested guidelines to assist the staff nurse support the relatives of patients who are critically ill, injured, or dead at the time the relatives arrive at the accident and emergency department. They may be summarized as follows: 1) the relatives should be taken to a private area, 2) a nurse should introduce him/herself and identify the relationship to the patient, 3) assess the relatives' knowledge of the situation and speak at their level of understanding, 4) use open-ended statements to establish rapport and develop a relationship with them, 5) tell them about the event chronologically while expressing a caring and concerned manner, 6) pause and allow time for their questions, 7) the relatives also should be brought to see their loved one in the emergency room as soon as possible, 8) the nurse should prepare the relatives before entering the emergency room for what they are going to see and reassure them that they can talk to and touch their loved one, and 9) the nurse has to be aware that the situation may often be overwhelming for the relatives and assist them if they feel sick or faint, such as having a chair and ammonia inhalant at the ready.

Davies (1997) argued that even in a chaotic accident and emergency department, there is much more initial intervention that accident and emergency nurse should perform for mournful relatives when they are faced with sudden bereavement. It can be summed up in four vital tasks: telling, being present, viewing, and following-up.

Telling: the relatives need to know about the patient and every detail of the event. The strategies for communication are extremely important. Body language, the

words used, repetition, time, and privacy, are vital because probably the most important part of telling is to have time for explanation, time for silence, and time to talk about the person they love. These may mediate their grief and make them feel more comfortable.

Being present: the bereaved feel desolated and abandoned and need a constant presence they can relate to and who knows the situation. This active presence helps the relatives to remove the feeling of isolation and reassurance about how to behave and feel. It also gives control to the situation and, at the same time, it gives permission for relatives to be themselves.

Encouraging viewing of the body: seeing is a crucial part of believing. It is a chance for the relatives to see the person they love, often for the last time, to touch them and to say goodbye. Many people have things they wish to say to the patient and by allowing viewing it gives them this opportunity.

Following-up: one of the most valuable interventions for bereaved relatives is follow-up telephone calls. This has resulted in relatives requesting further viewings, coming to dress their children, asking for advice, or offering thanks. Many people feel that doctors are too busy to be asked trivial things and this phone call shows availability.

Davies also stated that no accident and emergency nurse in the course of their busy day could profess to be a bereavement counselor, but, by their actions they can help the process of denial and acceptance, can allow anger and guilt to be expressed and provide information and support. Thus the initial intervention should be taken to help the bereaved begin their grief in a healthy way (Davies, 1997: 181-184).

Besides, the review of studies of the interventions to meet the needs of family members who accompany a critically ill person into the emergency department of Redley, et al. (2003b) summarized many strategies of intervention to meet the relatives' needs, and which may decrease the family's anxiety. The finding was described according to the needs, based on the categories of the CCFNI.

Assurance and meaning: interventions to meet family members' needs for assurance were not clearly described. Some appear self-evident, such as honesty by hospital staff and assurances of best care. Nursing interventions should promote the effectiveness of optimistic coping styles including: assisting people to identify realistic

positive thoughts, acknowledging family strengths, increasing awareness of personal resources, reaffirming family members' ability to manage the situation, reporting signs of patient improvement, assisting people to visualize and verbalize how the situation could have a positive outcome, and identifying realistic short-term goals. Staff interventions to promote a supportive coping style include: sharing with families their perceptions of present and future impact of the critical illness, active listening techniques, prayer, and referral to clergy as appropriate. Finally, strategies to promote palliative coping styles include: identifying and replacing negative thoughts that drive behavior, encourage moderation in food, drink and activity, and distraction or diversional activities while waiting. Several researchers identified seeing the patient as important to facilitate assurance and meaning, avoid fantasy, identify with the patient's experience and gain a sense of their own reality of the experience.

Proximity: further suggested interventions to meet family member needs for proximity include informing family of transfer plans while they are being made and allowing them to wait close by the patient.

Information and communication: suggested interventions to assist staff in meeting family members' needs for information and communication include: initiating early contact with the family to provide information, use of open-ended questions, active listening skills, such as reflecting and clarifying, verifying understanding, honesty and accuracy, offering appropriate and specific explanations, visual aids and repetition, encouraging the family to ask questions, opportunities to ask questions after leaving the emergency department, regular or frequent communication opportunities, and written information to supplement verbal communication.

Support: hospital staff can provide anticipatory guidance about appropriate actions and behaviors, negotiate with family members about their roles in the care process and respect their roles. Other supportive interventions identified include maintaining eye contact, volunteering information, involving the family in decision-making and the presence of a designated staff member to offer assistance.

Comfort: interventions aimed to satisfy comfort needs include acceptance by hospital staff, meeting personal needs, such as those for privacy, food, fluids, and access to bathroom facilities.

Redley, et al. used the finding of this review to develop clinical practice recommendations for the care of family members who accompany a critically ill person into the emergency department (ED) in the phase of family arrival in the ED and the phase of family time in the ED (Redley, et al., 2003b: 95).

The phase of family arrival in the ED, the intervention which was suggested included: 1) the ED staff should have a consistent and coordinated approach to the care of families in the ED, 2) make contact with family members as soon as possible after their arrival in the ED and then regularly at frequent intervals, particularly if there are changes in the patient's condition, 3) use active listening techniques to enhance effectiveness of communication with family members, and 4) generate a family friendly environment.

The phase of family time in the ED. The recommended intervention was as follows: 1) the ED staff should evaluate family members who accompany a critically ill person into the ED, to identify those who are at increased risk of adverse outcome; 2) family members should be given the opportunity to accompany their ill relative while in the ED; 3) family members should have support from others while in the ED with a critically ill person; 4) ED staff should endeavor to give family members a realistic yet hopeful perception of their relative's critical illness that is in line with their own meaning attached to the situation; 5) the ED staff should assist family members develop and maintain optimistic coping strategies; 6) the ED personnel should communicate with family members of a critically ill person details of the condition and care of their critically ill relative, 7) distractions or diverting activities for family members while waiting serve to reduce anxiety.

Moreover, in respect for the relatives themselves, a study of the phenomena of nurses' caring behaviors as perceived by the critical care family by Warren (1994) found that the positive types of nurses' caring behaviors which the critical care family perceived as caring while they are in the waiting room consisted of informing, enhancing, touching, and spiriting.

Informing was defined as a way of providing information about the patient's condition and treatment, orienting the family to the environment, sharing nursing knowledge, encouraging family members to ask questions, allowing them to tell their stories, acknowledging families' statements, and dialog with them. This

informing assisted the families in coping with high levels of anxiety and helped them know what to expect and what to do next. It also made them feel part of a team rather than being abandoned.

Enhancing was defined as behaviors that intensified and magnified the spirit of the families. It occurred when the information provided was taken in and the families understood it. All families were hoping for a positive outcome and the honesty of the nurse. Open communication promoted trust and confidence in the nurses and the care they provided. Nonverbal actions, such as eye contact and facial expressions, were also reassuring. Besides, understanding messages of encouragement and knowing specific facts related to the patient's progress provided hope and realistic appraisal for families.

Touching, families described many actions of the nurses as touching, such as gentle and tender handling, holding the hand, placing an arm around the shoulder, and patting the hand. These simple actions help to ease many feelings of the families such as nurturing, mind-body interaction, respect, relaxation, security, comfort, caressing and believing. Apparently the "laying on of hands" had a very profound meaning to families in crisis situations.

Spiriting as an aspect of caring, emerged from families who discussed the healing powers of the nurse, the enhanced ability to detect changes in the status of the patient, and being guided by a higher power.

Besides, the study of Li, et al. (2002), about nursing actions with bereaved family members in an accident and emergency setting in Hong Kong, found that the subjects perceived giving written information, an opportunity to view the patient, and respecting their customs and religious procedures, as most helpful.

To summarize the nursing interventions suggested for supporting relatives during a time of crisis at the accident and emergency department, giving informational support and providing emotional support at the same time were often emphasized. These points may be concluded according to the concept of social support of Schaefer, Coyne, & Lazarus (1982). Informational support was defined as providing information and advice, and giving feedback, about how a person is doing, while emotional support included attachment, reassurance, and being able to rely on and confide in a person (Schaefer, Coyne, & Lazarus, 1982 cited by Lazarus & Folkman, 1984: 250).

In practice, if these suggested interventions can satisfy the relatives' needs, it may help to decrease their anxiety.

Empirical works testing the effect of informational and emotional support on relatives' anxiety during this phase of care were not found. Several studies examined the effects of many forms of this intervention on relatives' anxiety in many critical care phases.

The study of Kathol (1984) aimed to test the effect of videotaped preoperative information and informative and supportive staff interactions with family members on state anxiety and the perception of support from nursing staff. The subjects were 67 family members of 60 patients scheduled for major elective surgery. The findings showed that videotaped preoperative information could help decrease state anxiety among family members. Staff-family interactions had a positive effect on the family's perceived support from the nurse.

Leske (1995) designed a three-group quasi-experimental research study to examine the effectiveness of intraoperative progress reports, by comparing 150 family members' state anxiety scores during the intraoperative waiting period. Family members in the control group received normal care, while the experimental group received a 5-10 minute progress report protocol about halfway through the surgical procedure. An additional group of family members received an attention protocol. The result found that family members in the experimental group reported lower state anxiety scores ($p<.001$) than the other groups.

In 1996, Leske conducted a four-group quasi-experimental research study to examine the effect of intraoperative progress reports on 200 family members' anxiety during the intraoperative waiting period. Each group was comprised of 50 subjects. The subjects in group one received standard perioperative care. Group two received in-person progress reports from perioperative nurses. Group three received an attention protocol, i.e., a checklist explaining hospital routines and waiting room procedures. Group four received progress reports delivered by telephone. The results showed that the in-person intraoperative progress report group had lower state anxiety scores ($p<.001$) than the other three groups (Leske, 1996: 424-436).

Marayart Vacharakiat (B.E. 2536) identified the effects of nursing support on the levels of anxiety of 40 significant others of emergency patients who had to be admitted

to hospital. The nursing support provided to the subjects in the experimental group was a process composed of three phases: orientation, assistive and supportive, and resolution. The result found that the post-test anxiety levels of the significant others in the experimental group was significantly lower than those of the control group, at $p = .01$.

Kanungnit Bureetes (B.E. 2540) studied the effects of a family supportive nursing system on the levels of anxiety of 30 patients' families in the intensive care unit. The families in the experimental group received the family supportive nursing system, which was composed of four phases: receiving information, being with the patient, participating in caring for the patient, and personal support and ventilation. The result found that the post-test of anxiety levels of the patients' families in the experimental group was significantly lower than those of the control group ($p = .05$).

The study by Rattana Yooplao (B.E. 2543) examined the effects of informational and emotional support on anxiety among 20 family members of head-injury patients. The results revealed that the family members who received informational and emotional support had greater decreases in scores for state anxiety than those the family members who received routine care ($p < .01$).

Kongsuwan (2001) identified the effects of informational and emotional support on the anxiety of 40 relatives of surgical patients during the perioperative period. The finding showed that the post-intervention anxiety scores of the relatives of the group who received informational and emotional support were statistically significantly lower than those of the group who received routine nursing care from the health care team (p-value = .001).

Nevertheless, Halm (1990) conducted a quasi-experimental study to examine the effectiveness of support groups in reducing state anxiety of adult family members during a patients' critical illness. The 30 subjects in the control group received bedside support from nurses and other health professionals during visiting hours, or condition reports, while 25 experimental subjects attended a support group to share feelings and experiences in coping with illness. The results revealed no significant differences in pre-state or post-state anxiety scores between the two groups, but the experimental subjects had significant reductions in anxiety, when the pre-measures and post-measures were compared ($p \leq .01$).

Similarly, the study of Aimin (1999) examined the effect of informational support on anxiety among 30 family members of critically ill patients admitted to the intensive care unit. The 15 subjects in the control group received routine information, while the 15 subjects in the experimental group received informational support by the researcher. The results of the study showed no statistically significant difference in the mean scores for state anxiety after receiving informational support, between the experimental group and control group. However, the mean state anxiety scores of the subjects in the experimental group after receiving informational support were significantly lower than that before receiving informational support ($p < .001$).

Moreover, the study of Pikul Tantitham (B.E. 2533) was designed to determine the effectiveness of systematic informational preparation on anxiety levels among 52 relatives of critically ill patients admitted to the intensive care unit (ICU). Twenty-six subjects in each group were provided with the same treatment by the staff of the ICU, but before visiting the patient, the relatives in the experimental group received additional systematic informational preparation, comprised of information about the intensive care environment and the patient's condition. The anxiety level was measured at pre- and post-visit to the patient. The results showed that, after visiting the patients, the mean scores for anxiety level of the subjects in both groups were not statistically significantly different ($p > .05$). However, the mean scores for anxiety level of the subjects in both groups were significantly reduced after visiting the patient ($p < .01$).

From the studies mentioned above, the interventions that were used in each study were different forms of informational and emotional support. The results of effective testing of the intervention on relatives' anxiety showed both effectiveness and ineffectiveness for the different interventions and different situations of the patient. Most of them had positive effects; however, some studies showed ineffective interventions.

Relatives' Satisfaction with Nursing Care

Patient satisfaction is viewed as an outcome of health care delivery and has been widely adopted as an indicator of quality of care (Greeneich, 1993: 65). Nowadays, many aspects of health care service have changed. The shift of nursing from caring for patients to providing a service to a customer is evident in the present day framework of health care (Yellen & Davis, 2001: 483). It can validly be applied to relatives, who are another important group of healthcare customers. Based on principles developed in the business world, the customer's needs and expectations are seen as the starting point of organizational development (Hiidenhovi, et al., 2001: 697). All patients and relatives enter the healthcare setting with certain expectations of care, which are often combined with their previous healthcare experiences. Meeting and exceeding customer expectations is a top priority for health care institutions. Providers must recognize that the customer has expectations of quality care.

Satisfaction in the business world is interpreted as a positive evaluation of specific service dimensions based on customer expectations and provider performance (Yellen & Davis, 2001: 483). Thus, if this concept is applied to the nursing service dimension, satisfaction will be based on patients' or relatives' expectations, and healthcare provider performance, perceived in the context of those expectations. This is congruent with Greeneich (1993: 64), who stated that patient expectations may be the key determinants of satisfaction with health care; patient satisfaction with nursing care was defined as the match between patient expectations of nursing care and the care actually received. In the same way, Wilkin, et al. stated that satisfaction represents a complex mixture of perceived needs, expectations of care, and the experience of care. It is an intermediate outcome, which may reflect a failure or not to respond to patients' needs, meet their expectations, or provide an acceptable standard of service (Wilkin, et al., 1992: 230).

According to theoretic model of patient satisfaction specific to nursing which was developed by Greeneich and associates in 1992, the dimensions associated with patient satisfaction are classified into three tracts: the nurse, the patient, and the organization. In the nurse tract, inherent personality characteristics, nursing care characteristics, and nursing proficiency are the important dimensions. In the patient

tract, dimension of expectations is emphasized, while the nursing milieu is viewed as a dimension of the organizational environment tract (Greeneich, 1993: 65-66).

The nurse tract: *inherent personality characteristics* are those attributes and behaviors that the nurse brings to the job. These attributes are unique to each nurse and are displayed on and off the job. Examples of positive and negative inherent personality characteristics are abrupt-smooth, helpful-nonhelpful, careless-thorough, assertive-aggressive, friendly-unfriendly. Besides, social courtesy, acceptance, kindness and empathy have been consistently identified as essential to promoting patient satisfaction. *Nursing care characteristics* are those professional characteristics that expedite meaningful patient-nurse interactions. Patient-nurse communication is part of this dimension. Explanation of nursing procedures, demonstrated concern, mutual goal setting, and the ability of the patient to express feelings to the nurse contribute to positive patient-nurse interactions. Besides, caring such as empathy, compassion, comfort measures, and development of a trusting relationship, are unique professional characteristics connected to patient satisfaction. *Nursing proficiency* is comprised of organization skills, technical competency, and nursing knowledge.

The patient tract: *patient expectation* is the anticipation that an event will happen. This anticipation is based on prior experience with nurses, and reports of others such as relatives, friends, and the media. Competence, equity of treatment, communication, and information are examples associated with patient expectation that result in patient satisfaction.

The organizational environment tract: *nursing milieu* is the environment in which nursing care takes place. It contains two different domains: the physical environment, and the organizational environment. Noise, lighting, food service, and housekeeping are all examples of the physical environment measured in patient satisfaction surveys. The organizational environment encompasses nursing service. Staffing, consumer policies, such as visiting hours, and locus of control for nursing practice. have an impact on nursing's ability to match patient expectations in the service setting.

Nevertheless, the studies that have been conducted to measure customer satisfaction with emergency services suggested that important satisfaction dimensions

for emergency department customers include expertise of care, quality of care, waiting time, and billing (Bursch, et al., 1993: 587).

Several extensive studies determined the factors that influence customer satisfaction with emergency department nursing care. The findings can be summarized as follows: the information provided by the nurse and the care of the nurse were the most important variables associated with emergency department nursing care (Bruce, et al., 1998: 31-37; Bursch, et al., 1993: 586-591; Lewis & Woodside, 1992: 959-964; Raper, 1996: 48-58). However, the primary area of concern was information about the length of waiting time and accompanying the patient (Bruce, et al., 1998: 31-37; Lewis & Woodside, 1992: 959-964).

Knowledge of customers' needs, and the expectations and dimensions associated with satisfaction is useful for nurses and other healthcare providers. It helps nurses and healthcare providers to understand and recognize how to design and provide effective nursing interventions to meet customers' needs and expectations, and thereby enhance their satisfaction with nursing care. Based on this knowledge, if the customers experience the intervention or nursing care that meets their needs or expectations, they usually rate higher levels of satisfaction. It may be interpreted that the intervention is a dimension of effective care for them.

At present, the concept of customer satisfaction has been used widely to evaluate the effective of nursing interventions. At a conference sponsored by the National Center for Nursing Research, Hinshaw cited customer satisfaction as more appropriate for capturing the results of nursing interventions than the more traditional outcomes of mortality and morbidity (Hinshaw, 1992 cited by Mahon, 1996: 1242). Although much could be found for most hospital settings, few studies regarding customer satisfaction with nursing intervention at the emergency department were located. One example was the study by Krishel and Baraff, which aimed to determine the effect of emergency department information distributed to patients on emergency department arrival. The result showed that patients who received emergency department information rated their overall satisfaction higher than did the control group ($p < .0001$) (Krishel & Baraff, 1993: 568-572). Besides, the study of Nittaya Dechpituksirikul (B.E. 2543) determined the effect of an information-giving model on satisfaction of the patient's relatives in the emergency department of Banpho Hospital. The result

found that most of the relatives in the experimental group who received the intervention rated high levels of satisfaction, while most of the relatives in the control group rated low levels of satisfaction.

In this study, the relatives' satisfaction was also used to evaluate the effectiveness of the informational and emotional support provided to the relatives when they were waiting during the patient's emergency treatment period at the accident and emergency department.

Summary

The sudden trauma of the patient visit to the accident and emergency department creates a crisis and different needs for the relatives of the patients. In the chaotic environment of the accident and emergency department, managing the life-threatening injury of the patient must take priority. The relatives may be present, but forgotten outside. The relatives typically respond with confusion and high anxiety. Their complaints often include lack of support by the staff and lack of information about the patient while waiting. Although nurses at present are increasingly concerned about taking care of the relatives, the interventions do not have definite forms. It may depend on each nurse. Thus nurses' interactions with relatives are usually mentioned as limited and less than satisfying. In this study, the researcher developed the informational and emotional support program for relatives of the accident patient, while waiting during the emergency treatment period at the accident and emergency department, which aimed to reduce the relatives' anxiety and promote their satisfaction with the nursing care they received.

CHAPTER 3
MATERIALS AND METHODS

This was a quasi-experimental research study, randomized two groups pre-test post-test design. The objectives were to investigate the effects of informational and emotional support on the anxiety and satisfaction of relatives of patients who have had an accident, during the waiting period at the accident and emergency department.

Population and Sample

The population of this study was relatives of patients who had had an accident, who were waiting for the patient during the emergency treatment period at the accident and emergency department of Somdejphraputthalerdlha Hospital.

The criteria for selecting the relatives were based on the severity of the patients' accidents, classified as urgent or emergent. For a particular accident, each relative must have only one injured patient. The patient was not to be a member of a mass casualty accident. The relatives had to have an adequate waiting period at the accident and emergency department to receive all stages of the intervention, be eighteen years of age or older, be able to communicate and understand the Thai language, and be willing to participate in the study. In the process of data collection, if the patient died, the relatives would be excluded from the study because their respondents' emotions would change significantly because of this event, and the design of this intervention did not cover approaching dead patients' relatives.

The sample size was based on the recommendation of Polit and Hungler (1983: 426-427), that a sample size selected for an experimental research design should be at least 10 and preferably 20-30 for every subdivision of the data, or cell of the design. Therefore, 60 subjects were selected using a purposive sampling technique. They were divided into two equal groups: a control group and an experimental group, with thirty subjects in each group. The method used to divide the subjects was daily random

assignment, by which each day was randomly assigned for recruiting subjects into control or experimental groups. At the start of each day, the researcher conducted the draw from two pieces of paper, on which were written "experimental group" or "control group". The pieces of paper were folded so that the words were concealed. Then, one piece of paper was drawn, and the day's recruitment of subjects decided as "control group" or "experimental group", depending on the draw result. All the subjects who participated the study in that day would be assigned to the same group. The researcher chose this method to achieve the greatest similarity of the subjects in the control and experimental groups, to prevent the problem of contamination from the intervention, and to forestall any feeling of inequality in the control group, which might occur in the data collection period.

Setting

The relatives of the patients with accident were recruited from the accident and emergency department of Somdejphraputthalerdlha Hospital, SamutSongkhram. This is a general hospital with more than 300 beds, under the Ministry of Public Health. The accident and emergency department is on the first floor of the hospital. Staff nurses work eight-hour shifts: morning, afternoon, and night shift. There are 8 nurses in the morning shift, 5 in the afternoon shift, and 3 in the night shift. The job responsibility of this department involves many areas: accident and emergency room, dressing and injection room, surgical and orthopedic out-patients, minor surgical room, casting room, and ambulance. Nowadays, more than 100 patients contact the accident and emergency department in the morning shift, about 60-70 in the afternoon shift, and 10-20 in the night shift. All of the patients with accident are taken to the department of accident and emergency, while the relatives have to wait outside. The contact time and manner between the staff nurses and relatives vary according to the situation.

Research Instruments

Two types of instrument were used in this study: instruments for intervention and instruments for data collection.

1. Instruments for intervention consisted of an informational and emotional support guideline and an emergency room booklet, which were developed by the researcher, based on the concept of social support of Schaefer, Coyne, & Lazarus (1982), and the literature review of the needs of relatives in crisis situations. The content validity of these instruments was verified by four experts: two surgical nursing instructors, one emergency nursing instructor, and one emergency staff nurse (Appendix F), then they were tried out with three relatives who had similar characteristics to the sample.

1.1 The informational and emotional support guideline is a set of informational and emotional support strategies. It was designed to support the relatives in the experimental group. This guideline consists of three intervention stages. The time for providing each stage was organized in relation to routine work process in the department of accident and emergency, Somdejphraputthalerdlha Hospital. Informational support included information about the patient and advice for the relatives, while emotional support included attachment, reassurance, and being able to rely on and confide in a person (Appendix D, Part I).

1.2 An emergency room booklet (Appendix D, Part II) is written information about the general process of caring for patients in the accident and emergency department. It was intended to help the relatives better understand the caring process in the emergency room, while they were waiting outside. It was given to the relatives at the first stage of the intervention.

2. Instruments for data collection

2.1 The relative's demographic data collection form was developed by the researcher, to obtain basic personal data for the relatives, provided by the relatives themselves. It consisted of gender, age, relationship to the patient, level of education, occupation, income, adequacy of income, responsibility for medical payment, and experience of accident (Appendix E, Part I).

2.2 The patient's demographic data collection form was developed by the researcher to obtain basic patient personal data. It consisted of gender, age, type of accident, area of injury, patient status, and method of medical payment (Appendix E, Part II). The researcher obtained these data from the patient's medical record.

2.3 The severity of injury classification form (Appendix E, Part III) was modified by the researcher from a triage rating system, and used to classify the severity of illness or injury of a patient who visited the accident and emergency department. The patient would be categorized into one of three classes: emergent, urgent, or non-urgent. The emergent patient's condition is serious or life-threatening, and requires immediate attention. The urgent patient is a mild emergency or a less serious condition that requires attention, but it may not be immediately. The non-urgent patient is one with a mild illness or is not an emergency, so immediate attention at the accident and emergency department is unnecessary (Ramler, 1990: 23-25; Wanida Orprasertsak, et al., B.E. 2546: 23).

In this study, the severity of injury classification was used for screening the severity of injury of the accident patient. Only the criteria of the emergent and urgent classification that fit the accident patient were chosen for screening patients in this study. Patients who met at least one criterion were selected for participation in the study. Four experts verified the content validity of this instrument: two surgical nursing instructors, one emergency nursing instructor, and one emergency staff nurse (Appendix F). Then it was tried out with 20 accident patients.

2.4 The Numeric Scale of Anxiety (Appendix E, Part IV) was used to measure the anxiety of the relatives. The researcher modified this instrument from the Visual Analog Scale of Anxiety that Gaberson (1991) used for measuring the preoperative anxiety of patients waiting for surgery. It is a 10 centimeter horizontal line with defined ends, representing the extreme limits of anxiety. The left end of the line was labeled with "no sensation" and the right end of the line was labeled "as much as could possibly be". The subject was instructed to mark the line at the point that represented his or her current level of anxiety. The score was the distance in centimeters from the left end of the line to the subject's mark. This instrument was reported to be a valid and reliable self-report measure of preoperative anxiety in the study by Vogelsang (Vogelsang, 1988 cited by Gaberson, 1991: 1260). In that study, it

was used with 40 women admitted for ambulatory surgery. Vogelsang found that the subjects' score on the Visual Analog Scale (VAS) and the Spielberger State Anxiety Inventory (SAI) were highly correlated (r = 0.84). Besides, the subjects reported that the VAS was easier to use than the SAI and the oral directions for the VAS were easy to understand. The subject could respond to this instrument in seconds. Furthermore, this instrument could also measure an infinite number of points between extreme ends.

In the present study, the researcher modified the Visual Analog Scale to the Numeric Scale of Anxiety for more practical use by defining the ends of the line with a number, which was a label of anxiety score. The left end of the line was labeled with the number "0" which meant "no sensation of anxiety" and the right end of the line was labeled with the number "100" which meant "an extreme sensation of anxiety". The relative was instructed to indicate the number or score that represented their current level of anxiety about the patient. Possible scores ranged from 0-100, with high scores reflecting the relative's high anxiety.

In the process of modification, the researcher tried out both types of anxiety scale (Visual Analog Scale and Numeric Scale of Anxiety) with 20 relatives of emergency patients while they were waiting for the patient at the accident and emergency department of Somdejphraputthalerdlha Hospital, SamutSongkhram. Fifteen relatives reported that the Numeric Scale of Anxiety was easier to use and understand than the Visual Analog Scale. Therefore, in this study, the Numeric Scale of Anxiety was chosen for measuring the anxiety of the relatives.

The content validity of this instrument was verified by four experts: two surgical nursing instructors, one emergency nursing instructor, and one emergency staff nurse (Appendix F). Then it was tried out again with 20 relatives with similar characteristics to the sample.

2.5 The satisfaction questionnaire (Appendix E, Part V) was developed by the researcher, based on the informational and emotional support guideline of this study. It was used to measures the relatives' satisfaction with the nursing intervention they received while waiting for the patient at the accident and emergency department. The questionnaire consisted of 20 items on a 5-point Likert scale, as follows: fully satisfied, moderately satisfied, barely satisfied, unsatisfied, and did not receive. The scores were weighted 4, 3, 2, 1, and 0, respectively. Possible total

scores ranged from 0-80, with higher scores indicating higher levels of satisfaction. The content validity of this instrument was verified by four experts: two surgical nursing instructors, one emergency nursing instructor, and one emergency staff nurse (Appendix F), then it was tested for reliability with 20 relatives with similar characteristic to the sample, and the Cronbach's alpha coefficient was .87. In the main study, after use with 60 subjects, the Cronbach's alpha coefficient was also .87.

Protection of Human Subjects

This study was conducted based on the protection of human rights. Eligible subjects were approached and asked to participate in the study. The researcher explained the purpose of the study, the research procedure, the benefits, the length of time for intervention, and the time needed to complete the questionnaires in this study. The subjects who agreed to participate were informed and assured that the data would be kept strictly confidential and reported only as group data. In addition, participants were informed that they could withdraw from the study at any time without any prejudice to them or to the patients.

Data Collection Procedure

1. Following approval by the Committee on Human Rights Related to Human Experimentation, Mahidol University (Appendix B), a letter requesting permission and co-operation in data collection from the Faculty of Graduate Studies, Mahidol University, was submitted to the director of Somdejphraputthalerdlha Hospital, where the study was conducted.

2. After receiving permission, data collection was commenced.

3. The relatives who met the inclusion criteria were approached. The researcher provided information regarding the study to the prospective subjects and asked for their consent to participate in the study (Appendix C). When they agreed to participate, the researcher ensured the protection of their human rights.

4. To achieve the greatest similarity of the subjects in the control and experimental groups, and to prevent the problem of contamination of the control group from the research intervention, which might occur in the period of data collection, the

study was conducted with the control and experimental groups by daily random assignment. The researcher drew the groups of subjects each day. The relatives who participated the study that day were assigned to be subjects of the group that was obtained.

5. Before receiving nursing care, the relatives in both groups were interviewed according to the demographic data form, and the researcher asked them to assess their pre-test of anxiety.

6. Then, the relatives in the control group received the routine nursing care provided by the staff nurses, while the relatives in the experimental group received the routine nursing care provided by the staff nurses, the same as the control group, and in addition, the researcher provided an additional nursing intervention according to the informational and emotional support guideline.

7. When the process of emergency treatment of the patient was finished, before transferring the patient from the accident and emergency department, the researcher asked the relatives in both groups to complete their post-test for anxiety and answer the satisfaction questionnaire. If, for any reason, the relatives who could not complete the questionnaire immediately at the accident and emergency department, the researcher would have them do it about 1 hour later, after the patient had been transferred.

Routine nursing care

The staff nurses contacted the relatives to provide information at the time of history taking, and at some other times that varied according to the situation, such as when they had to ask the relatives for permission to treat the patient, or before the patient was transferred. During this waiting time period, if the relatives had any questions or needed more help, they could request it from the staff nurses.

The informational and emotional support guideline

Before the intervention

The researcher approached the relatives with a polite manner, then established the relationship through introducing herself, and then assessed their emotions and needs by open-ended questions. At the same time, the researcher generated a friendly

atmosphere, such as by taking the relatives to a private area, talking with them using easily-understood or colloquial language, without medical terms, and supporting them with caring behaviors (i.e. active listening, empathy, and compassion).

The first stage

This stage commenced after the relatives had finished giving the patient's injury history to the staff nurse. This stage took approximately 10-15 minutes.

1. The researcher assessed the patients and talked to the staff nurses and the doctor, to learn of the patients' condition and the plan of first-aid treatment.

2. Information was given to the relatives about the patient's current condition, the reasons for the investigations, and the first-aid nursing activities or treatments.

3. The relatives were assured that the patient was receiving the best possible care.

4. An opportunity was provided for the relatives to ask questions and express feelings.

5. Attention was paid to the relatives by active listening, sharing their feelings and providing encouragement.

6. Advice was given about the facilities for their comfort and privacy, such as the waiting area, telephone, and drinks.

7. An emergency room booklet was provided for the relatives and they were allowed to read it while waiting outside the emergency room, when they were emotionally and cognitively ready. The booklet included information about the process of caring for the patient in the emergency room. It was designed to assist the relatives better to understand what was happening to the patient, how the staff worked, and why they might have to wait. If the relatives had questions arising from their reading, the researcher explained to them individually.

The second stage

This stage commenced after the patient's first-aid was completed. This stage also took approximately 10-15 minutes.

1. The researcher prepared the relatives before visiting the patient in the emergency room. The relatives were told about what would they see and how they

might behave and feel. This preparation prevented the relatives from feeling apprehensive when they visited the patient.

2. The relatives were taken to visit the patient in the emergency room, and they were allowed to be together.

3. The researcher provided help or support according to their needs, such as when they asked questions, or wanted more assurance about the patient's care.

The third stage

This stage commenced when the patient's condition changed, or every 30 minutes after the relatives visited the patient. The intervention given in this stage took approximately 5-10 minutes each time.

1. The researcher provided information about the change in the patient's condition, nursing activities or treatments after the change, and the progress of the patient's condition after treatment.

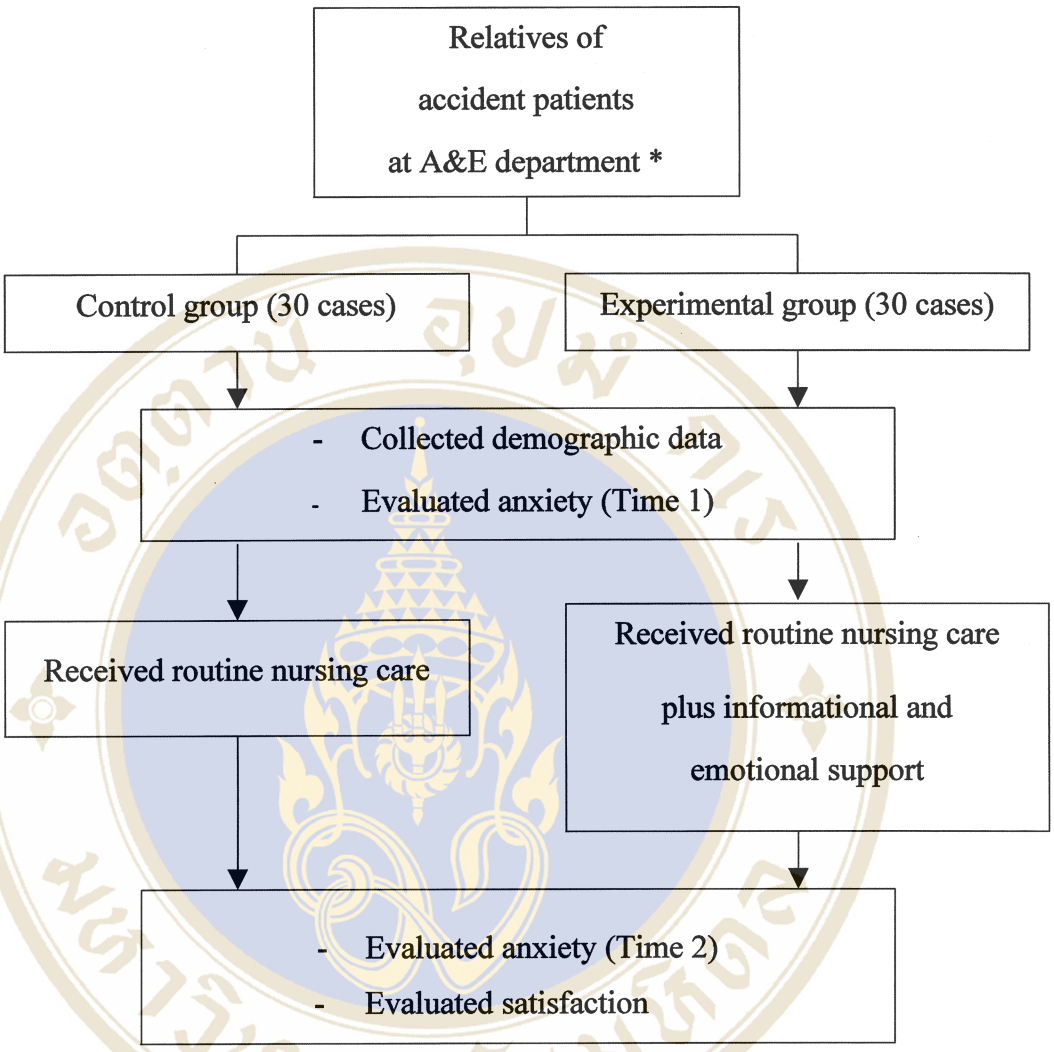
2. The relatives were taken to meet the physician, to ask questions and clarify the patient's condition and treatment.

3. The relatives were provided with information about other useful resources, such as the ways of paying the medical fees and the documentation that needed to be prepared.

4. If it was necessary for the patient to wait or be observed for a long time in the emergency room, the researcher contacted the relatives and told them every 30 minutes about the reasons for waiting and how the staff were caring for the patient.

Since the purpose was to show the relatives that the researcher was not a staff nurse in the accident and emergency department of the hospital, to prevent respondent bias, the researcher used a blue uniform during data collection. A blue uniform is perceived as that of a public health nurse.

The process of data collection with both groups, and the schedule of intervention conducted with the subjects in the experimental group, are shown in figures 2 and 3, respectively.



* A&E department = Accident and Emergency Department

Figure 2. The process of data collection in the control group and the experimental group

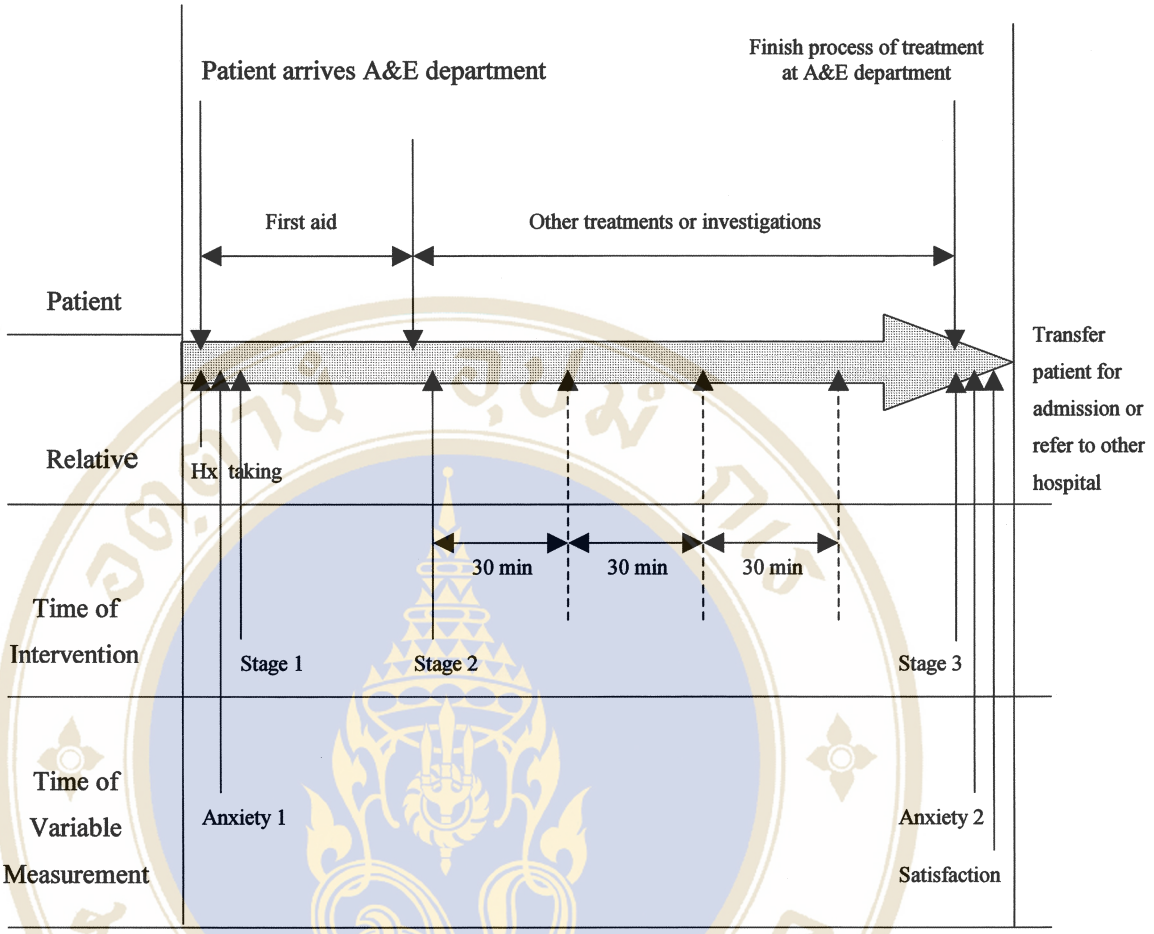


Figure 3. The schedule of intervention conducted with the subjects in the experimental group

⇨ = Total time for emergency treatment period of the patient at A&E department

Stage 1 = After history taking completed

Intervention : Giving information about the patient's condition and treatment

Stage 2 = After first-aid completed

Intervention : Taking the relative to visit the patient in the emergency room

Stage 3 = When the patient's condition changed or every 30 minutes after the relative visited the patient.

Intervention : Giving information about the change or progress in the patient's condition, and the treatment

30 = Extra time for the intervention that the researcher provided to the relatives when the patient's condition changed, or every 30 minutes after the relative visited the patient

Each time informational support was provided, the relatives were also provided with emotional support, such as sharing the relatives' feelings, active listening, and providing encouragement and reassurance.

Data Analysis

Data were analyzed using the computer package for Windows Program:

1. Descriptive statistics, including frequency, percentage, range, mean, median, and standard deviation, were used to describe the personal characteristics of the subjects.

2. The characteristics of the subjects in both groups were compared by using Chi-square or Fisher's exact probability test.

3. A comparison of the pre-test and post-test anxiety scores within the control and experimental groups were analyzed by Wilcoxon Signed-Ranks Test.

4. A comparison of the mean of differences in anxiety scores for the pre- and post-test, between the control group and the experimental group, was analyzed by independent t-test.

5. The satisfaction mean scores of the control group and the experimental group after the intervention were compared by independent t-test.

CHAPTER 4
RESULTS

This quasi-experimental research study was conducted to examine the effects of informational and emotional support on the anxiety and satisfaction of relatives of accident patients during the waiting period at the accident and emergency department. The subjects were divided into two groups, a control group and an experimental group, with 30 subjects in each group. The control group received routine nursing care, while the experimental group received routine nursing care plus informational and emotional support, according to the guideline. The results of data analysis in this study are presented into two parts, as follows:

Part I: Demographic characteristics of the sample

1.1 Demographic characteristics of the relatives

1.2 Demographic characteristics of the patients

Part II: Results of hypothesis testing

2.1 Comparison of the anxiety scores of the relatives in the control and the experimental groups

2.2 Comparison of the satisfaction scores of the relatives, between the control and the experimental groups

Part I: Demographic Characteristics of the Sample

The sample in this study was relatives of accident patients who were waiting for the patient during the emergency treatment period at the accident and emergency department, Somdejphraputthalerdlha Hospital. The data were collected from April to August 2003. Sixty relatives who met the criteria were approached. The relatives were selected according to the patient's condition. Therefore the demographic characteristics of the sample in this study are shown in two parts: demographic characteristics of the relatives; and demographic characteristics of the patients.

1.1 Demographic characteristics of the relatives

The demographic characteristics of the relatives in the control and experimental groups are shown in Table 2. In both groups, more relatives were female (control group 90%; experimental group 66.7%) than male (10 and 33.3%, respectively). Ages ranged from 19-65 years in the control group and 19-58 years in the experimental group. The mean age in the control group was 40.33 years (SD=13.12, median=38.50), and 37.03 years (SD=9.50, median=36.50) in the experimental group. The relationship of parent of the patient was greater than other categories of relatives in both groups (control group 36.7%; experimental group 30.0%). Most of the relatives in both groups (control group 80.0%; experimental group 63.3%) had elementary school levels of education, with six years being the most common. The majority of their occupations were employee/government officer (control group 66.7%; experimental group 70.0%) and their average income was about 8,765 Baht/month in the control group, and 8,186 Baht/month in the experimental group. Most reported that they had adequate income (control group 63.3%; experimental group 73.3%) and more than half were not responsible for the patient's medical payment (control group 66.7%; experimental group 56.7%). The majority of the relatives in both groups reported that they had experienced previous accidents (control group 70.0%; experimental group 60.0%).

The demographic characteristics of the relatives in the control and experimental groups were compared by Chi-square test. The results are shown in Table 2. There were no statistically significant differences between the two groups ($p>.05$). Therefore, the characteristics of the relatives in the control and experimental groups were similar.

Table 2 Number, percentage, and Chi-square test of the relative's demographic characteristics, of the control and experimental groups

Characteristics	Total (n=60) n (%)	Control group (n=30) n (%)	Experimental group (n=30) n (%)	p
Gender				
Male	13 (21.7)	3 (10.0)	10 (33.3)	.060
Female	47 (78.3)	27 (90.0)	20 (66.7)	
Age (years)				
≤ 40	38 (63.3)	19 (63.3)	19 (63.3)	1.000
> 40	22 (36.7)	11 (36.7)	11 (36.7)	
Min-Max	*19-65*	*19-65*	*19-58*	
Mean (SD)	*38.67 (11.48)*	*40.33 (13.12)*	*37.03 (9.50)*	
Median	*37.00*	*38.50*	*36.50*	
Relationship to patient				
Parent	20 (33.3)	11 (36.7)	9 (30.0)	.481
Spouse	15 (25.0)	7 (23.3)	8 (26.7)	
Son / Daughter	10 (16.7)	3 (10.0)	7 (23.3)	
Significant other	15 (25.0)	9 (30.0)	6 (20.0)	
Level of education				
Elementary school (0-6 yrs)	43 (71.7)	24 (80.0)	19 (63.3)	.252
High school or higher (>6 yrs)	17 (28.3)	6 (20.0)	11 (36.7)	
Min-Max	*0-18*	*0-18*	*1-16*	
Mean (SD)	*6.53 (3.71)*	*6.17 (4.17)*	*6.90 (3.22)*	
Median	*6.00*	*6.00*	*6.00*	
Occupation				
Employee/Government officer	41 (68.3)	20 (66.7)	21 (70.0)	1.000
Merchant/Agriculture/ Fishery/Housework	19 (31.7)	10 (33.3)	9 (30.0)	

Table 2 Number, percentage, and Chi-square test of the relative's demographic characteristics of the control and experimental groups (Continued)

Characteristics	Total (n=60) n (%)	Control group (n=30) n (%)	Experimental group (n=30) n (%)	p
Income (Baht / month)				
≤ 5,000	29 (48.3)	15 (50.0)	14 (46.7)	1.000
> 5,000	31 (51.7)	15 (50.0)	16 (53.3)	
Min-Max	*2,000-60,000*	*2,000-60,000*	2,000-45,000	
Mean (SD)	*8,476.00 (9,705.00)*	*8,765.33 (11,267.74)*	*8,186.67 (8,030.36)*	
Median	*5,400.00*	*5,350.00*	*5,550.00*	
Adequacy of income				
Adequate	41 (68.3)	19 (63.3)	*22 (73.3)*	.579
Inadequate	19 (31.7)	11 (36.7)	8 (26.7)	
Responsibility for medical payment				
Yes	23 (38.3)	10 (33.3)	13 (43.3)	.595
No	37 (61.7)	20 (66.7)	17 (56.7)	
Experience of accident				
Yes	39 (65)	21 (70.0)	18 (60.0)	.588
No	21 (35)	9 (30.0)	12 (40.0)	

1.2 Demographic characteristics of the patients

The demographic characteristics of the patients in the control group and the experimental group are shown in Table 3. The majority of the patients in both groups were male (control group 86.7%; experimental group 83.3%). Their ages ranged from 1-80 years (mean=29.57, SD=17.48, median=25.50) in the control group, and 5-76 years (mean=33.53, SD=20.79, median=27.00) in the experimental group. The largest group (control group 56.7%; experimental group 53.3%) had traffic-related accidents and 80% in both groups had multiple injuries. However, the severity of most injuries was categorized as urgent (control group 86.7%; experimental group 90%). More than

two of thirds of the patients in both groups (control group 76.7%; experimental group 73.3%) could have their medical payments reimbursed.

Comparisons of the demographic characteristics of the patients in the control and experimental groups were performed by Chi-square or Fisher's exact probability test. The results are shown in Table 3. There were no statistically significant differences between both groups ($p>.05$). Therefore, the characteristics of the patients in the control and experimental groups were similar.

Table 3 Number, percentage, Chi-square test, or Fisher's exact probability test of the patient's demographic characteristics, in the control and experimental groups

Characteristics	Total (n=60) n (%)	Control group (n=30) n (%)	Experimental group (n=30) n (%)	p
Gender [b]				
Male	51 (85.0)	26 (86.7)	25 (83.3)	1.000
Female	9 (15.0)	4 (13.3)	5 (16.7)	
Age (years) [a]				
≤ 20	20 (33.3)	11 (36.7)	9 (30.0)	.505
21- 40	24 (40.0)	13 (43.3)	11 (36.7)	
> 40	16 (26.7)	6 (20.0)	10 (33.3)	
Min-Max	*1-80*	*1-80*	*5-76*	
Mean (SD)	*31.55 (19.15)*	*29.57 (17.48)*	*33.53 (20.79)*	
Median	*26.00*	*25.50*	*27.00*	
Type of accident [a]				
Traffic-related	33 (55.0)	17 (56.7)	16 (53.3)	.831
Injury by enemy	11 (18.3)	6 (20.0)	5 (16.7)	
Other	16 (26.7)	7 (23.3)	9 (30.0)	

Table 3 Number, percentage, Chi-square test, or Fisher's exact probability test of the patient's demographic characteristics, in the control and experimental groups (Continued)

Characteristics	Total (n=60) n (%)	Control group (n=30) n (%)	Experimental group (n=30) n (%)	p
Area of injury [a]				
Multiple	48 (80.0)	24 (80.0)	24 (80.0)	1.000
Head / Skull	12 (20.0)	6 (20.0)	6 (20.0)	
Severity of injury [b]				
Urgent	53 (88.3)	26 (86.7)	27 (90.0)	1.000
Emergent	7 (11.7)	4 (13.3)	3 (10.0)	
Method of medical payment [a]				
Can be reimbursed	45 (75.0)	23 (76.7)	22 (73.3)	1.000
Cannot be reimbursed	15 (25.0)	7 (23.3)	8 (26.7)	

a = Chi-square test

b = Fisher's exact probability test

Part II: Results of Hypothesis Testing

2.1 Comparison of the anxiety scores of the relatives in the control and experimental groups

The pre-test anxiety scores of the relatives in the control group ranged from 50-100, which was the same as the pre-test anxiety scores of the relatives in the experimental group. The mean score was 87.27 (SD=17.75, median=100.00) for the control group and 85.50 (SD=17.63, median=97.50) for the experimental group (Table 4).

To achieve similarity of anxiety scores for the subjects, between the control and experimental groups, before receiving nursing care, a comparison of the pre-test scores of the relatives was tested. Since the Kolmogorov-Smirnov Test of the pre-test scores in each group of subjects was not accepted as a normal distribution ($p<.05$), comparison of these pre-test scores between the two groups was done by the Mann-Whitney test. The result showed no statistically significant differences (Mann-Whitney $U = 418.5$, $p>.05$). This result showed the pre-test anxiety score of the relatives in both groups, before receiving nursing care, were similar.

After receiving nursing care, the ranges for the post-test scores were 30-100 in the control group, and 10-100 in the experimental group. The post-test mean score of the control group was 72.23 (SD=25.58, median=75.00), while for the experimental group it was 66.00 (SD=25.00, median=60.00) (Table 4).

Comparisons between the pre-test and post-test scores for anxiety, of the relatives in each group, were performed using the Wilcoxon Signed-Ranks Test. The results showed that there were statistically significant differences between the pre-test and post-test anxiety scores of the relatives in both groups (experimental group $p<.001$; control group $p<.01$) (Table 4).

Table 4 Range, mean, median, standard deviation and comparison of the pre-test and post-test anxiety scores of the relatives within the control group (n=30) and the experimental group (n=30) using the Wilcoxon Signed-Ranks Test

Subject group	Pre-test anxiety score				Post-test anxiety score				Z
	Range	Mean	Median	SD	Range	Mean	Median	SD	
Control	50-100	87.27	100.00	17.75	30-100	72.23	75.00	25.58	-3.054 **
Experimental	50-100	85.50	97.50	17.63	10-100	66.00	60.00	25.00	-3.550***

* p <.01, *** p <.001

The differences in anxiety scores, between the pre- and post-test, in the control group ranged from –40 to 50, and –40 to 60 in the experimental group. The difference mean scores was higher (19.50±23.28) in the experimental group than in the control group (15.03±22.53). These differences in anxiety scores of both groups were accepted for normality of distribution by the Kolmogorov-Smirnov Test (p>.05). Therefore, the independent t-test was used to compare the mean of difference scores for anxiety between the two groups. The result showed that there was no statistically significant difference (p>.05) (Table 5).

Table 5 Range, mean, standard deviation, and comparison of the mean of difference in anxiety scores for the pre- and post-test of the relatives, between the control (n=30) and experimental groups (n=30), by independent t- test

Subject group	Range	Mean of difference score	SD	t
Control group	-40-50	15.03	22.53	-.755 ns
Experimental group	-40-60	19.50	23.28	

ns = not significant, p > .05

2.2 Comparison of the satisfaction scores of the relatives, between the control and experimental groups

The satisfaction scores of the relatives in the control group ranged from 31-80, while in the experimental group they ranged from 52-80. The satisfaction mean scores of the relatives of the two groups were compared by independent t-test. The result revealed that there was statistically significantly different ($p<.001$) of the satisfaction mean scores of the relatives between the two groups (Table 6). The relatives who received informational and emotional support from the researcher had a higher mean satisfaction score (67.90±7.77) than the relatives who received routine nursing care (55.87±14.40).

Table 6 Range, mean, standard deviation, and Comparison of the satisfaction mean scores of the relatives between the control and experimental groups by independent t- test

Subject group	Range	Mean	SD	t
Control group	31-80	55.87	14.40	-4.028***
Experimental group	52-80	67.90	7.77	

*** $p< .001$

CHAPTER 5
DISCUSSION

This quasi-experimental research study was conducted to determine the effects of informational and emotional support on the anxiety and satisfaction of relatives of accident patients during the waiting period at the accident and emergency department. The subjects were randomly assigned each day into two groups: 30 subjects in the control group and 30 in the experimental group. The control group received routine nursing care, while the experimental group received routine nursing care plus informational and emotional support based on the program developed by the researcher. In this chapter, the results are discussed according to the demographic characteristics of the sample and comparisons of the anxiety and satisfaction scores of the relatives, between the two groups.

Demographic Characteristics of the Sample

Female relatives of the patients in this study outnumbered male relatives in both groups. The mean age was 40.30 years in the control group and 37.03 years in the experimental group. Most of them were parents. These characteristics were consistent with reports of previous studies about relatives or family members of accident patients, which found the majority of the relatives were parents (Chayanit Luevanich, B.E. 2540; Marayart Vacharakiat, B.E. 2536; Rattana Yooplao, B.E. 2543; Ubolwan Kitirattragarn, B.E. 2541). This may be because accidents usually occur to young people, so that parents have to take responsibility for their sick and injured children.

Almost all of the patients in this study were male young adults (mean age in the control group 26 years; experimental group 27 years). The largest group among these had traffic-related accidents. These results are consistent with reports of the Medical Institute of Accident and Disaster, which found that transport accidents were the main causes of accidental death of Thai people in the year 1999. The prevalence was higher

in males than females (ratio 4 : 1) and the major age groups were 20-24 years and 25-29 years, respectively (Medical Institute of Accident and Disaster, B.E. 2544). This is similar to the United States of America, where traumatic injury is the first cause of death among persons prior to 45 years of age and the highest risk group is males aged between 15-24 years (National Safety Council, 1996; U. S. Bureau of the Census, 1996 cited by Laskowski-Jones, 1999: 1088).

Anxiety of the Relatives

The findings of this study revealed that after receiving informational and emotional support from the researcher, the post-anxiety score of the relatives in the experimental group tended to decrease greater than the control group, but no statistically significant difference of mean difference scores for anxiety between the two groups was found (Tables 4, 5).

These results can be explained according to the stress, appraisal, and coping theory of Lazarus and Folkman (1984). Based on this theory, anxiety is the emotion that characterizes the relatives after they confront the occurrence of the patient's accident and appraise it as stressful. An accident is an event that happens suddenly and unexpectedly. The relatives have little or no opportunity to prepare themselves emotionally for this event. They may have limited, or no experience of such an event. The problems they experience are uncertainty about the patient outcome, fear of death, role changes, financial concerns, and the unfamiliar environment (Hallgrimsdottir, 2000: 611; Washington: 2001: 30). These cause the relatives to appraise the patient's accident as a stressful event and they feel anxious while waiting outside the emergency room during the emergency treatment period at the accident and emergency department. The relatives would seek ways to deal with their anxiety. The informational and emotional support provided by the researcher was considered an important resource that relatives need to help them deal with their anxiety, according to the literature review, because it helped them understand and appraise the situation of the patient realistically. The relatives would know that the patient was receiving the best possible care by this intervention, however, this did not result to a significant decrease in their anxiety. This may be because the process of treatment and nursing care of the patient was not completed in the accident and emergency department. It

depended on the severity of injury or condition of each patient. In this department, the patients were only provided with first-aid. Many patients had health problems that could not immediately be solved in this department. Most of them (90% in the current study) had to be transferred for continued observation and care after the emergency treatment period, such as admission to the intensive care unit or other wards; some cases had to have an immediate operation (Appendix A, Table 9). It was the transition that made the relatives felt uncertain. The relatives would wonder what would happen next and about how the patient's condition was progressing. They could not accurately predict the patients' condition, future health problems, or the final outcome. At the same time, health care providers, including the researcher, could not guarantee the relatives at the accident and emergency department that the patients would, at the end, have a positive outcome. This caused the relatives to continually reappraise the patients' situation as a stressful event for them, and thus their anxiety persisted.

It can be confirmed by the finding of this study (Appendix A, Table 10) found that relatives (control group 43.33%; experimental group 30%) whose anxiety post-test scores had not decreased after completion of the emergency treatment period in the accident and emergency department, had patients who needed continued close nursing care and treatment. Furthermore, the researcher talked to the relatives after completing the data collection process, and asked them why they still felt high anxiety at the post-test. They said that, even though they knew the patient had received the best possible care, at that time (in the accident and emergency department), no one could assure them with certainty that the patient was safe or would survive. This was consistent with the study of Redley, et al. (2003a), which found that knowing about the expected outcome was the highest ranked need for relatives of critically ill patients in the emergency department. Similarly, the literature review indicated that family members of critically ill patients considered the need to feel that there was hope was a priority need, the same as the need for information, especially hope for a positive outcome for the patient (Kleinpell, 1991: 40; Warren, 1994: 70). This had been emphasized by families during a patient's critical illness, and family members usually interpreted hope as the hope that the patient would get better (Hickey, 1993: 97). This interpretation might contribute to an unmet need if the patient's condition did not improve immediately. In support of this finding, Halm (1990) stated that the anxiety of

family members was dependent on the condition of their critically-ill patient. Therefore, during this critical period for the patient, the relatives' anxiety would not decrease much.

The Control Group

In the control group, the relatives received only routine nursing care provided by the emergency staff nurses. It was unsystematic, varying according to the patient's situation, time limitations, and the experience of each nurse. However, the result of the study showed that the decrease in the relatives' post-test scores for anxiety after receiving routine nursing care was also statistically significant different ($p<.01$) (Table 4). This may be because, in the control group, the relatives also had the opportunity to receive informational and emotional support from the emergency staff nurses.

The method by which they usually received information was inquiring when they wanted to know about the patient's condition. This was consistent with a previous report, which found that at a critical time for the patient, when the family was isolated, the family members did not want to be confronted with a sudden negative change in the patients' condition when they visited, such as becoming comatose, unconscious, or breathing with the aid of mechanical ventilation. The relatives often actively solicited information about the patient from anyone who could provide it (Roberts, 1976 cited by Hickey, 1993: 97). Thus, the information provided by the staff nurse usually matched their needs.

Another possible way in which the relatives could receive information was the time when the staff nurses asked the relatives for permission to implement some procedures with the patient, such as when the patient had to undergo an operation immediately, or before the patient was transferred. The nurse had to tell the relatives about the current condition of the patient, and the reason of the treatment or transfer. Therefore, the relatives knew about the patient's condition and the reasons or objectives of the care being administered, which were their important needs. This may make the relatives felt more assured that the patient was receiving the good care from the nurses and physicians.

Coincidentally, during the study period, Somdejphraputthalerdlha Hospital was in the process of hospital accreditation, so that everyone, including the nurses, was

paying greater attention to improving the quality of care. The relatives would also be approached by the staff nurse politely and with a service awareness when the relatives had questions or needed more help. This might further help the relatives feel that they were not left to wait stranded outside, rather that the staff nurse was worried and concerned about their emotional state.

In conclusion, the above-mentioned factors might help to explain the decrease in anxiety of the relatives in the control group.

Satisfaction of the Relatives

The result of this study revealed that the relatives in the experimental group reported significantly higher satisfaction with the nursing care that they received than the relatives in the control group ($p<.001$) (Table 6).

This may be explained in terms of customer satisfaction. Many authors have defined customer satisfaction in terms of a match between the customer's needs or expectations of nursing care and the actual experience of nursing care (Greeneich, 1993: 64; Wilkin, et al., 1992: 230). If the relatives in the experimental group perceived a positive nursing care experience, which met their needs and expectations, they were usually satisfied with the nursing care they received.

The relatives in the experimental group had greater opportunity to access support from the healthcare provider than the relatives in the control group, which was an important need for them in the crisis situation, especially informational and emotional support.

The informational and emotional support program was developed based on the literature review of the needs of relatives in crisis situations. It consisted of informational and emotional support strategies. The information provided to the relatives dealt with the patient's condition, the reasons for investigations, nursing activities or treatments, the reasons for waiting, and changes or progress of the patient. This information prepared the relatives for understanding and accepting the critical situation and its possible outcomes (Leske, 1998: 129-139). The relatives were informed about what to expect and the negative effects of fantasy taking over were avoided, thereby decreasing stress, anxiety, and confusion among the family members (Davies, 1997: 183; Picton, 1995 cited by Hallgrimsdottir, 2000: 612; Warren, 1994:

69). Then, the relatives might use appropriate coping behaviors to restore their equilibrium (Hickey, 1993: 97). In addition, the researcher provided advice about the facilities or comfortable surroundings for the relatives themselves, such as the waiting area, telephones, and other useful resources, for example, methods for paying medical expenses. These might make the relatives' crisis more bearable (Washington, 2001: 30).

At the time of giving the information, the researcher also provided emotional support, such as sharing the relative's feelings, active listening, answering their questions, providing encouragement and reassurance. These supports could reduce feelings of isolation and aloneness that occur within families after a critical injury (Leske, 1998: 129-139), and it could assist families determine appropriate coping mechanisms (Washington, 2001: 30).

Moreover, the researcher gave the relatives an emergency room booklet, which briefly described the patient care process in the accident and emergency department. This booklet could assist the relatives better to understand the process of patient care in the accident and emergency department. The relatives would know what the nursing staff going to do for the patient, and why they might have to wait. In addition, in this booklet, one part was devoted to the documentation needed to prepare for reimbursement of the patient's healthcare expenses. It was found that many relatives were interested in this part. They usually asked and confirmed this information with the researcher, because they had to prepare all of the documents for the patient. Thus, this part appeared to be another piece of intervention that was useful and satisfied one of the relatives' needs. This finding was consistent with Hickey (1993: 97), who stated that although families identified the need for information about the patient's condition as very important, they still usually wanted to know more patient-related information, if they could acquire it. However, their ability to comprehend and process information might be impaired because of the emotional and cognitive disruption from their anxiety (Hickey, 1993: 97), so that verbal information could be forgotten or misinterpreted (Nelson, et al., 1997: 39). Giving them this booklet was probably another appropriate way to communicate with the relatives, because the relatives could read it when they were emotionally and cognitively ready (Hickey, 1990: 414; 1993: 97). It could improve both their retention and understanding (Ley, 1988 cited by Nelson, et al., 1997: 39).

In addition, when the patient's first-aid was completed, the relatives had a chance to visit the patient in the emergency room and could also talk to the physician if they had any questions. Proximity to the patient was another way to calm the relatives (Washington, 2001: 30), since it helped them to validate and clarify the seriousness of the patient's situation (Blumenfield & Schoeps, 1993: 57; Picton, 1995 cited by Hallgrimsdottir, 2000: 612). It might also help them to acknowledge the efforts of the healthcare team and recognize that everything possible was being done for their patient (Swartz, 2002: 84-85).

Furthermore, one strategy that the researcher used was to support the relatives by contacting them periodically, especially if they had been waiting for a long time. The researcher supported them every 30 minutes. It helped them felt nursing staff always concern them and did not left them felt lonely outside. A clinical case study by Leske (1998) found that a family that was forced to wait, without knowledge of the patient's condition, might perceive the staff as lacking respect for their value and dignity, and when families were waiting, they should not be expected to tolerate more than 15 minutes' uncertainty. The relatives felt that the initial minutes in the waiting room were like hours and the hours seemed like days. Thus, contact with the relatives was very important, because it set the foundation for a trusting and respectful relationship between the nurses and the family. It helped reduce family stress, anxiety, uncertainty, while increasing satisfaction with the steps the hospital was taking to care for their injured patient (Leske, 1998: 129-139).

All of the strategies implemented in this intervention are professional characteristics consistent with the nursing care characteristics that expedite meaningful relative-nurse interactions and connect with satisfaction, as suggested by Greeneich and associates (Greeneich, et al., 1993: 65-66). These might cause the relatives in the experimental group to perceive greater support from the nurses, which satisfied their needs. Thus, they felt more appreciative and satisfied with the nursing care. They perceived not only that the patient received the best possible care, but that the nurses also shared their concern.

The results of this study are consistent with many previous studies that found access to information and counseling, and experience of positive nurse interactions, to be important contributors to customer satisfaction (Krishel & Baraff, 1993; Mills

&Sullivan, 1999; Nittaya Dechpituksirikul, B.E. 2543; Phongphanngam, 2003; Rees & Bath, 2000; Thodsama Rotchanapraditse, B.E. 2541). In addition, this is supported by the published anecdotes of many researchers about interventions with families of surgical patients, which reported that, after receiving intra-operative progress reports, family members described feeling more assured and having a greater appreciation for the healthcare staff's caring behaviors (Craig, et al., 1986; Donnell, 1989; Eldridge, 1984; Mitiguy, 1986 cited by Leske, 1996: 424). Moreover, the results of the study by Kathol, which examined the perception of support from nursing staff of surgical patients' families who received informative and supportive staff interaction, also found that increasing staff interaction with family members had a positive effect on the degree of perceived support from the nurse (Kathol, 1984: 131-137). This is congruent with the results of research into needs assessment of family members in the surgical waiting area. The result showed that personal contact, which consists of receiving news and support from the surgical nurse coordinator, consulting with a physician, encountering friendly staff members who answer questions, or receiving encouragement from a religious representative, were very important factors for family member comfort. Family members said these supports were invaluable in reducing their fears and anxieties during the waiting period (Carmichael & Agre, 2002: 1077-1083).

CHAPTER 6
CONCLUSION

This study, of quasi-experimental research design, aimed to assess the effects of informational and emotional support on the anxiety and satisfaction of relatives of accident patients during the waiting period at the accident and emergency department. It was conducted based on the conceptual framework of the stress, appraisal, and coping theory of Lazarus and Folkman (1984).

The subjects were the relatives of accident patients who were waiting for the patient during the emergency treatment period at the accident and emergency department of Somdejphraputthalerdlha Hospital, from April-August 2003. Sixty subjects were selected by purposive sampling technique and divided into two groups, a control group and an experimental group, by daily random assignment. There were 30 subjects in each group. The relatives in the control group received routine nursing care while the relatives in the experimental group received routine nursing care plus informational and emotional support provided by the researcher.

The instruments used in this study consisted of intervention and data collection instruments. The instruments for intervention were the informational and emotional support guideline and an emergency room booklet, which were developed by the researcher. The instruments for data collection included the demographic data collection form for the relatives and the patients, the severity of injury classification form, the numeric scale of anxiety, and the satisfaction questionnaire.

Data collection commenced after permission to conduct the study was obtained from the administrators and the head nurse of the accident and emergency department of Somdejphraputthalerdlha Hospital. The subjects who met the inclusion criteria were approached. The researcher provided information regarding the study and asked for their consent to participate in the study. The demographic data of the subjects in both groups were collected, and the pre-test anxiety were evaluated. Then, the subjects

in the control group received the routine nursing care provided by the staff nurses, while the relatives in the experimental group received routine nursing care plus the informational and emotional support provided by the researcher, according to the determined guideline. After that, before transferal of the patient from the accident and emergency department, the subjects in both groups were evaluated the post-test anxiety and the satisfaction to nursing care.

All of the data were analyzed using the computer package for Windows. The subjects' demographic data were analyzed by descriptive statistics and the demographic characteristics of the subjects in both groups were compared by Chi-square or Fisher's exact probability test. A comparison of the pre-test and post-test anxiety scores within the control and experimental groups was done by Wilcoxon Signed-Ranks Test. A comparison of the mean differences in anxiety scores for the pre- and post-test, between the control group and the experimental group, was done by independent t-test. The mean satisfaction scores of the control group and the experimental group were compared by independent t-test.

The findings of the study were as follows:

1. The post-test anxiety scores of the relatives in both groups were statistically significantly lower than pre-test (control group $p < .01$; experimental group $p < .001$).

2. The mean of differences in anxiety scores for the pre-test and post-test, of the relatives between the two groups were not statistically significantly different ($p > .05$).

3. The satisfaction mean score of the relatives in the experimental group was statistically significantly higher than the control group ($p < .001$).

From this study, it may be summarized that informational and emotional support can help promote the satisfaction with nursing care of relatives while waiting at the accident and emergency department.

Limitations

1. The experimental treatment and all data collection throughout the study were conducted by the researcher. While this had positive effects on consistency of implementation, however, there was a risk of a Hawthorne effect among the participants and unconscious bias on the part of the researcher.

2. The subjects in this study were recruited from one setting. Thus, generalization of the results may be limited. Implementation of the intervention in other accident and emergency departments should be concerned with the design and specific details, which may have to be modified according to each setting.

Recommendations

The findings of this study contain several implications for the nursing profession, including nursing practice and nursing research.

Implications for nursing practice

1. The results of this study provide a means for improving current nursing practice. The anxiety of the relatives who received the intervention tended to decrease more than that of the relatives who did not receive the intervention. Moreover, the result also indicated that the relatives who were provided with this support had higher levels of satisfaction. Therefore, this intervention should be instituted as policy for caring for relatives in crisis in this area, to assist relatives reduce feelings of fear, isolation, and uncertainty about the situation, and to promote satisfaction with nursing care, because relatives are a vulnerable group that has been overlooked in the consideration of care. However, nurses should be trained before implementing practice. They should understand the program and techniques of providing support, such as approaching, establishing rapport, and emotional support techniques.

2. From the study, the interaction between the researcher and the relatives was found to be an important strategy that the relatives needed in their crisis, contributing to trust and rapport. The relatives felt that the nurse shared their concern. Thus the emergency nurse at the accident and emergency department should also concern and be aware of nurse-relative interactions in a crisis situation, which may provide strong support to achieving holistic care and promoting the quality of healthcare services.

3. An emergency room booklet, used with the subjects in the experimental group in the current study, appeared to be another useful information resource. However, it might have had too much content for the relatives in this situation. The relatives were often interested or read only those details that related to their immediate concerns, such preparing for reimbursement of the patient's healthcare expenditures. Thus, written material supporting verbal information for the relatives at the accident and emergency department should be in the form of specific information leaflets that the relatives can choose according to their needs. Nevertheless, this booklet should also be formally evaluated in the future to confirm its effectiveness.

Implications for nursing research

The result of this present study revealed no statistically significant difference between the anxiety scores of the relatives in both groups. However it showed the trend of difference. Therefore, the suggestion of further studies are as follows:

1. The factors influencing anxiety of relatives during the waiting period at the accident and emergency department should be more extensively explored.

2. Similar studies should be conducted with larger groups of subjects or replicated in other accident and emergency departments with more consideration of related factors, to confirm the effectiveness of this informational and emotional support program.

3. This program should be tested for its effectiveness on anxiety among specific groups of subjects, such as the relatives of patients with same specific type of accident, or the same relationship to the patient.

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APPENDIX

APPENDIX A
ADDITIONAL ANALYSIS

Table 7 Problem, setting after transferred from the accident and emergency department of the patients, and anxiety scores of the relatives in the control group

Case No.	Problem	Setting after transferred	Pre-anxiety score	Post-anxiety score
1	LCW with Myalgia and Abdominal injury	General Ward	80	30
2	Large LCW at Palm with tear tendon	OR	50	50
3	Open Fx. left Femur and left 3rd Phalange	OR	80	100
4	Multiple abrasion wounds and muscle sprain	Discharge	100	50
5	LCW at upper left Eyelid with Hyphema	General Ward	80	50
6	LCW at Face	Discharge	100	80
7	Burn at Face and both Arms	General Ward	50	50
8	LCW at right Ankle with tear muscle and tendon	OR	60	100
9	Head injury and Fx.left Clavicle	General Ward	50	30
10	Head injury	General Ward	98	98
11	Chest and Abdominal injury	General Ward	100	100

Table 7 Problem, setting after transferred from the accident and emergency department of the patients, and anxiety scores of the relatives in the control group (Continued)

Case No.	Problem	Setting after transferred	Pre-anxiety score	Post-anxiety score
12	Head injury	ICU	100	60
13	Head injury	General Ward	100	100
14	- Bleeding both eyes - Fx. Pelvis, left Acetabulum, left Tibia, and right Ankle	ICU	100	80
15	- Neck injury - Cut wound right Wrist and right Calf	OR	100	100
16	Fx. rib 11-15	General Ward	60	50
17	Multiple abrasion wounds and Ankle sprain	Discharge	100	50
18	Head injury	General Ward	100	50
19	Head injury	General Ward	80	70
20	Head injury with intra cerebral hemorrhage	ICU	100	100
21	Open Fx. both bones right Leg	General Ward	100	99
22	Multiple abrasion wounds and Fx. Mandible	General Ward	80	50
23	Burn both Legs and Penis	General Ward	100	100

Table 7 Problem, setting after transferred from the accident and emergency department of the patients, and anxiety scores of the relatives in the control group (Continued)

Case No.	Problem	Setting after transferred	Pre-anxiety score	Post-anxiety score
24	Open Fx. Mandible	General Ward	100	100
25	Multiple abrasion wounds with closed Fx. right Forearm	General Ward	100	50
26	Multiple LCW wounds and tear tendon of left 5th Finger	General Ward	70	40
27	LCW at head and closed Fx. neck of right Femur	General Ward	100	100
28	Fx. shaft of left Femur	General Ward	100	80
29	Compound Fx. Skull with Brain injury and expose brain	Refer	100	100
30	Head injury	General Ward	80	50

Table 8 Problem, setting after transferred from the accident and emergency department of the patients, and anxiety scores of the relatives in the experimental group

Case No.	Problem	Setting after transferred	Pre-anxiety score	Post-anxiety score
1	- LCW at Face and right leg - Closed Fx. left Intertrochanteric and left shaft of Femur	General Ward	100	80
2	- Multiple LCW wounds - Closed Fx. right Femur - Compound Fx. right Long Finger	General Ward	80	40
3	LCW with Fx. Pelvis and rupture Bladder	OR	100	100
4	- Fx. Rib with Hemothorax - Open Fx. both bones right Arm	OR	80	80
5	LCW with tear muscle at Chest	General Ward	70	10
6	Stab wound with pneumothorax	General Ward	70	50
7	LCW and multiple abrasion wounds at Face	Discharge	100	90
8	Head injury with neuroproblem	General Ward	80	50
9	Head injury with Maxilla facial injury	OR	50	30
10	Head injury	General Ward	100	100

Table 8 Problem, setting after transferred from the accident and emergency department of the patients, and anxiety scores of the relatives in the experimental group (Continued)

Case No.	Problem	Setting after transferred	Pre-anxiety score	Post-anxiety score
11	Head injury with closed Fx. both bones left Leg	General Ward	70	70
12	Multiple LCW with Abdominal injury	General Ward	50	40
13	Gun shot wound at Head	OR	100	100
14	Multiple avulsion and dirty wounds	General Ward	100	50
15	- Multiple LCW - Fx. left Wrist and Pelvis - Chest injury	General Ward	60	100
16	Dog bite with multiple LCW at Face	Discharge	100	50
17	- Head injury - Multiple LCW - Fx both bones right wrist	ICU	95	100
18	Open Fx. left Humerus	General Ward	70	90
19	Fx. left Acetabulum and left distal end of Radius	General Ward	80	50
20	Open Fx. both bones left Arm	General Ward	90	50
21	Open Fx. left distal Humerus and closed Fx. both bones left Arm	OR	70	50
22	Head injury with Fx. left Forearm	General Ward	100	70

Table 8 Problem, setting after transferred from the accident and emergency department of the patients, and anxiety scores of the relatives in the experimental group (Continued)

Case No.	Problem	Setting after transferred	Pre-anxiety score	Post-anxiety score
23	Large multiple LCW	OR	100	80
24	Fx. dislocate right Hip	General Ward	100	100
25	Head injury with Fx. right Clavicle and proximal Humerus	General Ward	100	80
26	Multiple LCW at Face	General Ward	100	50
27	Open Fx. left Talus and closed Fx. right calcaneus	OR	50	40
28	LCW	Discharge	100	50
29	Eyelid injury with hyphema left eye	General Ward	100	50
30	Large multiple LCW with expose bones and muscle	OR	100	80

Table 9 Number and percentage of the patients' setting after transferred from the accident and emergency department

Setting	Total (n=60)		Control group (n=30)		Experimental group (n=30)	
	n	%	n	%	n	%
General Ward	37	61.7	19	63.3	18	60.0
Operation Room	12	20.0	4	13.3	8	26.7
Intensive Care Unit	4	6.7	3	10.0	1	3.3
Refer	1	1.7	1	3.3	-	-
Discharge	6	10.0	3	10.0	3	10.0

Table 10 Number and percentage of the patients in each setting after transferred from the accident and emergency department grouped by the relatives' anxiety score

Setting	Equal / Increase of relatives' post-anxiety score		Decrease of relatives' post-anxiety score	
	Control group (n=13)	Experimental Group (n= 9)	Control group (n=17)	Experimental Group (n= 21)
	n (%)	n (%)	n (%)	n (%)
General Ward	7 (53.8)	5 (55.6)	12 (70.6)	13 (61.9)
Operation Room	4 (30.8)	3 (33.3)	-	5 (23.8)
Intensive Care Unit	1 (7.7)	1 (11.1)	2 (11.8)	-
Refer	1 (7.7)	-	-	-
Discharge	-	-	3 (17.6)	3 (14.3)

APPENDIX B
DOCUMENTARY PROOF OF ETHICAL CLEARANCE

No. 101/2003

Documentary Proof of Ethical Clearance

The Committee on Human Rights Related to

Human Experimentation

Mahidol University, Bangkok

.....

Title of Project : The Effect of An Informational and Emotional Support on Anxiety and Satisfaction of Relatives of the Patients with Accident during Waiting Period at the Accident and Emergency Department

Principal Investigator : Miss Somkid Panprasert

Name of Institution : Faculty of Medicine Ramathibodi Hospital

Approved by the Committee on Human Rights Related to Human Experimentation

Signature of Chairman : _____

(Professor Dr. Srisin Khusmith)

Signature of Head of Institute : _____

(Professor Dr. Pornchai Matangkasombut)

Date of Approval : 23 MAY 2003

APPENDIX C

CONSENT TO PARTICIPATE IN RESEARCH STUDY

แบบฟอร์มใบยินยอมให้ทำการวิจัยโดยได้รับการบอกกล่าวและเต็มใจ
(Informed Consent Form)

การวิจัยเรื่อง ผลของการสนับสนุนด้านข้อมูลและอารมณ์ต่อความวิตกกังวลและความพึงพอใจของญาติผู้ป่วยอุบัติเหตุขณะรอผู้ป่วยรับการรักษาที่แผนกอุบัติเหตุและฉุกเฉิน

วันที่ให้คำยินยอม วันที่.....เดือน.....พ.ศ.....

ก่อนที่จะลงนามในใบยินยอมให้ทำการวิจัยนี้ ข้าพเจ้าได้รับการอธิบายจากผู้วิจัยถึงวัตถุประสงค์ของการวิจัย วิธีการวิจัย และประโยชน์ที่จะเกิดขึ้นจากการวิจัยอย่างละเอียด และมีความเข้าใจดีแล้ว

ผู้วิจัยรับรองว่าจะตอบคำถามต่างๆที่ข้าพเจ้าสงสัยด้วยความเต็มใจ ไม่ปิดบังซ่อนเร้น จนข้าพเจ้าพอใจ

ข้าพเจ้ามีสิทธิที่จะบอกเลิกการเข้าร่วมในโครงการวิจัยนี้เมื่อใดก็ได้ และเข้าร่วมโครงการวิจัยนี้โดยสมัครใจ และการบอกเลิกการเข้าร่วมการวิจัยนี้จะไม่มีผลต่อการรักษาที่ญาติของข้าพเจ้าพึงได้รับต่อไป

ผู้วิจัยรับรองว่าจะเก็บข้อมูลเฉพาะเกี่ยวกับตัวข้าพเจ้าเป็นความลับ และจะเปิดเผยได้เฉพาะในรูปที่เป็นผลสรุปการวิจัย การเปิดเผยข้อมูลเกี่ยวกับตัวข้าพเจ้าต่อหน่วยงานต่างๆที่เกี่ยวข้องกระทำได้เฉพาะกรณีจำเป็นด้วยเหตุผลทางวิชาการเท่านั้น

ผู้วิจัยรับรองว่าหากมีข้อมูลเพิ่มเติมที่ส่งผลกระทบต่อการวิจัย ข้าพเจ้าจะได้รับการแจ้งให้ทราบโดยไม่ปิดบังซ่อนเร้น

ข้าพเจ้าได้อ่านข้อความข้างต้นแล้วและมีความเข้าใจดีทุกประการ และได้ลงนามในใบยินยอมนี้ด้วยความเต็มใจ

ลงนาม.....ผู้ยินยอม

ลงนาม.....พยาน

ลงนาม.....พยาน

ในกรณีที่ผู้ยินยอมตนให้ทำการวิจัยไม่สามารถอ่านและเขียนหนังสือได้ จะต้องได้รับการยินยอมในขณะที่ยังมีสติสัมปชัญญะ และระบุข้อความไว้ตามนี้ ข้าพเจ้าไม่สามารถอ่านหนังสือได้ แต่ผู้วิจัยได้อ่านข้อความในใบยินยอมนี้ให้ข้าพเจ้าฟังจนเข้าใจดีแล้ว ข้าพเจ้าจึงลงนาม หรือประทับลายนิ้วหัวแม่มือของข้าพเจ้าในใบยินยอมนี้ด้วยความเต็มใจ

ลงนาม.....ผู้ยินยอม
(หรือประทับลายนิ้วหัวแม่มือ)
ลงนาม.....พยาน

ลงนาม.....พยาน

APPENDIX D

INSTRUMENTS FOR INTERVENTION

Part I : รูปแบบการสนับสนุนด้านข้อมูลและอารมณ์
(The informational and emotional support guideline)

แนวทางการสนับสนุนด้านข้อมูลและอารมณ์แก่ญาติผู้ป่วยอุบัติเหตุ
ขณะรอผู้ป่วยรับการรักษาที่แผนกอุบัติเหตุและฉุกเฉินตามรูปแบบที่สร้างขึ้น

รูปแบบการพยาบาลนี้จัดทำขึ้นเพื่อเป็นแนวทางในการสนับสนุนด้านข้อมูลและอารมณ์แก่ญาติผู้ป่วยอุบัติเหตุขณะรอผู้ป่วยรับการรักษาที่แผนกอุบัติเหตุและฉุกเฉิน โดยแนวทางหลักประกอบด้วย การประเมินความพร้อมของญาติผู้ป่วยก่อนให้การสนับสนุนด้านข้อมูลและอารมณ์ และการสนับสนุนด้านข้อมูลและอารมณ์ 3 ระยะ ดังนี้

ก่อนให้การสนับสนุนด้านข้อมูลและอารมณ์ ผู้วิจัยจะประเมินความพร้อมของญาติผู้ป่วยก่อน โดย

1. สร้างสัมพันธภาพกับญาติของผู้ป่วย กล่าวทักทายและแนะนำตนเองด้วยท่าทางสุภาพ.

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ระยะที่ 1 เมื่อญาติให้ข้อมูลเกี่ยวกับประวัติการเจ็บป่วยของผู้ป่วยแก่พยาบาลประจำแผนกอุบัติเหตุและฉุกเฉินเรียบร้อยแล้ว

Intervention : การให้ข้อมูลเกี่ยวกับสภาพอาการและการรักษา

ระยะเวลาที่ใช้ : ประมาณ 10-15 นาที

ผู้วิจัยให้การสนับสนุนญาติผู้ป่วย ดังนี้

1. ให้ข้อมูลเกี่ยวกับสภาพอาการและการรักษาพยาบาลที่ผู้ป่วยได้รับ ได้แก่
   - ขณะนี้ผู้ป่วยได้รับการวินิจฉัยจากแพทย์ในเบื้องต้นว่ามีอาการบาดเจ็บของ.....

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ระยะที่ 2 เมื่อผู้ป่วยได้รับการรักษาพยาบาลในเบื้องต้นแล้ว

Intervention : การให้ญาติได้พบกับผู้ป่วย

ระยะเวลาที่ใช้ : ประมาณ 10-15 นาที

ผู้วิจัยให้การสนับสนุนญาติผู้ป่วย ดังนี้

1. เตรียมญาติก่อนเข้าเยี่ยม

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ระยะที่ 3 เมื่อผู้ป่วยมีอาการเปลี่ยนแปลงหรือทุกๆ 30 นาที หลังจากญาติเข้าพบผู้ป่วย

Intervention : การให้ข้อมูลเกี่ยวกับความก้าวหน้าของสภาพอาการและการรักษา

ระยะเวลาที่ใช้ : ประมาณ 5-10 นาที ต่อ ครั้ง

ผู้วิจัยให้การสนับสนุนญาติผู้ป่วย ดังนี้

1. แจ้งสภาพอาการเปลี่ยนแปลงของผู้ป่วยและการรักษาพยาบาลที่เพิ่มขึ้นหรือเปลี่ยนแปลงไปพร้อมเหตุผล

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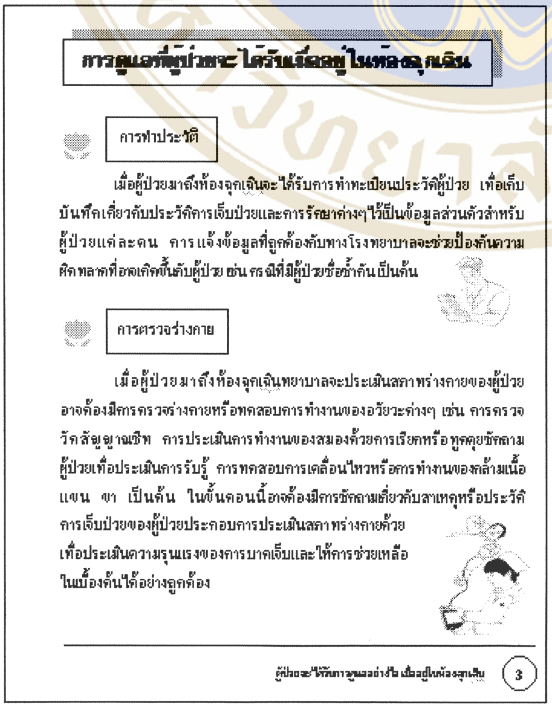
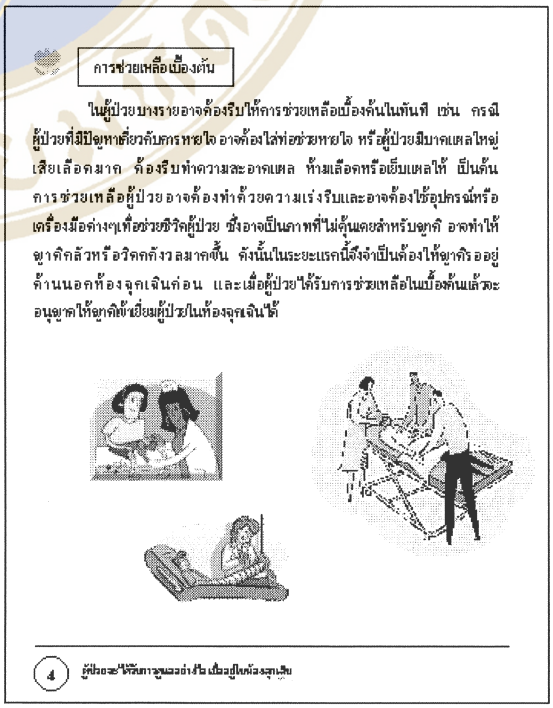
หมายเหตุ การให้การสนับสนุนด้านข้อมูลและอารมณ์ตามรูปแบบที่สร้างขึ้นนี้ คำนึงถึงความต้องการของญาติผู้ป่วยอุบัติเหตุเป็นหลัก การให้การสนับสนุนจะต้องให้ให้ครบตามแนวทางหลักนี้ทุกข้อ ส่วนรายละเอียดและการเรียงลำดับก่อนหลังขึ้นอยู่กับสถานการณ์ของญาติผู้ป่วยแต่ละราย

Part II: ตัวอย่างเอกสารประกอบการให้ข้อมูล
(An emergency room booklet)





APPENDIX E
INSTRUMENTS FOR DATA COLLECTION

Part I: แบบบันทึกข้อมูลส่วนบุคคลของญาติผู้ป่วย
(Relative's demographic data collection form)

ข้อมูลลำดับที่.....

วัน เดือน ปี.....

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1. เพศ ( ) ชาย ( ) หญิง
2. อายุ.....ปี.....เดือน
3. ความสัมพันธ์กับผู้ป่วย
   - ( ) สามี / ภรรยา
   - ( ) บิดา / มารดา
   - ( ) บุตร
   - ( ) อื่นๆ

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8. ประสบการณ์เกี่ยวกับเหตุการณ์อุบัติเหตุที่เกิดขึ้น
   - ( ) มี.....ครั้ง
   - ( ) ไม่มี

Part II: แบบบันทึกข้อมูลส่วนบุคคลของผู้ป่วย
(Patient's demographic data collection form)

ข้อมูลลำดับที่ .....

วัน เดือน ปี .....

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1. เพศ ( ) ชาย ( ) หญิง
2. อายุ.....ปี
3. ชนิดของอุบัติเหตุที่ได้รับ.....
4. การวินิจฉัยโรค.....
5. ประเภทของผู้ป่วยตามความรุนแรงของการบาดเจ็บ
   ( ) ฉุกเฉินมาก ( ) ฉุกเฉิน
6. สิทธิค่ารักษาพยาบาลที่ใช้.....

Part III: แบบประเมินความรุนแรงของการบาดเจ็บของผู้ป่วย
(Severity of injury classification form)

ข้อมูลลำดับที่ .....

วัน เดือน ปี .....

คำชี้แจง ผู้ป่วยจะต้องมีอาการดังต่อไปนี้ **อย่างน้อย 1 อาการ**

สำหรับ อาการที่มี * หมายถึง ผู้ป่วยควรมีอาการ หรือ ลักษณะทางคลินิกในข้ออื่นๆ ร่วมด้วย

สิ่งที่ประเมิน	ผู้ป่วยฉุกเฉินมาก	ผู้ป่วยฉุกเฉิน
ความรู้สึกตัว	( ) หมดสติ ชักตลอดเวลาหรือชักจนเขียว	( ) ไม่รู้สึกตัว ชัก เริ่มมีอาการของอัมพาต
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อื่นๆ		( ) เจ็บปวดมาก ทุรนทุราย ( ) มือเท้าเย็น ซีด เหงื่อแตก * ( ) บาดแผลขนาดใหญ่และมีหลายแห่ง 1. ตำแหน่ง..... ขนาด..... 2. ตำแหน่ง..... ขนาด..... 3. ตำแหน่ง..... ขนาด.....

Part IV: แบบวัดความวิตกกังวลของญาติผู้ป่วย
(The Numeric Scale of Anxiety)

ข้อมูลลำดับที่.....

วัน เดือน ปี.....

คำชี้แจง แบบวัดนี้เป็นแบบวัดความวิตกกังวลของท่านเกี่ยวกับการประสบอุบัติเหตุของผู้ป่วยในครั้งนี้ ขอให้ท่านประเมินความวิตกกังวลของตัวท่านเอง โดย ตอบเป็นคะแนนความวิตกกังวลที่ตรงกับระดับความรู้สึกวิตกกังวลของท่านในขณะนี้ในข้อ 1 พร้อมทั้งระบุสิ่งที่ท่านรู้สึกวิตกกังวลเกี่ยวกับการเจ็บป่วยของผู้ป่วยในขณะนี้ในข้อ 2 คำตอบของท่านไม่มีถูกหรือผิดและจะไม่มีผลกระทบใดๆทั้งสิ้นต่อท่านและผู้ป่วยในการให้การรักษาพยาบาล ข้อมูลที่ได้จะสรุปออกมาในภาพรวมเพื่อนำไปเป็นแนวทางในการปรับปรุงการให้บริการให้มีคุณภาพดียิ่งขึ้น

1. **ท่านรู้สึกวิตกกังวลเกี่ยวกับการเจ็บป่วยของผู้ป่วยในขณะนี้มากน้อยเพียงใด ?**

คะแนนความวิตกกังวลมีค่าตั้งแต่ 0 ถึง 100 คะแนน โปรดเลือกค่าที่ท่านรู้สึกว่าตรงกับระดับความวิตกกังวลของท่านมากที่สุดในขณะนี้ ซึ่งหากเปรียบเทียบกับตำแหน่งต่างๆ บนเส้นแบบวัด มีความหมาย ดังนี้ คือ

ปลายด้านซ้ายสุด (0 คะแนน) หมายถึง ท่านไม่มีความวิตกกังวลเลย

ระดับความวิตกกังวลจะเพิ่มมากขึ้นเรื่อยๆ ตามคะแนนไปทางด้านขวาของเส้นแบบวัด

ปลายด้านขวาสุด (100 คะแนน) หมายถึง ท่านมีความรู้สึกวิตกกังวลมากที่สุด

|---|

0 คะแนน
ไม่มีความวิตกกังวลเลย

100 คะแนน
มีความวิตกกังวลมากที่สุด

ขณะนี้ท่านรู้สึกวิตกกังวล.....คะแนน

2. **สิ่งที่ท่านรู้สึกวิตกกังวลเกี่ยวกับการเจ็บป่วยของผู้ป่วยในขณะนี้ คือ**.....

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Part V: แบบวัดความพึงพอใจของญาติผู้ป่วยต่อการพยาบาลที่ได้รับ (The satisfaction questionnaire)

ข้อมูลลำดับที่.....

วัน เดือน ปี.....

คำชี้แจง แบบวัดนี้เป็นแบบวัดความพึงพอใจของท่านต่อการพยาบาลที่ท่านได้รับขณะรอผู้ป่วยรับการรักษาที่แผนกอุบัติเหตุและฉุกเฉิน เพื่อนำมาปรับปรุงคุณภาพการให้การพยาบาลต่อไป ข้อมูลที่ได้จากคำตอบของท่านจะถือเป็นความลับและนำเสนอโดยภาพรวมพร้อมกับญาติผู้ป่วยคนอื่นๆ จะไม่มีผลต่อการบริการที่ท่านและผู้ป่วยได้รับแต่อย่างใด

ข้อความทั้งหมดมี 20 ข้อ แต่ละข้อไม่มีคำตอบที่ถูกหรือผิด คำตอบที่ดีที่สุดคือ คำตอบที่ตรงกับความรู้สึกของท่านมากที่สุด ขอให้ท่านตอบทุกข้อโดยทำเครื่องหมาย ✓ ลงในช่องด้านขวาของข้อความ เมื่อพิจารณาแล้วว่าตรงกับความพึงพอใจของท่าน โดย

ระดับความพึงพอใจมาก หมายถึง ท่านพึงพอใจต่อการพยาบาลที่ได้รับมาก
ระดับความพึงพอใจปานกลาง หมายถึง ท่านพึงพอใจต่อการพยาบาลที่ได้รับปานกลาง
ระดับความพึงพอใจน้อย หมายถึง ท่านพึงพอใจต่อการพยาบาลที่ได้รับน้อย
ไม่พอใจ หมายถึง ท่านไม่พึงพอใจต่อการพยาบาลที่ได้รับ
ไม่ได้รับ หมายถึง ท่านไม่ได้รับการพยาบาลนั้นๆ

ตัวอย่าง

การพยาบาลที่ได้รับ	ระดับความพึงพอใจ				ไม่ได้รับ
	มาก	ปานกลาง	น้อย	ไม่พอใจ	
ท่านพึงพอใจที่..... 1. พยาบาลแสดงความเอาใจใส่สอบถามความต้องการของท่าน	✓				

แสดงว่า ท่านพึงพอใจมากที่พยาบาลแสดงความเอาใจใส่สอบถามความต้องการของท่าน

การพยาบาลที่ได้รับ	ระดับความพึงพอใจ				ไม่ได้รับ
	มาก	ปานกลาง	น้อย	ไม่พอใจ	
ท่านพึงพอใจที่..... 1. พยาบาลทักทายและแนะนำตัว					
2. พยาบาลมีหน้าตาและท่าทางที่แสดงความเป็นมิตร					
3. พยาบาลพูดคุยกับท่านด้วยคำพูด วิธีการพูดและน้ำเสียงที่สุภาพและเป็นกันเอง					
4. พยาบาลแสดงความเอาใจใส่สอบถามความต้องการของท่าน					
5. พยาบาลเปิดโอกาสให้ท่านได้ระบายความรู้สึก					
6. พยาบาลรับฟังปัญหาหรือความทุกข์ของท่านอย่างตั้งใจ					
7. พยาบาลแสดงท่าทีเข้าใจและยอมรับการแสดงออกทางอารมณ์และความรู้สึกไม่สบายใจของท่าน					
8. พยาบาลชี้แจงเกี่ยวกับขั้นตอนทั่วไปในการดูแลผู้ป่วยในห้องฉุกเฉินให้ท่านทราบ					
. . . .					
20. พยาบาลแสดงความห่วงใย ไม่ทอดทิ้งท่านโดยให้ข้อมูลท่านอย่างต่อเนื่องเป็นระยะๆ					

APPENDIX F
LIST OF EXPERTS

The content of the instruments for intervention and the instruments for data collection in this study were validated by four consulting experts as follow:

1. Assoc. Prof. Dr. Pongsri Srimoragot
   Department of Surgical Nursing, Faculty of Nursing,
   Mahidol University
2. Assoc. Prof. Sudapan Thanjira
   Coordinator of Division of Emergency Nursing, Department of Nursing,
   Faculty of Medicine, Ramathibodi Hospital, Mahidol University
3. Assoc. Prof. Siraya Summawart
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4. Mrs. Sarika Somsri
   Registered Nurse 6, Division of Emergency Nursing,
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