Lived experience of patients *being cared for* in ICUs in Southern Thailand

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ABSTRACT

Background: Technologies in ICUs are increasingly saving human lives. The challenge for nursing in ICUs is to use technologies competently in order to know patients more fully within the harmonized view of technology, nursing and human care.

Purpose: The purpose of this study was to describe the meaning of the experiences of patients who were dependent on technologies while *being cared for* in ICUs.

Method: A hermeneutic phenomenological approach was used to describe the experiences of 10 participants who were discharged from adult ICU units in Southern Thailand. Lincoln and Guba's criteria for trustworthiness was used to establish the rigour of the study.

Findings: Four thematic categories structured the meaning of the participants' experiences: *Living suffering; Harmonizing living; Being in trust and security; and Transitioning to a better life*. These thematic categories were reflective of the four lived worlds of corporeality, relationality, spatiality and temporality.

Conclusion: The description of *being cared for* was based on the narratives of patients who were discharged from ICUs in Southern Thailand. In conclusion, the lived experience of *being cared for* with technologies in ICU was described as *living suffering within trust and security, and harmonizing living while transitioning to a better life*.

Relevance to clinical practice: The findings of the study could be used to design innovative nursing strategies and interventions to enhance understanding of human health and well-being while maintaining and advancing competencies in the use of technologies for human care.

Key words: Being cared for ● Hermeneutic phenomenology ● Human care ● ICU ● Technological competency

INTRODUCTION

Since the early 1960s, nurses who practice in intensive care settings have dramatically increased the used of technologies in their nursing of critically ill persons (Barnard, 1997). Technologies in ICUs, such as mechanical ventilators, cardiac pacemakers and hemodialysis machines, are employed to save and sustain patients' lives. Critically ill persons who are dependent on technologies are often seen as objects of care (Almerud *et al.*, 2007; Karlssona and Forsbergb, 2008). From the theoretical view of *Technological Competency as Caring in Nursing* (Locsin, 2005), health

care technologies are those required tools used by nurses in order to know persons in the moment. Consequently, the challenge for nursing in ICUs is to use technologies competently in order to know persons more fully within the harmonized view of technology, nursing and human care (Locsin, 2005; Locsin, 2010).

Expertise in the use of technologies of care is demanded of nurses who care for persons dependent on these technologies. This demand accentuates the need for ICU nurses to understand the experiences of those *being cared for* while living with these technologies (Locsin, 2005). In doing so, nurses are usually well informed about the human experiences that can influence quality nursing and human care. The competency demanded of nurses in high-tech settings, may distract nurses from focusing on the person, thus causing concern about their own competency in knowing the persons. This is frequently expressed as a disregard for their patients' nursing care (Almerud *et al.*, 2007). In Kongsuwan and Locsin's (2011) study, they focused on Thai nurses' experience of caring for

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persons using life-sustaining technologies in ICUs. They found it imperative that ICU nurses have awareness and understanding of patients' experiences of *being cared for* when technologies were used. This is crucial in the delivery of quality human health care, as it can provide the critical nursing needed to deliver the quality patient care that is crucial to the attainment and maintenance of human health and well-being.

A review of the literature produced studies that described patients' dependency on technologies in some countries in the North America, Europe and Australia. Most of these studies were undertaken in intensive care settings using qualitative research designs using phenomenological approaches. Several studies explored the experiences of being patients in ICU (Almerud *et al.*, 2007; Hofhuisa *et al.*, 2008; Karlssona and Forsbergb, 2008). Few studies (Johnson *et al.*, 2006; Schou and Egerod, 2008; Foster, 2010) specified the experiences of patients on long-term mechanical ventilation, on tracheotomy, and those who were on treatment for post coronary bypass graft and were being weaned from mechanical ventilators.

In Thailand, the use of technologies in ICUs multiplied with an increase in demand for high-tech care. Few studies were found that related technology and caring based on the experiences of ICU nurses (Kongsuwan and Locsin, 2011) and family caregivers (Netsawai, 2004; Borvornluck *et al.*, 2012). Only one study explored the experience of being weaned from mechanical ventilators (Darayon *et al.*, 2009). This led the researchers to conclude that the experiences of persons dependent upon these technologies for care in ICUs in Thailand have not been extensively studied; this area is little known to nurses and other health care personnel.

In the theory of *Technological Competency as Caring in Nursing* (Locsin, 2005) two phenomena were identified as integral to the value of the theory in practice. These are: *being cared for* and *caring for*. The former is focused on the experiences of the one nursed, while the latter is based on the experience of the nurse. The essentiality of these two phenomena is highlighted by the relatedness that exists between these critical aspects of caring in ensuring quality nursing. The appreciation and use of the theory guiding nursing care is found essential in knowing persons as a critical feature of human health and well-being.

This study focuses on the patients' experiences of *being cared for* with technologies in ICUs in Southern Thailand. Understanding this experience fosters an appreciation of being a patient in ICUs who are dependent on technologies for their care. These findings could have influence on the development of innovative strategies and interventions to assist nurses attain and maintain their competency in delivering human care in high-technology settings.

The theory of Technological Competency as Caring in Nursing

Technological Competency as Caring in Nursing (Locsin, 2005) is a middle range theory grounded in *Nursing as Caring* (Boykin and Schoenhofer, 2001). Four of the five theoretical assumptions of the theory provide structural perspectives influencing the understanding of the experience of patients who were *being cared for* in ICUs. The four theoretical assumptions are (1) persons are caring by virtue of their humanness; (2) human beings are complete regardless of composite parts; (3) knowing persons is a continuous process in which the nurse and nursed focus on appreciating, celebrating, supporting and affirming each other (knowing each other mutually recognizes persons as participants in their care, instead of as aspects and objects of our care) and (4) technology is used to know persons as whole, from moment to moment. Technologies of health and nursing are aspects of care that enable nurses to know human beings more fully as persons who participate in their care, rather than simply as recipients of our care. The fifth theoretical assumption is focused on the recognition of nursing as a discipline and a professional practice.

Purpose

The purpose of the study was to describe the meaning of the experiences of patients *being cared for* in ICUs who were dependent on technologies for human care.

METHODS
Design and setting

A hermeneutic phenomenology was used to discern the meanings of the lived experience made evident through interpretive texts of the lifeworlds (Van Manen, 1990). The study was conducted in Hat Yai city, Songkhla province, in Southern Thailand in 2010. The participants were previous ICU patients who were discharged from one of the hospitals in the city. These patients were dependent on technologies for care, such as mechanical ventilators, cardiac pacemakers, and hemodialysis machines and the technological monitoring of data represented the patients' human physiological dynamics. These dynamics included vital signs, oxygenation and electrocardiographic data; or central venous pressure and pulmonary pressure. Patients who have experienced these technological dependencies were recruited as participants and interviewed for the study.

The recruitment of prospective participants was done after the patients were discharged from the ICUs by word of mouth. Participants were selected based on the following criteria: they received intensive care while a patient in the ICU for at least 2 days; experienced care with technologies such as ventilators and intrusive cardiac care monitors while in the ICUs; agreed to participate in the study; able to describe their experiences in Thai language; and whose ages ranged between 18 and 80 years.

Ethical considerations

The study protocol was approved by the Institutional Review Board, Human Subjects Committee of Florida Atlantic University. It is the IRB institution on record because a co-author is a faculty member of the university. Furthermore, since selection of participants was done after the participants were discharged from the hospital and done by word of mouth the study did not involve any institutions in Thailand. Therefore IRB approval was not required from any other institution.

A detailed description and the associated procedures of the study were explained to each participant who then signed the informed consent form. The participants' personal identities were not used in data storage and reports; each participant was given a coded identification number to identify their personal demographics, including the interview data. These steps maintained confidentiality. These data were kept in a locked cabinet in the researchers' office.

Description of participants

Ten participants met the inclusion criteria. Table 1 exhibits the demographic data. There were more men ($n = 7$) than women ($n = 3$). The average age was 43·9 years old. Their length of stay in the ICU was 50·8 days. The earliest interview was conducted approximately 2 months after discharge, and the latest interview was performed almost 5 years after discharge from the hospital. The participants' recall of their experiences in a highly technologically dependent environment was integral to the study about the lived experiences of the participants.

Data collection

The purposeful participant selection method was used to recruit the participants. This was undertaken by personal contacts and word of mouth. Interview sessions were arranged mutually, and conducted in suitable and congenial locations such as in private homes or at the researcher's office. The participant interviews were conducted in Thai using any of the following interview questions allowing the participant to recall and describe their experiences of *being cared for* in ICU.

- Please tell me about your experience(s) of *being cared for* as a person who was dependent on technologies of care while you were in the ICU.
- What is it like to be a person who was dependent on technologies of care while in the ICU unit?
- Tell me what you felt when you were *being cared for* as a person who was dependent on technologies of care while you were in the ICU unit?

Each interview lasted from 45 to 60 min and was recorded on audiotape. A code number was given to each interview. The audiotape recordings were transcribed verbatim. Using the transcribed narratives in the Thai language was critical as this ensured that the derived statements and themes described accurately the lived experiences of the participants. After 10 participants had been interviewed, no new information was found significant to contribute to the descriptions of the experiences.

Data analysis

Van Manen's (1990) hermeneutic phenomenological approach was used to analyse the data. From the transcribed interviews, words, phrases and statements that described the experiences of *being cared for* as persons dependent on technologies in ICUs were identified and highlighted. These were isolated from the statements from which themes reflecting patients' experiences were formed. All essential themes were categorized in the way they reflected Van Manen's (1990) four lived worlds: *spatiality* or lived space; *corporeality* or lived body; *temporality* or lived time and *relationality* or lived relations.

Corporeality provides descriptions of the body as it relates to the phenomenon being studied. Relationality is the association or relationship expressed between the patients, their family and health care providers. Temporality is the lived time that fosters the appreciation of the movement of time concerning experiencing the phenomenon. Spatiality describes the experience of 'space' sometimes understood as 'distance' between the patients and their relationships in terms of how they relate to the phenomenon of *being cared for*. This is expressed as the distance/space of the patients while *being cared for* with technologies in an ICU.

Themes were grouped into thematic categories. The decisions for reflecting themes and thematic categories derived from significant statements within the four lived worlds were determined, shared, compared and agreed upon by the researchers. All analysed and interpreted data were presented as aggregate data.

Table 1 Demographic data of participants ($n = 10$)

Participant	Interview time after discharge from hospital	Age (in year)	Gender	Diagnosis	ICU length of stay	ICU technologies of care
1	5 years	76	Male	Coronary disease post-operative coronary artery bypass graft	SICU, 3 days	Ventilator, thoracic drain, temporary internal pacemaker line
2	1 year	70	Male	Coronary disease post-operative coronary artery bypass graft	SICU, 3 days	Ventilator, thoracic drain, temporary internal pacemaker line
3	2 years	44	Male	Coronary disease post coronary balloon dilatation	MICU, 2 days	Oxygen canular, temporary external pacemaker
4	3 months	29	Female	Systemic Lupus Erythematosus and post arrest and post cesarean section	MICU, 2 months MRCU, 1 month	Ventilator, defibrillator
5	6 months	46	Male	Coronary disease post coronary balloon dilatation	MICU, 2 days	Oxygen via canula, temporary external pacemaker
6	1 year	28	Male	Acute Respiratory Distress Syndrome	MICU, 3 months MRCU, 1 month	Ventilator
7	3 months	31	Female	Gall bladder rupture and pancreatitis with septic shock	SICU, 1 month SRCU, 1·5 months	Ventilator
8	2 months	45	Male	Mitral valve disease Post-operative open heart	SICU, 3 days	Oxygen canular, thoracic drain, temporary internal pacemaker
9	3 years	48	Male	End stage renal disease	MICU, 1 month	Ventilator, hemodialysis machine
10	5 months	22	Female	Sepsis and post arrest and post cesarean section	MICU, 3 months MRCU, 3 months	Ventilator, defibrillator
	$X = 16\cdot3$ months	$X = 43\cdot9$ years			$X = 50\cdot8$ days	

MICU, medical ICU; SICU, surgical ICU; MRCU, medical respiratory care unit; SRCU, surgical respiratory care unit.

These data were translated into English and were reviewed by two nursing professors who were fluent in both English and Thai.

Rigour of the study

Lincoln and Guba's (1985) criteria used to establish the rigour of this study included credibility, transferability, dependability and confirmability. Credibility was reached by recruiting and interviewing participants who met the inclusion criteria and who were able to describe their experiences of *being cared for* when dependent upon technologies for human care. Transferability or 'fittingness' was established by providing rich in-depth descriptions depicting the participants' lived experiences. Dependability or auditability was demonstrated by having another researcher follow the process of the study without reaching contradictory findings. Confirmability was achieved through the researchers' use of audit trails to demonstrate the thought processes associated with the descriptions.

Findings

Four thematic categories with 13 themes reflecting the four lived worlds provided the structure for describing the experience of *being cared for* in ICUs and being dependent on technologies (Table 2).

Lived body: living suffering
Fear and insecurity of not being one's self

Depending on life sustaining technologies affected the participants' perception of their bodies. The participants felt that the bodies they lived in were freakish. They could not control their bodies by themselves as in their normal lives. Instead, the technologies used had determined their physical living.

> *It was uncomfortable when I was dependent on the mechanical technology. It was that I was not being my own self. It was liked I had other things helping me. I couldn't do anything by myself at all. I had*

Four lived worlds	Thematic categories	Themes
Lived body (Corporeality)	Living suffering	- Fear and insecurity of not being one's self
		- Like being in a dream (nightmare)
		- Death is better than suffering
Lived relation (Relationality)	Harmonizing living	- Living with technology
		- Loss of autonomy
		- Sustaining life through family support
		- Not wanting to burden the others
Lived space (Spatiality)	Being in trust and security	- It is like a home
		- Trust and security
Lived time (Temporality)	Transitioning to a better life	- Recognizing own karma
		- Creating hope for living
		- Getting a new lease on life
		- Discovering new meanings of living

the mechanical ventilator, which made me felt like I couldn't have my own breath, but had something like air continuously flown into my throat and my tummy. It (the air flow) was juggled in my tummy. (p. 4)

Fear and insecurity occurred when *being cared for* as patients depending upon technologies for human care. The causes of the fear and insecurity included fear of the machine technologies and the associated care activity. The participants feared the sound of the alarms of the machine technologies because they thought that the machine had some problems or the pipe was disconnected. They lived in insecurity and were aware of monitoring themselves.

I was in fear. I didn't want to take my eyes off from the monitors. I want to know the level of my oxygen intake. When the machine alarmed, I was frightened. Why did it alarm? What was happening with me? (p. 6)

In addition, attaching machines to their bodies was a practice that could also contribute to participants fear. The participants felt they were in a situation where they could suffer harm.

These technologies helped ... I felt that they were tangled everywhere. I wanted to remove them but they (nurses) kept their eyes on me. They tied both my hands and ankles but I was still restless. I felt like I feared something, like having someone coming to harm me. (p. 2)

Like being in a dream (nightmare)

Four participants disclosed that they felt like being in a dream while *being cared for* in ICUs. The participants dreamt about food, travelling and being harmed.

It is like dreaming. I dreamt that I was hungry and went back home to ask for rice. I didn't have food. I dreamt like this. I dreamt that I went home. (p. 2)

Some participants revealed that they often had nightmares and were in terror.

It was like a dream. Like, someone was pulling my arms and legs. Nightmare ... I was scared. It was as if it was real. (p. 7)

Death is better than suffering

The participants had lived in suffering while depending on life-sustaining technologies. They were in pain and often uncomfortable. The severity of these sufferings bothered the participants. The participants claimed they would have preferred to die rather than deal with continuous suffering.

I was really uncomfortable ... The respirator caused difficulty in changing body positions. I thought it would be better if I die. I would no longer be suffering. (p. 4)

The participants disclosed that they feared continuous physical sufferings more than dying. Death would ease their suffering.

I have no fear of dying, but always of being in pain and suffering even for 7 days past, still having a painful

(body), the same pain, I would like to die instead. Two weeks past, I still suffered with the same pain. I thought that if (I) didn't die soon, it would be pitiful. (p. 9)

Lived relation: harmonizing living
Living with (accepting) technology

Some participants *being cared for* with technologies adapted their living to the technologies. This theme illustrated that participants accepted the technologies as temporary measures as means of saving their lives. They learned how to live with these technologies in harmony with their life.

I felt that I must live with them … must be with them. I, at the present, must accept their existence (technologies). If it is not necessary to use technology, they won't use one on you. That's what I believe. (p. 8)

Loss of autonomy (Reducing independence and needs)

In describing the relationship between patients and health care providers in ICUs, the participants felt as if their lives depended on the physicians and nurses. The participants could not express their needs effectively.

When they put this and that on me, I was very annoyed but I must give in. Being in the status as a patient makes (me) passive, meaning we have to put utmost trust on doctors and nurses. Our lives are in their hands. (p. 5)

In addition, some participants realized that they should ask for only necessary things, as pointed out by one participant:

It was difficult though I prepared my mind. When I was thirsty, I must wait for someone to stand near. I needed to see her face first. But really, I could just raise my hand if I wanted anything. It was better if I could see faces. Got to be a little patient, even when feeling thirsty, be patient … someone walked towards my bed, I would call for his/her attention and ask for some water. Doing it this way, I felt more comfortable (to ask for help). (p. 8)

Sustaining life through family support

The family was significant to the participants and supported the participants' thinking and spirit. The compassion and commitment on the part of family could encourage the participants to live with the hope of surviving for their families. As a participant expressed it:

Mom's love gave me courage. If I felt hopeless it meant that I was not going to survive. The weak mind in an improved physical condition was not a good sign. Mom came to perform chanting every day; every hour … Mom was with me until 8 or 9 pm and came again in the early morning at 5 am. Mom came every day. It was really up to me, whether I was to stay alive for her sake or not, if I gave up, I wouldn't survive. (p. 6)

Not wanting to burden the others

The participants realized that living with technologies in ICUs limited their competency to do things by themselves. The participants had to be cared for by others, including their families. Dependence on the family members made them a burden which can cause alienation. The participants maintained relationships with their family members by attempting to care for themselves as much as they could. The participants were more comfortable about dying than burdening their family members.

I didn't want other persons to be burdened because of me. I wanted to die if I could; that was what I thought … didn't want anyone to help. To burden the others wasn't the choice, so I tried to do things by myself. (p. 4)

Lived space: being in trust and security
It is like a home

The home-like environment of the ICU provided the much-needed experience of feeling at home. *Being cared for* in ICUs allowed the participants to relate to the staff and the environment. The participants felt like the ICUs were their homes. They noted that the physicians and nurses formed a trusting relationship with the patient. This resulted in the perception that they observed the participants closely and were more helpful to them.

I felt attached to this unit as if it was another home of mine. They helped in every way … the doctor, I could recall when I started to feel tight in my chest, the nurse walked to me and checked on me very often to observe my condition. If my condition was worsening, she [the nurse] called the doctor. She [the nurse] constantly kept her eyes on me. (p. 4)

Trust and security

In ICUs, the physicians, nurses and family members were always visible and available to the participants. Not being alone and being with these persons and receiving competent care created feelings of trust and security. As a participant said:

I had confidence that there would be someone; a doctor would keep close eyes on me. They came very often to check up on me. When I woke up, they were still working. I knew I had someone with me. My older sister visited me. I had doctor. It was not a lonely environment. There was family. I was lucky to have my relatives who cared for me well, adored me and loved me very much. (p. 8)

Lived time: transitioning to a better life
Recognizing own karma

Being dependent on the use of technologies for care make the participants reflect more upon their person. The participants commonly related their changing physiologies or sickness to their karma (deeds). They believed that their sickness or body status was dependent on these technologies; this was a consequence of their own past karma.

I asked myself what had I done to be in this situation [being cared for]? I thought to myself it must truly be karma. I never committed any sins. Out of the blue, I had to have the operation, having my muscle and my leg being torn like this. (p. 1)

Another participant said:

I thought, it happened because of my own karma. I neither blamed the physician nor the hospital. It was my karma. And regarding what I had done, I would say, I was lucky enough to experience just this. I just realized what the source of my karma was, cutting a lizard into pieces. (p. 2)

Creating hope for living

The hope for living generated by the participants was a consequence of patient realizations of others. The participants took significant roles such as parents and employers. They hoped to live for others.

I told myself that I couldn't die. I had a lot of responsibilities. If I died, how would they live? How can my family be? I told myself that it was not my time. I was not ready to die. (p. 5)

Another participant stated:

I had high hope. I thought that I would survive because if I didn't, I would have died a long time ago. I must fight (for life) for the sake of my daughter, must stay alive. I thought that I would not die. (p. 1)

Getting a new lease on life

Some participants learned that their symptoms were relieved by using life-sustaining technologies and receiving treatment. The participants reflected on this experience; they felt reborn and could expect a better life.

I feel like being born again after I died. Like passing the worst point, then (life) got better and better. These technologies are life-giving. (p. 7)

The positive outcomes of using technological care for the physical and emotional well-being of patients were explained by a participant as getting a better life:

I felt that I had gained ... I felt more comfortable. My body was being relieved. When I first regained consciousness, I breathed more easily. That's right, no breathing difficulty. (p. 8)

Discovering new meanings of living

Being sick and depending on life-sustaining technologies provided an opportunity for the participants to understand the reality of life.

I understood deeply that life is uncertain. It is best to recognize the reality of life. Don't think about or put too much expectation on anything. After having been through the experience of having part of my body cut off, I no longer think that money is the most important thing in life. At the moment, the most important thing is to live a happy life. (p. 6)

Another participant revealed that his meaning of life was associated with his religious belief in Buddhism:

Doing the best as long as my life exists. My thoughts have changed. In the past when my body was healthy, I did bad things. In the present, I stick to doing only good things and not causing trouble to others. Doing only good deeds, living a normal, not too adventurous, life, not wishing to have this and that. In the past, I was greedy, wanting this and that. Now, I realized, we couldn't bring anything with us when passing away, but we could leave goodness behind, I think about Dharma [Buddha]. (p. 9)

DISCUSSION

The experience of being in intensive care is often considered different and more intense by those whose loved ones have experienced this care (Borvornluck

et al., 2012). The experiences of patients are often addressed as inconsequential because the value ascribed to having survived the intense life-threatening condition, and the ability to live a life more fully after discharge is appreciated as a better consequence. However, *being cared for* in ICUs with technologies can be a demanding experience for the patient. Therefore it is important for nurses to understand the meaning of this experience by those who have lived it – what it is like being care for in ICUs dependent on technologies for human care.

Ten former ICU patients were asked to describe their experiences while *being cared for* in ICUs. These lived experiences were analysed and interpreted following Van Manen's (1990) hermeneutic phenomenological approach. Four thematic categories provided the descriptions which were derived from 13 themes generated from descriptions of participants about their lived experiences. This discussion will be structured along the four lived worlds of corporeality (lived body), lived relation (relationality), spatiality (lived space) and temporality (lived time).

Lived body: living suffering
Fear and insecurity of not being one's self

The experience of 'living suffering' undergirds the fear and sense of *not being one's self* while being dependent on technologies for care. This is congruent with living in an unfamiliar body as described by Johnson *et al.* (2006), who explored the meaning of being on long-term mechanical ventilation in critical care units in Queensland, Australia. This experience was explored by Schou and Egerod (2008) based on the lived experience of patients in Denmark who underwent post coronary artery bypass graft and were weaned from a mechanical ventilator. They found that patients experienced loss of control and reduced self-confidence. Heidegger (1962) named this type of episode of not being one's self and loss of control of the body in its usual being as 'the-ready-to-hand' (p. 103).

However, while exploring the lived experience of British patients undergoing tracheostomy in an ICU, Foster (2010) found that the patients feared the dangerous effect of uncontrolled technology because of their inability to control their bodies. In Thailand, Darayon *et al.* (2009) explored the experiences of 10 Thai patients who were being weaned from mechanical ventilators. They revealed that the patients were worried and fearful of their experiences because they did not understand the process of being weaned from the technology revealing the generation of fear of not

knowing the procedures of care associated with the technology used in care.

Fear is related to the unpleasant characteristic of *being cared for* through the use of technologies; it was harmful but necessary. Locsin (2005, 2010) asserted in his theory of '*Technological Competency as Caring in Nursing*' that technology provides the nurse with the opportunity to know persons fully. Since meeting technological demands are crucial to living, the use of technologies in ICUs is commonplace and is life-saving. Nurses watch in vigilance so that the patients become known through the technologies. However, nurses may become focused more on the technologies resulting in impersonal practices and in the practice of 'technical' nursing.

Like being in a dream (nightmare)

The theme *like being in a dream (nightmare)* is reflected in the findings of other studies as well. Hofhuisa *et al.* (2008) studied the perceptions of patients in The Netherlands, regarding their ICU stay. In this study, 11 patients of 50 (22%) had psychological problems that were related to hallucinations and bad memories after hospital discharge. For many months after discharge, dreams and sometimes nightmares could be recalled in detail (Granberg *et al.*, 2001). However, among the participants in this study, 40% of them recalled their vivid dreams very well even after 3 months and even up to 1 year after discharge.

Death is better than suffering

This theme indicated that the severity of suffering while being dependent on technologies used for care influenced some patients to desire to die rather than to suffer. This was also revealed in the study by Karlssona and Forsbergb (2008), who explained that during ventilator treatment, patients often wished to commit suicide as suffering became intolerable. Similarly, Darayon *et al.* (2009) explained that during the process of weaning from ICU technologies, Thai patients lived with multiple sufferings such as pain, dyspnea, inability to communicate, inadequate sleep, plus hopelessness and uncertainty. Nevertheless, the fear of death was found to be more prevalent among ICU patients in Australia. They understood that being on a mechanical ventilator meant they may not survive otherwise (Johnson *et al.*, 2006). In Sweden, the experience of being in a technological setting meant that such patients consistently confronted death because of their severe illness (Almerud *et al.*, 2007).

Lived relation: harmonizing living
Living with (accepting) technology

The theme *living with technology* affirms other findings about mastering one's situation; thus the patients accepted the situation of being dependent upon technologies and thus participated in their care (Karlssona and Forsbergb, 2008). This was supported by Almerud *et al.* (2007) in their study revealing that patients who accepted having to use devices and follow procedures trusted the technology best because their caregivers agreed with them and trusted it too. Locsin (2005) pointed out that dependence upon technology is a phenomenon that nurses ought to be very familiar with. Advanced technologies are here to stay, and in ICUs, the use of technologies in care is vital. As Locsin (2010) stressed, technological competency is the practice of using technologies in order to know persons more fully as participants in their care rather than as objects of our care.

Loss of autonomy (Reducing independence and needs)

Hofhuis *et al.* (2008) reported that patients in an ICU were reluctant to call for nurses who were busy checking the technologies used for care at the bedside. Similarly, Johnson *et al.* (2006) indicated that with patients using technologies to sustain them in their living created the feeling of vulnerability and dependence. An obvious realization was that critical care staff controlled the technologies in the ICUs and created a forged perception of reliance on others for the patients' survival. This sense of loss and reliance was sustained by the engagement of families in providing their perceptions of autonomy experienced by their loved ones, heightened by the technologies their loved ones were using.

Sustaining life through family support

This finding affirms the theme found by Karlssona and Forsbergb (2008) in their study, in which it was essential to have someone being with the patient during ventilator treatments to keep their hopes alive. Johnson (2004) explained that the patients on long-term mechanical ventilators in critical care units gained the will to live in their everyday world by being with their families. Borvornluck *et al.* (2012) also found that in Thailand, the presence of the patients' family members in the ICU provided psychological and spiritual support. Oftentimes, these family members also assisted in the provision of physical care as family involvement in the patient's care is a cultural expectation among Thai people.

Not wanting to burden the others

This theme could be explained as harmonizing their living by becoming more concerned about others and increasing their self-dependency. This is consistent with the findings of the study by Almerud *et al.* (2007), who found that the patients did not want to be a bother or to disturb others, and rather strove hard to please them. They adapted themselves to the system of care, learned the routines and attempting to be a good patient.

Lived space: being in trust and security
It is like a home

The participants used 'home' as a metaphor to demonstrate a familiar, bonding and safe environment. The theme *it is like a home* reflected the health teams' significant role in creating the space of the ICU as if it were a home. However, in the study by Darayon *et al.* (2009), they found that patients received less attention from health care providers during the weaning process and that the patients' felt hopeless and uncertain about their care. According to Almerud *et al.* (2007), the environment in ICU settings can be seen as unfamiliar, perplexing and frightening. The patients received less information and few clear answers from the caregivers; thus they experienced uncertainty and insecurity.

Trust and security

These remarks confirm the findings of the study by Hupcey (2000), who undertook a grounded theory study of 45 critically ill adult patients in an ICU. It was found that with the patients undergoing ventilation, the need to feel safe was paramount. Feelings of isolation, loneliness, fear and anxiety impacted negatively on patients' perceptions of safety. Schou and Egerod (2008) found that the patients needed close human interaction with caregivers, such as talking, laughing, touching or having eye contact, to prevent the feeling of loneliness in the unfamiliar/strange ICU environment. These interactions were seen by Karlssona and Forsbergb (2008) as social confirmation. Vouzavali *et al.* (2011) explored the interpersonal relationships with critically ill individuals of 12 ICU nurses. The findings suggested that nurses experience deep relationships with patients through contact with the patients' bodies. Nurse and patient affect each other reciprocally and are mutually dependent upon each other.

Lived time: transitioning to a better life
Recognizing own karma

Generally, Thai Buddhists figure out their own deeds rather than blame others when they are dealing with their own sickness and suffering. Buddhists believe

that there is karma, and the present situation is a result of deeds in the past. This may be the way to heal the internal self and to assist the patients to adapt and accept their sickness and suffering. However, Johnson *et al.* (2006) found out that Australian patients on long-term mechanical ventilator care also considered re-appraising the past and re-evaluating the future in order to live their lives more fully.

Creating hope for living

Hope is a caring ingredient (Mayeroff, 1971). The finding in *creating hope for living* could be reflected in the participants' view as caring for themselves in order to care for the others. The value of hope influences living in the present state, and in transiting to a better life. Creating hope for living, therefore, encourages the nurse to care for patients by appreciating their dependence on the use of technologies expressing these as hoping to live, and to assist them to live their lives more fully as living human beings.

Getting a new lease on life

In the study by Locsin *et al.* (2010), they found that the experience of persons with life sustaining cardiac devices in the USA was that the patients desired a new life. After the implantation of a pacemaker, the patients described themselves as 'having a new lease on a new life' (p. 48). Such an appreciation of life is consistent with the desire to live a full life, a realization that indeed surviving intensive critical care is a second 'lease' towards a new life – perhaps engaging in different lifestyles in order to live a better life.

Discovering new meanings of living

The participants in this study reflected on their experiences and learned from their past experiences to improve their health and future well-being. This theme confirms the finding of re-appraising the past and re-evaluating the future by Johnson *et al.* (2006). In addition, Karlssona and Forsbergb (2008) described a situation whereby patients on ventilators who progressed in rehabilitation yearned to become healthy and 'normal' again, thus the focus on discovering new meanings of living one's life more fully affirms life-changing meanings which are critical to human health and well-being

LIMITATIONS OF THE STUDY

In this study, participants were recruited by word of mouth which may have limited the recruitment pool of suitable individuals. Furthermore, the patients who

were recruited to be participants in the study were admitted in the ICUs for a mean of 50·8 days. This could be a possible and perhaps a critical influence in the description of their experiences of *being cared for* with technologies as these may possibly reflect more their experiences of long-term care in ICUs. Further studies are suggested, and the next study ought to be designed to recruit a wider pool of prospective participants who were *being cared for* in ICUs for short-term care. This could be done by advertizing in local newspapers or by distributing brochures to invite patients who were discharged from the ICUs. This recruitment process may streamline the procedure thereby controlling possibilities of engendering ethical questions such as the involvement of institutions as possible source of prospective participants. In addition, contact with local health care offices especially cardiology clinics and other health clinics for the purpose of increasing the pool of prospective participants are recommended.

CONCLUSION AND IMPLICATIONS FOR NURSING

This study described the meanings of the experience of being patients in ICUs who were dependent upon the use of technologies for human care. This experience was described as *living suffering within trust and security, harmonizing living while transitioning to a better life*. In essence, the patients who were *being cared for* in ICUs suffered since they lived in fear and insecurity of not being their own selves, had nightmares and related their suffering as their own karma. They thought more about dying than to continue to live in suffering.

This study showed that patients in ICUs were living in suffering but were trustful and secure within a harmonious coexistence while moving beyond it. This description should encourage nursing care practitioners to reconsider their own appreciation of how patients who are 'being cared for', particularly in ICUs, view their experience and nursing care.

The findings provide some relevant implications for nursing practice, education and research. In nursing practice, ICU nurses should know the meaning of their patients' experiences while *being cared for* with the use of technologies in ICUs. With this knowledge, nurses should be able to anticipate patients' needs, and enhance their experiences by providing appropriate interventions that include ways to live with the technologies while in the ICU. For example, nurses should communicate with their patients verbally if possible, or use appropriate technologies that can foster communication such as pen and paper, or 'answer boards' like the smiley face-pain boards to describe their pain. Nurses should provide interventions to

assist patients' in relieving their suffering, while promoting comfort so that anxiety, stress, despair and insecurity can be prevented or alleviated. In addition, nurses should provide opportunities for patients to share and discuss their experience of illness, and should seek ways towards clearer understanding and discovering of the meaning of living as a human being dependent on technology. Furthermore, nurses may need to foster an appreciation of family participation in the care of patients in ICUs.

In nursing education, the meaning of the experience of *being cared for* should be made the focus of study so that patients' responses to illness and care are appreciated, rather than adopting the perspective that patients are objects of care needing to be ministered. These patients who are dependent upon the use of technologies for care while in ICUs are active participants in their care. The nurse must be cognizant of the values, opportunities to show care and the

priorities that advance the meaningful practice of nursing as integral to human health and well-being. Nevertheless, even with such a knowledge base, as patients continue to be engaged participants in their care, the demand for continuous knowing is made clear through an understanding of patient experiences in contemporary nursing practice. Further study is needed to improve human care for the patients depending on the use of technologies.

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WHAT IS KNOWN ABOUT THIS TOPIC

- Critically ill patients in ICUs who are dependent on technologies are often seen as objects of care.
- Technologies sustaining life may distract nurses from focusing on the patient.
- The theory of Technological Competency as Caring in Nursing views proficiency with health care technologies as integral to knowing persons. They are participants in their care rather than objects of nurses' care.

WHAT THIS PAPER ADDS

- Patients who are *being cared for* in ICUs suffer since they live in fear and insecurity of not being their own selves. They think more about dying than continue to live in this suffering.
- Being trusting and secure assist patients to live in harmony while being dependent on the technologies for care.
- Patients who are *being cared for* in ICUs transition to a better life through reappraisal, nurturance and understanding the meaning of their lives.

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