

Quality of Dying in the Medical Intensive Care Unit: Comparison between Thai Buddhists and Thai Muslims

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Abstract

Background and Aims: Religious belief is an important aspect that influences the life of a patient, especially in Asia. We aim to compare the quality of death in an Intensive Care Unit (ICU) between Buddhists and Muslims from the perspectives of the relatives of the patients and the nurses and physicians. **Subjects and Methods:** This was a cohort study of critically ill patients who died after admission to a medical ICU in Songklanagarind Hospital in Thailand between 2015 and 2016. We interviewed by telephone the relatives of patients. The nurses and physicians who cared for the patients responded to a self-questionnaire. **Results:** A total of 112 patients were enrolled in the study. The quality of death and dying-1 scores in Thai Buddhists and Muslim patients rated by the relatives (8 vs. 8, $P = 0.55$), nurses (8 vs. 8, $P = 0.28$), and physicians (7 vs. 7, $P = 0.74$) were not different. The ratings by the nurses correlated with the relatives ($r_s = 0.41$, $P < 0.001$) but did not correlate with the physicians ($r_s = 0.15$, $P = 0.12$). Compared with Buddhist patients, Muslim patients were more likely to have documentation in place at the time of the death of do not resuscitate (100% vs. 80.2%, $P = 0.02$) and withholding and withdrawing life support (100% vs. 80.2%, $P = 0.02$). **Conclusion:** There was no difference in the quality of dying and death between Thai Buddhists and Muslims. However, some elements of palliative care were not similar.

Keywords: Buddhist, critical care, intensive care, Muslim, quality of dying

INTRODUCTION

Improving the quality of dying is a desirable aim for patients and their relatives and is also the key performance indicator of quality in an Intensive Care Unit (ICU). A good death or peaceful death is based on personal experience or perception. However, many factors affect the quality of dying which involves religious belief, sociocultural issues, and also ICU admission sources.^[1,2]

Religious belief is an important aspect that influences the life of a patient, especially in Asian countries. In Thailand, the two main religions are Buddhism and Islam. The quality of dying in Buddhism involves being at peace and preparedness within the family,^[3] whereas in Islam, death is a way to approach God willingly.^[4] A study revealed that approximately half of terminal cancer in-hospital patients need spiritual and religious support and patients whose needs were addressed reported a better quality of life.^[5] Understanding the impact of religious belief was recommended to provide improved quality of dying.^[6]

Palliative care is increasingly accepted as an essential care in the ICU.^[7] It was integrated into all patients with chronic

critical illnesses and their families.^[8] A systematic review reported that proactive palliative care using either consultative or integrated palliative care interventions decreased hospital and ICU length of stay.^[9] Spiritual and religious services were key components in palliative care. Since our institution in southern Thailand serves a population that is largely Muslim, we aim to compare the quality of dying and palliative care bundles between the two religions of Buddhism and Islam.

SUBJECTS AND METHODS

Study design

This prospective survey study was conducted from November 2015 to October 2016 in the medical ICU of Songklanagarind

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Hospital which is an 800-bed tertiary hospital in southern Thailand. Our ICU is a closed medical ICU that comprises 10 beds with a nurse to patient ratio of 1:1.5. The inclusion criteria were Buddhist and Muslim patients who had chronic illnesses and acute respiratory failure that required mechanical ventilation and patients who died in the medical ICU with at least a 6-h stay. The criteria for chronic illness were the presence of one or more comorbidities including dementia, heart failure, malignancy, human immunodeficiency virus infection, chronic renal disease, diabetes, cirrhosis, connective tissue disease, chronic immunosuppression, chronic respiratory disease, or cerebrovascular disease.^[2] We excluded patients who stayed only a short while in the ICU and patients whose relatives refused to give consent.

We collected the patients' demographic data and reviewed the palliative care bundles during the ICU stays from the electronic medical records. Our researcher made telephone calls 1 month after death to the relatives who had the most knowledge of the care received by the patient during his/her stay in the ICU. We also gave a self-questionnaire within 72 h of death to the primary nurses and internal medicine in-training residents who last cared for the patients.

Informed consents were obtained from the relatives, nurses, and physicians of the deceased patients. The protocol of this study was approved by the Ethics Committee of the Faculty of Medicine, Prince of Songkla University (EC number: 58-209-14-1).

Data

The baseline patient characteristics included the palliative care bundles. Six bundles included: (1) Family conference within 72 h of the ICU admission; (2) prognosis discussion within 72 h of ICU admission; (3) presence of do not resuscitate (DNR) order at the time of death; (4) symptomatic treatment and pain control, including anxiety, thirst, dyspnea, confusion and delirium; (5) withholding or withdrawing life support and (6) involvement of a spiritual care provider, including a monk or spiritual adviser. These bundles were chosen based on a consensus conference and the palliative care program at our institution to reflect the quality of palliative care provided to critically ill patients.^[10]

The quality of dying was obtained from the relatives, nurses, and physicians of the deceased patients. With permission, we used the single-item quality of dying and death (QODD-1) question. A single summary question: "Overall, how would you rate the quality of your loved one's dying?" was used with the relatives of the patients and the question: "Overall, how would you rate the quality of your patient's dying?" was used with the nurses and physicians. Items were rated on an 11-point scale from 0 ("terrible" experience) to 10 ("almost perfect" experience). This score demonstrated a strong correlation with high-quality end-of-life care in an ICU.^[11] We used Likert scales to detect the satisfaction of the relatives, nurses and physicians of the patients in six palliative care bundles. The scales ranged from 1 to 5, with 1 representing very

dissatisfied, 2 representing dissatisfied, 3 representing neither, 4 representing satisfied, and 5 representing very satisfied.

Analysis

Categorical data were presented as percentages. Continuous data were shown median (with minimum and maximum, interquartile range). Comparisons of the QODD-1 ratings and satisfaction in palliative care bundles between the two religions were analyzed using the Wilcoxon rank-sum test. An analysis to compare the palliative care bundles between the two religions used Fisher's exact test or Chi-squared test. Spearman's correlation coefficients (r_s) were used to detect correlations in the QODD-1 ratings between the relatives, nurses, and physicians. Two-tailed values of $P < 0.05$ were considered statistically significant. All statistical analyses were performed with R software version 3.3.1 (R foundation for statistical computing, Vienna, Austria).

Table 1: Patients' characteristics by religion

Patients' characteristics	Religion		P
	Buddhist (n=91)	Muslim (n=21)	
Age, mean (SD)	61.8 (16.7)	54.3 (13.8)	0.05
Male, n (%)	54 (60.4)	10 (47.6)	0.46
ICU admission sources, n (%)			
Medical wards	49 (53.8)	10 (47.6)	0.61
Emergency department	38 (41.8)	9 (42.9)	1.00
Other wards	3 (3.3)	2 (4.8)	0.74
APACHE II score, median (IQR)	20 (18, 23)	20 (18, 25)	0.85
Comorbidities, n (%)			
Heart failure	25 (27.5)	3 (14.3)	0.21
Malignancy	14 (15.4)	2 (9.5)	0.49
Respiratory disease	14 (15.4)	2 (9.5)	0.49
Liver disease	12 (13.2)	1 (4.8)	0.28
Diabetes mellitus	11 (12.1)	3 (14.3)	0.78
Chronic kidney disease	9 (9.9)	2 (9.5)	0.96
Cerebrovascular disease	5 (5.5)	1 (4.8)	0.89
Immunosuppressive state	3 (3.3)	2 (9.5)	0.22
HIV/AIDS	2 (2.2)	0	0.49
Connective tissue disease	1 (1.1)	1 (5)	0.25
Other	4 (4.4)	2 (9.5)	0.58
Cause of death, n (%)			
Heart disease	28 (30.8)	9 (42.8)	0.29
Malignancy	21 (23.1)	5 (23.8)	1.00
Septic shock	17 (18.7)	3 (14.3)	0.63
Chronic liver disease	8 (8.8)	2 (9.5)	0.91
Cerebrovascular disease	4 (4.4)	1 (4.8)	0.94
Nephrotic, nephritis syndrome	4 (4.4)	0	0.33
Accident and adverse effect	4 (4.4)	1 (4.8)	0.94
Neurologic	1 (1.1)	0	0.63
Other	5 (5.5)	0	0.27
ICU LOS (days), median (IQR)	3 (1, 9)	2 (1, 7)	0.18
Ward LOS (days), median (IQR)	13 (4, 26)	6 (2, 9)	0.10

ICU: Intensive Care Unit; APACHE II: Acute Physiology and Chronic Health Evaluation II; HIV/AIDS: Human immunodeficiency virus/acquired immunodeficiency syndrome; LOS: Length of stay; SD: Standard deviation; IQR: Interquartile range

RESULTS

Sample and measures

We enrolled 112 critically ill patients with chronic life-threatening conditions and acute respiratory failure 91 (81.2%) were Buddhist, and 21 (18.8%) were Muslim. The cohort flow diagram is presented in Figure 1. The mean patient age in the Muslim group was lower than in the Buddhist group (54.3 vs. 61.8, $P=0.05$). There were no significant differences in the underlying diseases or ICU and ward length of stay between the two groups. The patient characteristics by religion are described in Table 1. Family characteristics are described in Table 2. All telephone calls (100%) were responded to. Most of the relatives of the patients were female and had lived with the patients. There were no significant differences between the two groups.

Perceptions of quality of dying

We compared QODD among the relatives, nurses, and physicians of the patients who cared for the patients before dying using the QODD-1 [Table 3]. Overall, Muslim patients had higher QODD-1 ratings than the Buddhist patients without statistical significance. There was a moderate correlation of the QODD-1 ratings between the relatives and nurses ($r_s = 0.41, P < 0.001$). However, there was no correlation between the relatives and physicians ($r_s = 0.10, P = 0.27$). There was also no correlation between the physicians and nurses ($r_s = 0.15, P = 0.12$).

Indicators of palliative care in the Intensive Care Unit

The six elements of palliative care are shown in Table 3. Overall, the Muslim patients received a higher percentage of palliative care elements and the DNR and withholding and withdrawing life support documents were significantly in place at the time of death (100% vs. 80.2%, $P = 0.03$). The palliative care element with the lowest percentages in the Buddhist and Muslim groups was spiritual care provided (60% and 76.2%, respectively) with no statistical significance.

A comparison of the ratings of the elements of palliative care as scored by the relatives of the patients, nurses, and physicians

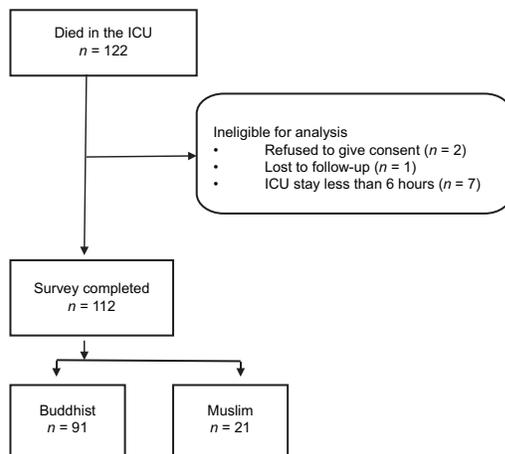


Figure 1: Cohort flow diagram

is shown in Table 4. The overall ratings were not significant in any of the elements between the two religions.

DISCUSSION

To the best of our knowledge, this is the first study reporting on quality of dying in the medical ICU between two religions. In our observational analysis, we found no difference in the QODD between the Buddhist and Muslim patients; although, the QODD-1 ratings tended to be higher in Muslim patients.

There are possible explanations for our results. First, it means that the relatives of the patients and the health care providers

Table 2: Family characteristics by religion

Family characteristics	Religion		P
	Buddhist (n=91)	Muslim (n=21)	
Age at time of survey, mean (SD)	44.6 (10.3)	42.7 (10.8)	0.59
Female, n (%)	69 (75.8)	12 (57.1)	0.08
Relationship to patient, n (%)			
Spouse	24 (26.4)	10 (47.6)	0.06
Child	50 (54.9)	8 (38.0)	0.16
Sibling	1 (1.1)	0	0.63
Parent	9 (9.9)	1 (4.8)	0.46
Friend	1 (1.1)	0	0.63
Other	9 (9.9)	2 (9.5)	0.96
Lived with patient, n (%)	80 (87.9)	19 (90.5)	0.74
Years of relationship with patient, mean (SD)	22.4 (10.7)	22.1 (10.7)	0.92

SD: Standard deviation

Table 3: Quality of death scores and elements of palliative care by religion

Quality of death scores and element of palliative care	Religion		P
	Buddhist	Muslim	
QODD-1 ratings ^a , median (IQR)			
Relatives	8 (7, 8)	8 (7, 8)	0.55
Nurses	8 (7, 9)	8 (8, 8)	0.28
Physicians	7 (6, 8)	7 (7, 8)	0.74
Elements of palliative care in the ICU (%)			
Family conference, first 72 h of ICU admission	76.9	81.0	0.78
Prognosis discussed, first 72 h of ICU admission	71.4	81.0	0.54
DNR document in place at the time of death	80.2	100	0.02
Symptomatic treatment and pain control	91.2	95.2	1.00
Withholding and withdrawing life support	80.2	100	0.02
Spiritual care provided	60.0	76.2	0.26
Complete all elements	43.9	57.1	0.27

^aScoring based on response to a single-item summary question, rated on an 11-point scale (0-10) with higher scores reflecting a better experience. QODD-1: Quality of dying and death single item; IQR: Interquartile range; ICU: Intensive Care Unit; DNR: Do not resuscitate

accepted the same general care and palliative care although the patients had different religions. These findings were similar to a survey study in which the points of views of good death in the nurses were not different across cultures and legal systems.^[12] Second, religion is a part of the quality of dying which is a concern, but it is not a major concern. A study revealed that a high QODD-1 score correlated with the use of standardized comfort care order sets and conducting a family conference.^[13] Third, our ICU personnel are of both religions and live in southern Thailand. They are familiar with the people and culture. Finally, our overall sample size was small in the Muslim group that reflected a statistical difference.

Religions affect people as they face their own dying and mortality. A study addressed the important formal religions of Judaism, Islam, and Christianity.^[14] In Thailand, 90% of the people are Buddhist, the remainder are Muslim and Christian.^[15] A few studies reported the quality of death attitudes of Thai Buddhist family members and nurses, but there are no studies in the Muslim context.

The moderate correlation of the scores between the relatives and nurses but not with the physicians reflects that the quality of dying in the view of physicians differs from the nurses and relatives. The members of Thai Buddhist families believe that a peaceful death in an ICU means a peaceful state of mind and a time of being with family members.^[3] As family

members, the Thai Buddhist nurses reported that a peaceful death means dying with peace of mind without showing signs and symptoms of suffering and not dying alone.^[15] Considering the discordance between the relatives and physicians, a study revealed a mismatch between the opinions on communication in intensive care settings by the physicians and family members of the patients with chronic incurable diseases receiving care in intensive care settings.^[16] The physicians also differed from the patients in the end of life views that included being mentally aware and coming to peace with God.^[17]

The percentage of palliative care elements was higher in the Muslim group, especially in the DNR and withholding and withdrawing life support documentation compared with the Buddhist group. Religions play a major role in making the DNR decision. Muslims believe that life belongs to God and they also believe that death is only a transition between two different lives and that DNR orders are acceptable.^[4] The majority of Muslim physicians also thought that preparing a patient DNR is allowed in Islam.^[18]

The spiritual care bundles were low in both groups. We allow relatives to pray bedside without a regular service for spiritual care in every case. However, when the relatives were asked, they accepted a spiritual care provider with a score above 4 in 5 points. The term “spiritual care” has a deep meaning and depends on individual values.

Table 4: Rating elements of palliative care

Rating elements of palliative care	Religion		P
	Buddhist (n=91)	Muslim (n=21)	
Relatives' ratings, median (IQR)			
Family conference, first 72 h of ICU admission by physicians	4 (4, 5)	4 (4, 4)	0.52
Family conference, first 72 h of ICU admission by nurses	4 (4, 5)	4 (4, 4)	0.15
Prognosis discussed, first 72 h of ICU admission	4 (4, 5)	4 (4, 4)	0.71
DNR document in place at the time of death	4 (4, 5)	4 (4, 4)	0.11
Symptomatic treatment and pain control	4 (4, 5)	4 (4, 4)	0.06
Withholding and withdrawing life support	4 (4, 5)	4 (4, 4)	0.22
Spiritual care provided	5 (4, 5)	4 (4, 5)	0.19
Nurses' ratings, median (IQR)			
Family conference, first 72 h of ICU admission by physicians	4 (4, 5)	4 (4, 5)	0.97
Family conference, first 72 h of ICU admission by nurses	4 (4, 5)	4 (4, 5)	0.86
Prognosis discussed, first 72 h of ICU admission	4 (4, 5)	5 (4, 5)	0.12
DNR document in place at the time of death	4 (4, 5)	5 (4, 5)	0.09
Symptomatic treatment and pain control	4 (4, 5)	4 (4, 5)	0.93
Withholding and withdrawing life support	4 (4, 5)	5 (4, 5)	0.25
Spiritual care provided	4 (4, 5)	5 (4, 5)	0.22
Physicians' ratings, median (IQR)			
Family conference, first 72 h of ICU admission by physicians	4 (4, 5)	4 (4, 5)	0.89
Family conference, first 72 h of ICU admission by nurses	4 (4, 5)	4 (4, 5)	0.76
Prognosis discussed, first 72 h of ICU admission	4 (4, 5)	4 (4, 5)	0.65
DNR document in place at the time of death	4 (4, 5)	4 (4, 5)	0.77
Symptomatic treatment and pain control	4 (4, 5)	4 (4, 5)	0.43
Withholding and withdrawing life support	4 (4, 5)	4 (4, 5)	0.15
Spiritual care provided	4 (4, 5)	4 (3.5, 5)	0.69

IQR: Interquartile range; ICU: Intensive Care Unit; DNR: Do not resuscitate

Our findings revealed a gap for improvement in palliative care in the ICU. First, we need to fine tune the palliative care value system in the attitudes of the physicians. Second, we need to develop a palliative care bundle checklist, in particular for the family conference by physicians and in spiritual care. Spiritual care assessment tools are available.^[19]

This study had several limitations. First, the small percentage of Muslim patients corresponding to the proportion of the population in this region may have impacted the power of the study. Second, the definition of “quality” depends on the emotions and experiences of the subjects and not by objective evidence. However, the QODD-1 score had generalized use and showed good correlation. Third, the study included patients in one geographic area of southern Thailand and the results cannot be generalized to other regions or a Muslim population in a different sect.

Future studies that evaluate the quality of dying and palliative care process in the medical ICU should consider the religion of the patients and develop interventions to improve the quality of palliative care.

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Conflicts of interest

There are no conflicts of interest.

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