INFORMATIONAL COPING STYLE AND DEPRESSIVE SYMPTOMS IN FAMILY DECISION MAKERS

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Background
Overwhelmed family decision makers of chronically critically ill patients must comprehend vital information to make complex treatment decisions that are consistent with patients’ preferences. Exploration of informational coping styles of family decision makers may yield evidence for tailored communication practices supporting the psychological and informational needs of family decision makers.

Objectives
To describe patterns in the demographic characteristics and informational coping styles of family decision makers; to assess differences in informational satisfaction, role stress, and depressive symptoms between family decision makers classified as monitors and as blunters; and to describe the predictive associations between informational coping styles, informational satisfaction, and role stress on depressive symptoms in family decision makers.

Methods
A secondary data analysis of 210 family decision makers of cognitively impaired patients who required 3 days or more of mechanical ventilation. On enrollment, decision makers completed the abbreviated Miller Behavioral Style Scale to assess informational coping styles, the Critical Care Family Satisfaction Survey’s informational subscale to assess informational satisfaction, a single-item measure of role stress, and the Center for Epidemiological Studies Depression scale to assess depressive symptoms.

Results
No associations emerged between demographic characteristics and informational coping styles of family decision makers. Monitors had higher depression scores than did blunters. Both information coping style and informational satisfaction influenced depressive symptoms; however, role stress was the most significant predictor.

Conclusions
Family decision makers classified as monitors were at higher risk for depression than were those who seem to avoid information. Targeting monitors with additional psychological and informational support may mitigate their psychological impairment. (American Journal of Critical Care. 2010;19:410-420)
Technological and pharmacological advancements have enabled more acutely critically ill patients to survive and transition to a state of being chronically critically ill (CCI). The symptoms associated with the syndrome of chronic critical illness include metabolic derangements, alterations in neuroendocrine function, muscular atrophy, infection, psychological disturbances, cognitive impairment, and the clinical hallmark of prolonged dependence on mechanical ventilation. CCI patients are a relatively small but growing proportion of all critically ill patients. Zilberberg et al estimated that the age-adjusted annual growth of the CCI population is 5.5% and, given this rapid rate of annual growth, the incidence of chronic critical illness is projected to be greater than 600,000 persons by 2020. This emerging cohort of critically ill patients also consumes a significantly greater amount of intensive care and posthospital resources compared with acutely critically ill patients. Despite the resource intensiveness of CCI patients, survival, and functional status outcomes for these patients are poor.

The acuity of CCI patients, their impaired cognitive status, and their poor survival outcomes despite aggressive use of health care resources increase the complexity of the decision-making process. Clinical characteristics such as the severity of illness, mechanical ventilatory support, sedation, and analgesics limit communication, comprehension, and the active participation of CCI patients in decision making. Daly et al reported a 37% prevalence of impaired cognitive status for those CCI patients who required at least 3 days of mechanical ventilation; cognitive impairment occurs in up to 82% of CCI patients who receive an elective tracheotomy.

The lack of decision-making capacity, the enormous resource consumption, and the clinical features of CCI patients often result in family members actively participating in the decision-making process on behalf of a cognitively impaired patient. During an occurrence of critical illness, family members are more than visitors and informal care providers; they assume the role of family decision maker (FDM). An FDM is a surrogate decision maker who makes medical decisions on the behalf of a cognitively impaired critically ill patient. Although often overwhelmed by the psychological stress of a loved one’s critical illness, FDMs must receive and comprehend medical information in order to make medical decisions that are in accordance with the preferences of the cognitively impaired patient. FDMs of critically ill patients routinely are faced with life-sustaining or life-limiting decisions while coping with situational and role uncertainty.

The complexity and vulnerability of critically ill patients establish unique informational and psychological needs for FDMs during the acute and chronic phase of critical illness. Although the need for frequent high-quality communication has been thoroughly discussed in the literature, no one has studied the informational coping style of these families and how to tailor this communication to their psychological and informational coping needs. However, a growing body of literature in the social sciences suggests that individuals differ in the way in which information is processed to facilitate effective coping processes.

Examination of patterns of informational processing style is relevant to FDMs, because these family members are expected to process information in order to formulate an informed decision for the cognitively impaired patient. Therefore, the purpose of this article is to describe a method of assessing informational coping styles of FDMs and to report the results of a preliminary exploration of relationships among informational coping style, role stress, and depressive symptoms of FDMs of cognitively impaired CCI patients.

**Background**

The traditional approach to understanding the relationship between stress and coping employs a...
transactional model. The most common philosophical approach explaining stress and coping is a transactional process that entails the cognitive appraisal of a stressor as potentially harmful and the initiation of coping behaviors to mitigate the effects of the stressor. The second philosophical approach applied to the stress and coping process assumes that individuals initiate preferential coping behaviors based on personality traits without regard to the context or psychological stressor; this form of dispositional coping is known as the individual’s coping style.

Many classifications of coping styles exist. Approach and avoidance coping styles are 2 of the most well-known methods of classifying the ways that individuals cope with psychological threats. During a stressful event, some individuals attempt to gain closer proximity with the stressful situation through information seeking; this coping behavior is characteristic of approach coping. In contrast, individuals who prefer to withdraw from the stressor have an avoidant coping style. Approach and avoidance coping styles reflect cognitive and emotional activity and orient the person either toward or away from the threat. In this article, we further examine informational coping style, a variation of approach and avoidance coping that describes an individual’s disposition for processing information while exposed to stressful conditions, such as being the FDM for a cognitively impaired CCI patient.

In the early 1980s, the concept of informational coping style emerged as a method of categorizing informational coping behaviors. The Cognitive-Social Health Information Processing (C-SHIP) model developed by Miller et al consists of a cognitive-affective construct that categorizes individuals on the basis of their informational coping disposition as either “monitors” or “blunters.” The C-SHIP model assumes that monitoring and blunting coping styles are conceptually independent and a person is likely to use both dimensions, with a primary dimension being the most preferential.

**Informational Coping Style**

Dispositional coping styles, information seeking (monitoring) and information avoidance (blunting), are stable characteristics of the individual. Individuals who consistently seek additional, detailed information from nurses, physicians, and the environment as a method of coping with psychological stress exemplify monitoring behaviors. When information from these sources is insufficient, monitors may have alterations in their psychological well-being, because of their loss of the predictability, control and certainty acquired from gaining information.

Information for individuals classified as monitors can mitigate or perpetuate the effects of exposure to threatening health information. The persistent psychological arousal related to the constant scan for information and the fixation on the negative aspects of the stressor contribute to the psychological distress in individuals classified as monitors; however, when sufficient information is available, psychological arousal will decrease. FDMs who are monitors are likely to report more depressive symptoms and a greater amount of perceived stress associated with being a surrogate decision maker if the information available is limited or their informational needs are not satisfied.

Unlike monitors, blunters will avoid or distract themselves from sources of information deemed as threatening. The avoidance behaviors of blunters toward information are protective preferences, and exposing these individuals to a great deal of detailed information may actually be harmful to their psychological well-being. Blunting behaviors in the FDMs of a CCI patient may appear as resistance to meeting with health care providers or passive participation by the FDM in the decision-making process. The preference for avoidance of informational sources by FDMs could be thwarted by the recommended practice of a shared medical decision-making paradigm, resulting in unwanted exposure to sources of threatening information. In contrast to monitors, individuals who are blunters perceive information as stress inducing, and when they are no longer exposed to sources of threatening information, their psychological arousal is likely to subside. However, to date, no one has studied the patterns of informational coping style in blunter FDMs.

**Role Stress**

Family members of critically ill patients are exposed to multiple sources of psychological stress. Those family members designated as FDMs may experience additional stress from being in the role of surrogate decision maker. FDMs must understand complex medical terminology, deliberate on the decision choices, and then make a decision that is in accordance with the patient’s preferences. Results of several studies validate the perception of role...
stress in FDMs of cognitively impaired persons who were faced with life-limiting or life-sustaining decisions. Experiencing role stress may reduce the FDM’s ability to make appropriate treatment decisions and can further increase the risk for impaired psychological well-being.

**Informational Satisfaction**

Results of previous studies show that family members of critically ill patients perceive the amount and quality of the information they receive as being insufficient and not satisfying their informational needs. Lilly and Daly suggest the use of a structured communication system during formal family meetings, in an effort to provide sufficient informational support, to enhance informational satisfaction, and to reduce unnecessary consumption of intensive care resources. However, these clinical recommendations may support only the informational coping style of individuals who use the monitoring informational coping style and may induce unintended psychological harm for those who use the blunting informational coping style to manage threatening health information.

**Depressive Symptoms**

Few researchers have explored the psychological impairment of family members of CCI patients. As a consequence of a loved one’s critical illness, family members of critically ill patients have symptoms associated with anxiety, posttraumatic stress disorder, and depression that contribute to their impaired psychological well-being.25,26 Douglas and coworkers were among the first to cite the psychological impairment of caregivers of CCI patients, as part of a clinical trial of a posthospital disease management program for families of patients who required prolonged mechanical ventilation. Their findings indicate that at hospital discharge most caregivers (51.2%) were at risk of clinical depression (depression score > 16), although symptoms of depression were significantly reduced by 6 months after hospital discharge. Adding to this scant body of literature, Im et al and Van Pelt et al noted that a third of caregivers of patients who required 48 hours or more of mechanical ventilation were at risk for clinical depression 2 months after the start of prolonged mechanical ventilation, and, contrary to the findings of Douglas and coworkers, these symptoms did not decrease significantly over time in caregivers of CCI patients.

**Methods**

This secondary data analysis was done to investigate patterns in demographic characteristics and informational coping styles of FDMs as well as differences in informational satisfaction, role stress, and depressive symptoms between FDMs classified as monitors and FDMs classified as bluters. Predictive associations between informational coping style, informational satisfaction, and role stress on depressive symptoms at the onset of chronic critical illness in FDMs of cognitively impaired CCI patients also were examined.

**Setting and Sample**

A convenience sample of 210 FDMs was recruited from 5 intensive care units (ICUs) at 2 Midwestern academic medical centers, as part of a larger study of the use of a structured communication system during formal family meetings. The eligibility criteria for the interventional study were maintained; therefore, potential participants were age 18 years or older and were the next of kin or legal representative for a cognitively impaired patient who required at least 72 hours of mechanical ventilation. Potential subjects for the present study also had to be available to meet with the health care team for formal and informal family conferences while the patient was in the ICU. Before recruitment of subjects, approval was obtained from each institutional review board and written informed consent was obtained from each FDM.

The participants included in our secondary data analysis represent a subgroup of participants who were administered additional questionnaires upon entry into the clinical trial of a structured communication system. All participants in the present study were enrolled during the intervention phase of the clinical trial but had not received a dose of the intervention. The intervention consisted of weekly multidisciplinary family conferences held away from the bedside, intended to assist FDMs and the health care team in establishing a plan of care consistent with the patient’s treatment preferences.

**Procedures**

Patients were screened daily during weekdays by a research assistant for study eligibility. Once a patient met the eligibility criteria, the research assistant would refer to the Glasgow Coma Scale to determine the patient’s decisional capacity. If the patient was sedated, confused, or had an eye score less than 3 or a motor score less than 2, enrollment was not possible. If the patient was alert, oriented, and able to state treatment preferences, the family member was asked if he or she would like to participate in the study. For the present study, we included family members of patients who were 18 years or older and were the next of kin or legal representative for a cognitively impaired patient who required at least 72 hours of mechanical ventilation. Potential participants were age 18 years or older and were the next of kin or legal representative for a cognitively impaired patient who required at least 72 hours of mechanical ventilation. Potential subjects for the present study also had to be available to meet with the health care team for formal and informal family conferences while the patient was in the ICU. Before recruitment of subjects, approval was obtained from each institutional review board and written informed consent was obtained from each family member.
Two stress-provoking hypothetical scenarios, job loss and a dental procedure, were used.

After enrollment, the abbreviated Miller Behavioral Style Scale (MBSS), the Critical Care Family Satisfaction Survey (CCFSS), a single-item measure of role stress, and the Center for Epidemiological Studies Depression (CES-D) scale were administered during the first week of the ICU admission.

**Instruments**

The full-version MBSS, a measure of informational coping style, has established internal reliability and validity as well as stable test-retest reliability. The MBSS is constructed to represent the 2 dimensions of informational coping and has 2 subscales, monitoring and blunting. The full-version MBSS has 4 stress-provoking scenarios (possible job loss, a dental procedure, airplane flight, and a hostage situation) and a series of 4 monitoring and 4 blunting behaviors for each scenario. The abbreviated MBSS uses only 2 of the original 4 stress-provoking hypothetical scenarios (job loss and a dental procedure) and is thought to reflect the more commonly experienced stress-evoking events. Several methods of scoring the MBSS have been reported. In the present study, we employed the most widely used method to score the abbreviated MBSS. Responses to the abbreviated MBSS are scored as 1 (yes) or 0 (no). To obtain the total score on the monitoring subscale or the blunting subscale, each monitoring and blunting response is summed to produce a total score with a range of 0 to 8 for each subscale. The median of the total score on the monitoring subscale for the sample serves as a cut-off for categorizing subjects as either monitors or bluters. Those subjects whose total score on the monitoring subscale of the abbreviated MBSS were greater than the median were classified as high monitors and those with scores less than this cutoff were categorized as bluters (or low monitors).

The full version and abbreviated versions of the MBSS have been validated in samples of patients and their spouses. The internal reliability consistency (Kuder-Richardson 20) for the abbreviated MBSS was 0.60 in this sample of FDMS.

The CCFSS is used to assess family satisfaction with ICU care. The CCFSS was developed as a 5-factor, 18-item tool to assess family member satisfaction as a proxy for patient satisfaction. The 5 subscales of the CCFSS are assurance, proximity, support, comfort, and information. The information satisfaction subscale consists of 4 items on a 5-point Likert scale from 1 (very dissatisfied) to 5 (very satisfied). The items of this subscale measure satisfaction with the information provided by critical care physicians and nurses. The higher the score on the information subscale, the more satisfied the family member is with the information he or she received from physicians and nurses. The CCFSS has established reliability and validity in a sample of family members of critically ill patients, and an internal reliability consistency coefficient of 0.73 was estimated for the information subscale in this study.

A single-item measure, “How stressful has it been making medical decisions for your family member?” was used to measure the stress associated with surrogate decision making as perceived by the FDM. Similar single-item measures have been established as reliable and valid methods of measuring stress. Therefore, our single-item measure is an acceptable method of assessing the stress associated with surrogate decision making by FDMS given the lack of a reliable and valid multidimensional measure of this latent construct. This measure was constructed as a graphic rating scale with the labels “not at all stressful” at one end and “very stressful” at the other end of a 10-cm horizontal line. The subject was asked to place an “X” on the scale to reflect the magnitude of perceived stress. The distance, in millimeters, from 0 to the “X” mark was then divided by the total length of the scale (100 mm) and multiplied by 100 to transform the raw score to a percentage. Higher scores indicate the FDM’s perception of the psychological stress associated with being a patient’s surrogate decision maker.

The CES-D is a widely used instrument that measures depressive symptoms and the clinical risk for depression. It is constructed as a 20-item self-report measure of depressive symptoms on a 4-point Likert scale from 0 (rarely or none of the time) to 3 (most or all of the time). Total CES-D scores range significantly higher depression scores than bluters had upon entry to the study.
Our data met the statistical assumptions of multiple regression, and a 2-step hierarchical multiple regression was conducted to explore the predictive associations between informational coping style (total monitoring score), role stress, and informational satisfaction on the FDM’s CES-D scores at enrollment. The hierarchical entry of the study variables was guided by the conceptualization of informational coping style as a stable characteristic activated by the individual’s perception of a psychological threat. Therefore, the monitoring score was entered in step 1. Role stress and informational satisfaction were entered simultaneously in step 2 of the hierarchical multiple regression. Statistical significance ($\alpha$) was set at .05 or less for all analyses.

**Results**

**Sample Description**

The Figure shows the distribution of the total sample and enrolled subjects. As shown in Table 1, our sample of FDMs consisted primarily of white women who had prior experience with a critically ill family member. A total of 210 participants (43%) completed all of the questionnaires; however, this subgroup of participants represents less than one-fourth (21%) of the total number of eligible FDMs. The refusal rate was calculated by excluding the number of FDMs who could not be contacted by...
Predictors of Depressive Symptoms in FDMs

Given the incidence of depressive symptoms and the high risk for clinical depression in these FDMs, we were also interested in examining predictors of depressive symptoms at the onset of an episode of chronic critical illness. A hierarchical multiple regression was conducted and these results confirmed that a 3-predictor model (informational coping style, informational satisfaction, and role stress) accounted for 24.5% of the explained variance of depressive symptoms reported by FDMs at study entry (Table 4). All 3 predictors included in the model met the criterion for statistical significance; however, role stress ($\beta = .381$, $P = .001$) was the most influential predictor of CES-D scores.

Discussion

First, we found that demographic characteristics of surrogate decision makers do not affect the FDM’s classification of informational coping style. Previous studies have shown no significant differences in demographic characteristics between persons classified as monitors and persons classified as blunters. However, these findings have been reported in samples of patients receiving primary care at an internal medicine practice and among family caregivers of women with breast cancer. This study is the first to assess informational coping style in FDMs of cognitively impaired CCI patients.

The independence of informational coping style from the FDM’s demographic characteristics suggests that the assessment of informational preferences and psychological needs should not be triggered by demographic characteristics of FDMs. Tailoring communication practices on the basis of the FDM’s demographic characteristics is unlikely to facilitate comprehension or effective decision making, improve satisfaction, or address the informational preferences and psychological needs of these individuals. Therefore, we believe that routine clinical assessment of informational coping style is likely to be a more useful approach to tailoring communication practices designed to provide the informational and psychological support necessary for family members exposed to surrogate decision making for CCI patients.

Comparison of Informational Coping Style and Demographic Characteristics of FDMs

Two fundamental aims of this study were to describe informational coping style in FDMs of cognitively impaired CCI patients and to provide preliminary evidence of the need for tailored communication practices. FDMs classified as monitors did not differ significantly from FDMs classified as blunters with respect to demographic characteristics (Table 2).

Comparison of Informational Coping Style and Psychological Outcomes of FDMs

The informational coping style of monitors did not differ significantly from that of blunters with respect to the perceptions of informational satisfaction and role stress at the beginning of chronic critical illness (Table 3). However, FDMs who were classified as monitors had significantly higher CES-D scores ($\text{mean, 26.1; SD, 10.9}$) compared with blunters upon entry to the study ($\text{mean, 23; SD, 12; } t = -2.0; P = .04$).

The research team ($n = 217$); therefore, the refusal rate for this study was 35% for eligible FDMs who were contacted for informed consent. The mean CES-D score in for the FDMs was 24.8 ($SD = 11.1$) at enrollment, which categorizes the sample as reporting a moderate amount of depressive symptoms.

Table 1

<table>
<thead>
<tr>
<th>Variablea</th>
<th>No. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female sex</td>
<td>160 (76.2)</td>
</tr>
<tr>
<td>White race</td>
<td>131 (62.4)</td>
</tr>
<tr>
<td>Relationship to patient</td>
<td></td>
</tr>
<tr>
<td>Spouse</td>
<td>72 (34.3)</td>
</tr>
<tr>
<td>Adult child</td>
<td>59 (28.1)</td>
</tr>
<tr>
<td>Parent</td>
<td>45 (21.4)</td>
</tr>
<tr>
<td>Other relative</td>
<td>34 (16.2)</td>
</tr>
<tr>
<td>Married</td>
<td>150 (71.4)</td>
</tr>
<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>High school or less</td>
<td>131 (62.4)</td>
</tr>
<tr>
<td>2-4 years of college</td>
<td>56 (26.7)</td>
</tr>
<tr>
<td>Graduate studies</td>
<td>23 (11.0)</td>
</tr>
<tr>
<td>Employed</td>
<td>124 (59.0)</td>
</tr>
<tr>
<td>Household income, $</td>
<td></td>
</tr>
<tr>
<td>$\leq 20 000$</td>
<td>44 (22.7)</td>
</tr>
<tr>
<td>21 000-49 000</td>
<td>84 (43.3)</td>
</tr>
<tr>
<td>$\geq 50 000$</td>
<td>66 (34.0)</td>
</tr>
<tr>
<td>First experience in intensive care unit</td>
<td>79 (37.6)</td>
</tr>
</tbody>
</table>

aMean (SD) age of family decision makers was 51.2 (13.1) years.
lack of psychometric evaluation of the single-item measure of role stress.

However, we did find a significant difference between informational coping style and CES-D scores. Consistent with previous studies done to assess informational coping style and depressive symptoms, we found that FDMs classified as monitors (high monitors) had significantly higher CES-D scores than did FMDs who were classified as blunters (low monitors). Our sample of FDMs had significantly higher CES-D scores overall compared with estimates for a general population of community-dwelling adults. Possible explanations for these high scores include the following: exposure to a steady decline in the patient’s health status, overinflated report of depressive symptoms associated with the acute phase of the patient’s critical illness, the burden of the FDM role. In addition, items on the CES-D may overlap with symptoms of another affective state, such as anxiety, that was not assessed in our study.

Table 2

<table>
<thead>
<tr>
<th>Variable</th>
<th>Monitors (n = 116)</th>
<th>Blunters (n = 94)</th>
<th>Z</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, y</td>
<td>52.8</td>
<td>50.1</td>
<td>-0.79</td>
<td>.43</td>
</tr>
<tr>
<td>Female sex</td>
<td>No. %</td>
<td>No. %</td>
<td>χ²</td>
<td>P</td>
</tr>
<tr>
<td>White race</td>
<td>85 73.3</td>
<td>75 79.8</td>
<td>1.21</td>
<td>.27</td>
</tr>
<tr>
<td>Married</td>
<td>83 71.6</td>
<td>66 70.2</td>
<td>0.04</td>
<td>.83</td>
</tr>
<tr>
<td>Caregiver before admission (n = 194)</td>
<td>36 31.3</td>
<td>23 24.7</td>
<td>1.09</td>
<td>.30</td>
</tr>
<tr>
<td>First experience in intensive care unit</td>
<td>44 39.3</td>
<td>35 38.5</td>
<td>0.01</td>
<td>.90</td>
</tr>
<tr>
<td>Relationship to patient</td>
<td></td>
<td></td>
<td>5.97</td>
<td>.11</td>
</tr>
<tr>
<td>Spouse</td>
<td>47 40.5</td>
<td>24 25.5</td>
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<td></td>
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<tr>
<td>Adult child</td>
<td>28 24.1</td>
<td>32 34.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent</td>
<td>22 19.0</td>
<td>23 24.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other relative</td>
<td>19 16.4</td>
<td>15 16.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual household income, $ (n = 207)</td>
<td></td>
<td></td>
<td>0.99</td>
<td>.61</td>
</tr>
<tr>
<td>≤20000</td>
<td>24 22.2</td>
<td>20 23.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21000-49999</td>
<td>50 46.3</td>
<td>34 39.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥50000</td>
<td>34 31.5</td>
<td>32 37.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education (n = 203)</td>
<td></td>
<td></td>
<td>3.56</td>
<td>.17</td>
</tr>
<tr>
<td>High school or less</td>
<td>68 59.1</td>
<td>66 71.7</td>
<td></td>
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<tr>
<td>2-4 years college</td>
<td>34 29.6</td>
<td>19 20.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate studies</td>
<td>13 11.3</td>
<td>7 7.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
<td></td>
<td>1.68</td>
<td>.20</td>
</tr>
<tr>
<td>Employed</td>
<td>63 54.3</td>
<td>61 64.9</td>
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<td></td>
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</table>

Table 3

<table>
<thead>
<tr>
<th>Score</th>
<th>Monitors</th>
<th>Blunters</th>
<th>Mean difference</th>
<th>95% CI, mean difference</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCFSS-IS</td>
<td>115 4.3 (0.55)</td>
<td>92 4.3 (0.55)</td>
<td>-0.01</td>
<td>-0.16, 0.14</td>
<td>-0.09</td>
<td>.93</td>
</tr>
<tr>
<td>Role stress</td>
<td>95 60.9 (31.2)</td>
<td>83 58.5 (30.8)</td>
<td>-2.37</td>
<td>-11.60, 6.80</td>
<td>-0.51</td>
<td>.61</td>
</tr>
<tr>
<td>CES-D*</td>
<td>116 26.1 (10.9)</td>
<td>93 23.0 (12.0)</td>
<td>-3.17</td>
<td>-6.30, -0.02</td>
<td>-2.00</td>
<td>.04</td>
</tr>
</tbody>
</table>

Abbreviations: CCFSS-IS, Critical Care Family Satisfaction Survey–Informational Satisfaction; CES-D, Center for Epidemiological Studies Depression scale.

*Effect size (d = 0.30).
Future research should address these possible influences on mood among FDMs at the beginning of chronic critical illness.

The third significant result of this study was the association of higher informational satisfaction with lower appraisal of depressive symptoms. However, role stress and the monitoring informational coping style are likely to increase the appraisal of depressive symptoms, which suggests that interventional research should address the informational needs and psychological stress among family members subject to the role of surrogate decision maker for CCI patients.

Although several studies have been done to examine the characteristics of informational coping styles for patients, understanding of the concept among family members acting as surrogate decision makers for CCI patients is limited. We suspect that patients and FDMs differ in their appraisal of health information. For instance, patients are likely to perceive a direct threat from information regarding their diagnosis and treatment of cancer. This same health information given to the patient’s spouse is likely to present a different kind of threat associated with the potential loss of a loved one and role change or strain, rather than the fear associated with one’s own health. Differences in the appraisal of meaning or the threat associated with information are likely to be influenced by the individual’s role in the communication process. To date, informational coping style has been presumed to function consistently within the individual despite the individual’s cognitive role. The relationship between informational coping style and the cognitive role of the individual is not well understood. However, it is possible that being a FDM who does not receive informational support tailored to informational coping style can result in an inability to make a rational and informed decision on the behalf of a cognitively impaired patient.

Although the focus of this study was on the informational coping style, our findings indicated that role stress was the most influential contributor to self-reported depressive symptoms. Family members who are in the decision-making role and appear to be active information seekers might be at greater risk for depression than are family members who are not faced with making decisions for their loved one and family members who appear to be avoiding information. Given this finding, it would be appropriate for critical care nurses to target family members who appear to be information seekers for a more careful assessment of psychological status and the allocation of additional informational and social support resources.

**Limitations**

This study had several limitations that should be noted. First, data on FDMs were collected only at 1 point in time, at the onset of chronic critical illness. Second, the sample consisted primarily of white women who were either a spouse or an adult child of a cognitively impaired CCI patient, and thus the sample may not adequately represent male FDMs or nonwhite FDMs. In addition, more than half (63%) of the FDMs had prior experience with a family member who had been critically ill. Third, our study used several instruments, MBSS, CCFSS, and the single-item measure of role stress, that had not been used before in a sample of family members of critically ill patients and that showed poor internal reliability consistency in this sample of FDMs. Fourth, our refusal rate was 35%, and most FDMs who refused reported being too overwhelmed from the stress of having their loved one in an ICU to participate in our study. Given our moderately high rate of refusal to participate in this study, we recognize that our sample may represent only those FDMs who were moderately distressed rather than those

<table>
<thead>
<tr>
<th>Model</th>
<th>Predictors</th>
<th>$R^2$</th>
<th>$R^2_{adj}$</th>
<th>$\Delta R^2$</th>
<th>$b$</th>
<th>95% Confidence interval for unstandardized coefficients</th>
<th>$\beta$</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Monitoring score</td>
<td>.088</td>
<td>.083</td>
<td>1.78</td>
<td>1.00, 2.75</td>
<td>.297</td>
<td>4.11</td>
<td>&lt;.001</td>
<td></td>
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<tr>
<td>2</td>
<td>Monitoring score</td>
<td>.258</td>
<td>.245</td>
<td>.170</td>
<td>1.33</td>
<td>0.554, 2.18</td>
<td>.224</td>
<td>3.57</td>
<td>.001</td>
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<tr>
<td></td>
<td>Role stress</td>
<td></td>
<td></td>
<td></td>
<td>0.14</td>
<td>0.086, 0.183</td>
<td>.381</td>
<td>5.67</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td>Informational satisfaction</td>
<td></td>
<td></td>
<td></td>
<td>2.84</td>
<td>-5.15, -0.201</td>
<td>.140</td>
<td>2.12</td>
<td>.03</td>
</tr>
</tbody>
</table>

Assessment of informational coping style is a useful approach to tailor communication practices.
experiencing the highest levels of stress. Our study was focused on the primary FDM designated to make decisions for a CCI patient; however, most decisions about the care of the patient are made by the primary FDM with input from other key members within a family system. We examined the role of the FDM from a family member’s perspective and did not take into account the family’s involvement and experience in the decision-making process, another limitation of our study.

Conclusion

The emphasis on family-centered care in the ICU recognizes both the patient and the patient’s family as the focus of concern to critical care nurses providing care to this vulnerable dyad.42 As critical care nurses, it is our responsibility to provide psychological support and to facilitate communication to patients and their family members during an episode of critical illness. Moreover, the American Association of Critical-Care Nurses advocates for further study of nursing interventions focused on family members of the critically ill, coaching family members on how to communicate with health care providers, and interventions to provide tailored emotional support.42 Exploring psychological factors such as role stress and informational coping style is a logical direction for future interventional studies focused on improving information delivery and emotional support among FDMs of critically ill patients.

FINANCIAL DISCLOSURES

This study was funded by a diversity in health-related research supplement to grant R01-008941 from the National Institute of Nursing Research and grant 1KL2RR024990 from the National Center for Research Resources (NCRR), a component of the National Institutes of Health (NIH) and NIH Roadmap for Medical Research.

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Informational Coping Style and Depressive Symptoms in Family Decision Makers
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Am J Crit Care 2010;19 410-420 10.4037/ajcc2010354
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