CRITICAL CARE NURSES’ PERCEPTIONS OF FUTILE CARE AND ITS EFFECT ON BURNOUT
Lilia Susana Meltzer and Loucine Missak Huckabay

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Nurses working in critical care often encounter a great deal of pain and suffering as they journey with patients through weeks and months of life support and burdensome treatments and care that nurses perceive as being futile or nonbeneficial to the patients. These nurses are often faced with ethical dilemmas associated with the management of patients’ care, because increasingly, advanced technology and changes in healthcare delivery combine to create difficult treatment decisions and add new responsibilities to nurses’ roles as caregivers and patients’ advocates.1-3

Ethical decisions affect not only patients’ family members but also caregivers at an intellectual and emotional level.4,5 Many investigators6-11 have recognized the effects on nurses, in terms of emotional attachment and bonding, of caring for patients physically and emotionally for 12 hours at a time. Hoyt12 contended that although with education and adequate time most patients’ families are able to accept an irreversible diagnosis, situations arise when patients’ families, or less often patients, demand inappropriate or futile treatment, treatment to be provided against the will and best judgment of the medical team.
In an attempt to expand nurses’ insights on these issues and ascertain some of the possible factors that may contribute to the experience of moral distress and burnout in critical care nurses, we conducted a study to determine the relationship between critical care nurses’ perceptions of futile care and the effect of futile care on burnout. Six research questions were tested. Of the 6 questions, 3 concerned the relationship between the frequency of moral distress situations involving futile care and the 3 components of burnout (emotional exhaustion, depersonalization, and diminished personal accomplishment); the other 3 questions concerned the relationship between the intensity of the experience of painful feelings related to situations involving futile care and the 3 components of burnout (as noted previously). However, in this article, we deal solely with the following research question: Is there a relationship between frequency of moral distress situations involving futile care and emotional exhaustion?

The Concept of Futile Care

Futility is a complex concept associated with the accomplishment of goals. An act is considered futile if its goals are not achievable or its degree of success is empirically implausible. Among the challenges presented by futile care is its effect on professional caregivers. Many investigators have articulated concern about overtreatment of dying patients and the negative effect of such treatment on staff members. In a survey of 759 nurses and 687 physicians by Solomon et al, of 1100 critical care nurses across the United States, ethical dilemmas were among the most difficult issues encountered. One half of the participants rated the decision to withdraw or withhold life support as the second most significant issue in their profession; the most significant issue was authority to make decisions about patients, which received a 69% rating. Soderberg and Norberg reported that critical care nurses were concerned that patients received meaningless and excessive care.

The determination of medical futility can be made only within the context of the individual clinical situation. For example, performing cardiopulmonary resuscitation on a patient with multiple organ dysfunction would be a “physiologically” futile act, and cardiopulmonary resuscitation may be withheld on these grounds because the probability of success is truly zero; however, resuscitating a patient whose chances for survival are small, but existent, would not be considered futile care. Controversy exists, of course, on whether heroic treatments in cases such as the first example are to be viewed as prolongation of life or prolongation of dying. This issue has no easy or correct answer.

For the purpose of our study, futile care was operationalized as life-sustaining interventions and treatments that have no medical benefit for a patient because the interventions and treatments cannot end dependence on intensive medical care.

Review of the Literature

Burnout in critical care nurses is a phenomenon that has been examined in numerous research studies. Personal and occupational factors, or the combination of the two, have been identified as the main components involved in the burnout syndrome. Personal factors and personality variables that have been related to feelings of burnout include lack of hardiness, lack of assertiveness in dealing with others, diminished coping skills, family demands, health problems, and lack of social support. Major occupational sources of stress affecting critical care nurses that may lead to burnout include a difficult workload, conflict with colleagues and management, inadequate staffing and resources, emotional demands of patients and patients’ families, dealing with the ethical aspects of life-sustaining technology, and exposure to death and dying.

In a controversial study, Asch examined critical care nurses’ attitudes and practices with regard to the nurses’ role in euthanasia and assisted suicide. He pointed out that because nurses working in critical care often encounter patients who are terminally ill and who wish to die, the nurses are in a position to meet these patients’ needs and hasten the patients’ deaths. Asch’s dramatic findings indicated that 40% of the nurses in the study considered engaging in such practices but refrained for different reasons, often for fear of being caught, and that an additional 20% had, at some point in their career, participated in these practices. Reasons for nurses’ engagements in these practices were an overwhelming sense of responsibility for patients’ welfare, a desire to relieve patients’ suffering, a sense of frustration due to lack of physicians’ responsiveness to that suffering, and concern about the excessive use of life-sustaining measures near the end of life.
Nurses working in critical care units are faced with complex ethical dilemmas more often than are nurses working in other acute care settings.\(^2^\) Working in such emotionally charged environments where life-and-death issues are encountered on a daily basis could become highly stressful and could contribute to the experience of moral distress.\(^3^\) Moral distress results when a person perceives that the right course of action cannot be implemented because of institutional constraints.\(^4^\) Corley\(^7\) found that moral distress was a stress response experienced by nurses dealing with the ethical challenges of critical care, such as giving pharmacological treatment during a cardiac arrest but withholding chest compressions or intubation.

**Conceptual Framework**

Burnout has been described as an occupational hazard of the helping professions. Healthcare providers are predisposed to burnout when clients’ needs, because of either the intensity or the complexity of the circumstances, surpass the resources of the care providers.\(^5^\)

Maslach and Jackson\(^6^\) identified 3 main components associated with burnout: emotional exhaustion, depersonalization, and diminished personal accomplishment. Emotional exhaustion results in apathy and loss of concern; as emotional resources are depleted, helping professionals feel they cannot give of themselves at a psychological level. Depersonalization is characterized by the development of negative and cynical attitudes toward the recipient of care. Diminished personal accomplishment is characterized by the tendency to evaluate oneself negatively, particularly in relation to one’s work with patients. This definition is consistent with the burnout model of Pearlman and Hartman\(^7\) in which burnout is conceptualized as a response to chronic emotional stress that has 3 major components: emotional exhaustion, lowered job productivity, and depersonalization.

The burnout model proposed by Pearlman and Hartman\(^7\) was selected for this study because of its cognitive/perceptual focus, which encompasses a wide array of personal and occupational variables. The model depicts a progression of 4 stages of stress leading to burnout: the degree to which a situation is conducive to stress, the individual’s perception of stress, the response to stress, and the outcome of stress.

**Methods**

A descriptive survey design was selected to represent the population of critical care nurses through a convenience sample (N = 60) of all available staff nurses who fit the criteria of having worked full-time in an adult intensive care unit (ICU), coronary care unit, or neurological ICU for a minimum of 1 year at the 2 participating hospitals (350-470 beds) in Southern California where this study took place.

Extraneous variables of age, sex, marital status, religion, educational background, years of critical care experience, and whether the nurses worked in the different critical care units in rotation or always worked in the same unit were not controlled; however, the relationship of these variables to the major variables, if any, was taken into consideration.

**Instruments**

Subjects were asked to complete a sociodemographic data survey we developed, the Moral Distress Scale (MDS), and the Maslach Burnout Inventory (MBI).

Demographic data were collected to determine if a relationship existed between demographic variables and nurses’ perceptions of stressors that lead to burnout.

The MDS was developed by Corley\(^7\) to measure the level of moral distress experienced by critical care nurses and to determine the issues that most often lead to moral distress. For the purpose of our study, Corley was contacted and permission was obtained to exclude 4 questions (numbers 11-14) from the MDS. Of the 4 excluded questions, 2 involve medical students’ situations and 2 are related to pediatrics. After exclusion of the 4 questions, the Cronbach α was calculated for both subscales of the MDS to determine reliability. The reliability coefficients were still high: .95 for the painful feelings intensity subscale and .96 for the frequency subscale.

This MDS includes items such as prolongation of dying (“Initiate extensive life-saving actions when I think it only prolongs death”) and “Follow the family’s wishes to continue life support even though it is not in the best interest of the patient”) and overtreatment by physicians (“Prepare a terminally ill elderly patient on a respirator for surgery to have a mass removed”). Each statement is scored in 2 dimensions: frequency and intensity. Each set is scored on a 7-point Likert scale, with 1 indicating none or never and 7 indicating great extent or very frequently. Because there are 28 question items, each with a score ranging from 1 (none) to 7 (great extent), potential subscale scores are 28 to 196.

The MBI, which consists of 22 items, was designed by Maslach and Jackson\(^6^\) to measure the 3 components of burnout: emotional exhaustion, depersonalization, and personal accomplishment. Each of these components is measured by using a separate subscale based on a 6-point response format as an expression of frequency (0 through 6, indicating never or every day, respectively). The emotional exhaustion subscale is used to measure the inability of healthcare professionals to cope with chronic emotional occupational stres-
sors because the caregivers are no longer able to give of themselves at a psychological level. The depersonal- ization subscale is used to assess negative attitudes, loss of concern, and feelings of cynicism toward the recipi- ents of care. The personal accomplishment subscale is used to assess the tendency to evaluate oneself negatively, especially in relationship to one’s work with clients.

Procedure
Before data were collected, permissions were obtained from the institutional review boards of both hospitals and from California State University, Long Beach, where we are affiliated. Additionally, a written consent form was obtained from each participating nurse. The nurse managers made announcements about the study to the nursing staff in the critical care units, and we made presentations at staff meetings and during shift report time. Informational sessions were held on all shifts, as well as on weekends, to facilitate optimal participation by staff who worked in the units in rotation and by staff who worked the night shift. The content of the presentations was based on the information stated in the consent form.

Subjects were asked to complete the MDS, the MBI, and the sociodemographic data survey. A postage-paid envelope containing the letter of informed consent and the 3 instruments was given to all staff nurses who fulfilled the inclusion criteria of having worked full-time for at least 1 year in the adult critical care units at the 2 participating institutions.

Potential participants were told that the information they provided would be treated confidentially, and they were guaranteed anonymity. The nurses were asked to return the completed instruments in the postage-paid envelope within 2 weeks of the study presentation. Data collection in both hospitals took a total of 6 months.

Data Analysis
Frequency and percent distributions were used to present the demographic characteristics of the sub- jects. The main research question was tested by using the Pearson product moment correlation to determine if any significant relationship existed between scores on each of the 3 subscales of the MBI (emotional exhaus- tion, depersonalization, and personal accomplishment) and scores on the 2 subscales of the MDS (frequency and intensity of painful feelings). Additionally, linear regression analysis was performed to determine if scores on the MDS subscales could actually be used to predict burnout as indicated by scores on the MBI subscales. In order to determine if any differences between the different demographic groups and moral distress and between the different demographic groups and scores on the MBI were significant, t tests for sex and analysis of variance for the other demographic variables were performed. In addition, if the results of the analysis of variance were significant, post hoc Scheffé tests were conducted to determine the difference between the specific groups.

Results
Characteristics of the Sample
The sample consisted of 51 women and 9 men. Most of the participants (50.0%) were 31 to 45 years old, and the majority of the sample (70.0%) were married. The mean number of years in critical care was 11.79. A total of 41.7% had an associate degree in nursing and 43.3% had a bachelor’s degree or higher in nursing. The majority of the sample (68.3%) indicated that reli- gion was very important in their lives. The majority of the sample worked 12-hour shifts (98.3%) and worked in the medical/surgical ICU, the coronary care unit, and the neurological ICU in rotation (76.7%) (Table 1).

Moral Distress and Emotional Exhaustion
The frequency with which critical care nurses encountered moral distress situations involving futile care was directly and significantly related to the experience of emotional exhaustion. A Pearson product moment correlational analysis indicated a significant positive correlation ($r = 0.317$, $P = .05$) between scores on the MBI emotional exhaustion subscale and scores on the MDS frequency subscale (Table 2). Linear regression analysis also indicated significance; scores on the MDS frequency subscale were significantly associated ($r^2 = 0.10$; accounting for 10% of the vari- ance) with scores on the MBI emotional exhaustion subscale ($F = 6.47$, $df = 1.58$, $P = .01$).

Additional Findings
$Age$. Analysis of variance indicated no significant association between age and scores on the MBI depersonalization subscale ($F = 2.32$, $P = .08$). A post hoc test of least significant difference was used to determine what age groups accounted for the existing differences. The results indicated that nurses 18 to 30 years old scored significantly higher on the depersonalization subscale than did nurses 46 to 60 years old.
lower on the depersonalization subscale than did those who worked the units in rotation ($t=3.114, P=.004$).

**Religion.** Nurses who considered religion to have no importance in their lives had significantly higher scores ($F=3.43, P=.05$) on the MBI emotional exhaustion subscale (mean = 37.33, SD = .5774) than did those who reported that religion was very important in their lives (mean=24.56, SD=13.58).

**Discussion**

**Moral Distress and Emotional Exhaustion**

The frequency with which critical care nurses encountered moral distress situations involving futile care was directly and significantly related (accounting for 10% of the variance) to the experience of emotional exhaustion, 1 of the 3 components of the burnout syndrome as postulated by Maslach and Jackson and by Pearlman and Hartman. This finding can be explained in accordance with Pearlman and Hartman’s theoretical formulation of the burnout phenomenon, as manifested in the form of emotional exhaustion. Emotional exhaustion occurs when a person’s appraisal of occupational stressors exceeds his or her coping capabilities or they conflict with the person’s values and belief system so that he or she cannot cognitively reconcile with the stressors or cope.

**Additional Findings**

**Age.** Younger nurses appeared to have somewhat more feelings of depersonalization than did older nurses. Consistent with this finding, in the model of Pearlman and Hartman, 4 stages of stress progress to burnout, indicating that in the first stage a person’s skills and abilities may not be sufficiently developed to adequately cope with perceived or actual work-related stressors. Similarly, Maslach and Jackson found that younger healthcare providers were more susceptible to burnout than were older healthcare providers. Moreover, younger age was a significant predictor of emotional stress in previous research on burnout in critical care nurses.

**Education.** We found a significant relationship between educational level and moral distress, indicating that nurses with a bachelor’s degree or higher experienced greater feelings of emotional exhaustion than did older nurses and nurses who worked in a single ICU.

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**Table 1** Demographic characteristics of the sample (N = 60)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>51</td>
<td>85.0</td>
</tr>
<tr>
<td><strong>Age, years</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-30</td>
<td>9</td>
<td>15.0</td>
</tr>
<tr>
<td>31-45</td>
<td>30</td>
<td>50.0</td>
</tr>
<tr>
<td>46-60</td>
<td>19</td>
<td>31.7</td>
</tr>
<tr>
<td>61+</td>
<td>2</td>
<td>3.3</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>9</td>
<td>15.0</td>
</tr>
<tr>
<td>Married</td>
<td>42</td>
<td>70.0</td>
</tr>
<tr>
<td>Separated</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>Divorced</td>
<td>8</td>
<td>13.3</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
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<tr>
<td>Diploma</td>
<td>6</td>
<td>10.0</td>
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<tr>
<td>Associate degree in nursing</td>
<td>25</td>
<td>41.7</td>
</tr>
<tr>
<td>Bachelor’s degree in nursing or higher</td>
<td>26</td>
<td>43.3</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>5.0</td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not important</td>
<td>3</td>
<td>5.0</td>
</tr>
<tr>
<td>Somewhat important</td>
<td>16</td>
<td>26.7</td>
</tr>
<tr>
<td>Very important</td>
<td>41</td>
<td>68.3</td>
</tr>
<tr>
<td><strong>Area employed</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical-surgical intensive care unit</td>
<td>2</td>
<td>3.3</td>
</tr>
<tr>
<td>Coronary care unit</td>
<td>11</td>
<td>18.3</td>
</tr>
<tr>
<td>Neurological intensive care unit</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>3 units in rotation</td>
<td>46</td>
<td>76.7</td>
</tr>
<tr>
<td><strong>Shift worked</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 hours</td>
<td>59</td>
<td>98.3</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>1.7</td>
</tr>
</tbody>
</table>

**Education.** Analysis of variance with post hoc Scheffé tests were conducted with scores on the MDS painful feelings subscale as the dependent variable and education as the independent variable. The results indicated that nurses with a bachelor’s degree in nursing or higher had significantly higher scores ($F=4.27, P=.009$) on the MDS painful feelings subscale (mean = 154.19, SD = 30.10) than did nurses with an associate degree in nursing (mean = 126.58, SD = 34.87).

**Rotation Within the Critical Care Units Versus No Rotation.** An indirect relationship indicated that nurses who did not work the critical care units in rotation scored significantly higher ($t=2.00, P=.05$) on the personal accomplishment subscale (mean = 40.07, SD = 9.76) than did nurses who worked the different units in rotation (mean = 35.59, SD = 6.49). Nurses who always worked in the same type of unit scored significantly lower on the depersonalization subscale than did those who worked the units in rotation ($t=3.114, P=.004$).

Younger nurses and nurses who rotated between different ICUs had greater feelings of depersonalization than did older nurses and nurses who worked in a single ICU.
enced more painful feelings when confronted with situations of medical futility than did nurses with an associate degree. This result is in agreement with the theoretical formulation of Pearlman and Hartman\(^\text{27}\) related to the perception and impact of job stress, pointing out that a person’s work may not meet his or her values and expectations. Similarly, in their investigation of the relationship between ethical decision making and stress in ICU nurses, Erlen and Sereika\(^\text{1}\) found that nurses with a bachelor’s degree or higher had higher stress-related scores than did nurses with an associate degree.

**Rotation Within the Critical Care Units Versus No Rotation.** We found a significant inverse correlation between nurses who rotated between different ICUs and nurses who did not. Nurses who worked in only a single type of critical care unit experience fewer feelings of personal accomplishment than did nurses who worked in the different units in rotation. A possible explanation is that working in certain areas of intensive care may be less rewarding than working in other areas in terms of satisfactory outcomes of patients. However, this explanation is a speculation because we did not measure the actual number of patients who received futile care. For example, van Servellen and Leake\(^\text{19}\) found that nurses working in medical ICUs reported lower levels of personal accomplishment than did nurses working in other hospital areas such as oncology and special care units for patients with acquired immunodeficiency syndrome. In addition, the importance of job satisfaction and meaningfulness of work in critical care nurses has been reported in previous research. Stechmiller and Yarandi\(^\text{11}\) reported that meaningfulness of work and opportunities for advancement are the most important aspects of job satisfaction among critical care nurses.

Another finding of interest was that nurses who worked in the different critical care units in rotation experienced higher feelings of depersonalization than did those who always worked in the same unit. Along this line, Spencer\(^\text{10}\) researched ways in which critical care nurses deal with grief when a patient dies and found that peer support was crucial for effective coping. Nurses who reported receiving higher support had worked in the unit longer and therefore had more meaningful relationships among themselves.\(^\text{10}\)

**Religion.** The last significant additional finding was that of an indirect relationship between religion and emotional exhaustion. The results suggest that nurses who viewed religion as important in their lives experienced fewer feelings of emotional exhaustion when confronted with ethical dilemmas than did nurses for whom religion was not so important. A possible explanation for this finding is that nurses with strong religious beliefs see hope and the end of life differently than do nurses without such religious beliefs.

**Limitations**

The research reported here has several limitations. The descriptive design of the study and the convenience method of sampling limit the generalizability of the results; thus, the findings should be viewed cautiously. Our findings may reflect a particular response bias because nurses experiencing high levels of burnout may have lacked motivation to participate in the study. In addition, because of the descriptive nature of the study, we used only standardized measures to examine relationships. Therefore, the results may not reveal the true causal relationship between medical futility and burnout or emotional distress in critical care nurses.

**Table 2** Pearson product moment correlations for MDS and MBI subscales

<table>
<thead>
<tr>
<th>Subscale</th>
<th>MDS painful feelings</th>
<th>MDS frequency</th>
<th>MBI emotional exhaustion</th>
<th>MBI depersonalization</th>
<th>MBI personal accomplishment</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDS painful feelings</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MDS frequency</td>
<td>0.370*</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MBI emotional exhaustion</td>
<td>0.02</td>
<td>0.317†</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MBI depersonalization</td>
<td>-0.107</td>
<td>0.243</td>
<td>0.610*</td>
<td>-0.353*</td>
<td>-0.343*</td>
</tr>
<tr>
<td>MBI personal accomplishment</td>
<td>0.049</td>
<td>-0.205</td>
<td>-0.353*</td>
<td>-0.343*</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Abbreviations: MBI, Maslach Burnout Inventory; MDS, Moral Distress Scale.

* Significant at \(P = .01\).
† Significant at \(P = .05\).
Implications

Our major finding suggests that feelings of emotional exhaustion leading to burnout in critical care nursing are highly influenced by the frequency with which nurses are involved in life-sustaining interventions that conflict with the nurses’ values and standards in terms of what the nurses think are ethically appropriate and can result in improvement in a patient’s condition and outcome. The clinical significance of this finding cannot be overlooked. Experiencing feelings of emotional exhaustion can lead to staff conflicts, absenteeism, lowered morale, and decreased productivity, ultimately culminating in burnout and compromising patients’ care.9,10

In their analysis of the relationship between ethics in nursing and professionalism, Quinn and Smith29 pointed out that experiencing uncertainty is an inherent component of being a professional. However, it is essential that nurses address uncertainty through open communication with colleagues, develop skills in moral reasoning, and apply ethical principles to clinical situations. Ethical principles such as respect for others (autonomy), helping others in their best interest (beneficence), avoiding harm (nonmaleficence), and fairness (justice) are major components of decision making in critical care nursing, as well as the objective point of reference on which to base the determination of medical futility.13,30,31

At the hospital administration level, our results can be used to provide resources to critical care nurses to discuss ethical dilemmas or particular situations with patients as the situations occur. These resources could include interdisciplinary group discussions, accessibility to ethics committees, and involvement in the development of organizational policies and guidelines on futility and ethical decision making. At the unit level, the availability of a counselor, such as a clinical nurse specialist or a psychiatric liaison, could help identify problem areas and help nurses change the perception of stressors. If the sources of stress can be identified and controlled, the overall effect might be an improvement in nursing performance, resulting in optimal care for patients.9,10

ACKNOWLEDGMENTS

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