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Background  Discretionary autonomy is a key factor in enhanced patient outcomes and nurses’ work satisfaction. Among nurses, insufficient autonomy can result in moral distress.

Objectives  To explore levels of autonomy among European critical care nurses and potential associations of autonomy with nurse-physician collaboration, moral distress, and nurses’ characteristics.

Methods  Descriptive correlational study of a convenience sample of 255 delegates attending a major European critical care conference in 2009. Respondents completed a self-administered questionnaire with validated scales for nurses’ autonomy, nurse-physician collaboration, and moral distress.

Results  The mean autonomy score (84.26; SD, 11.7; range, 18-108) and the mean composite (frequency and intensity) moral distress score (73.67; SD, 39.19; range, 0-336) were both moderate. The mean collaboration score was 47.85 (SD, 11.63; range, 7-70). Italian and Greek nurses reported significantly lower nurse-physician collaboration than did other nurses (P<.001). Greek and German nurses reported significantly higher moral distress (P<.001). Autonomy scores were associated with nurse-physician collaboration scores (P<.001) and with a higher frequency of moral distress (P=.04). Associations were noted between autonomy and work satisfaction (P=.001). Frequency of moral distress was associated inversely with collaboration (ρ = -0.339; P<.001) and autonomy (ρ = -0.210; P=.01) and positively with intention to quit (ρ = 0.257; P=.004).

Conclusions  In this sample of European intensive care nurses, lower autonomy was associated with increased frequency and intensity of moral distress and lower levels of nurse-physician collaboration. (American Journal of Critical Care. 2012;21(2):e41-e52)
Among nurses, the association between being able to exercise autonomy and job dissatisfaction, burnout, and intention to leave the profession is well established. In intensive care units (ICUs), increased nursing autonomy is strongly linked with improved outcomes for patients and nurses’ health and well-being. Exercising autonomy is a factor in supporting application of evidence-based practice and in enhancing nurses’ satisfaction and retention.

Autonomy is defined as the freedom to make decisions within the domain of an individual’s profession and to act accordingly. The ability to make discretionary and autonomous decisions based on comprehensive knowledge, clinical expertise, and evidence-based findings is a hallmark of professionalism. In general, ICU nurses make 1 care decision every 30 seconds and approximately 9 important patient-care decisions per hour, suggesting that exercising judgment is a core nursing activity and influences the quality of care provided. Previous studies in European ICUs indicated that the levels of nurse autonomy differ between countries and that the decision-making capacity of these clinicians needs to be developed and strengthened. However, factors that may be associated with low autonomy among European ICU nurses have not been systematically studied. Although, presumably, poor nurse-physician collaboration may limit a nurse’s ability to implement care- and unit-related decisions, associations between these 2 constructs have not been investigated. Evidence of the association between nurse-physician collaboration and ICU nurses’ moral distress is likewise scant. Although the design of the study we report here was unsuitable for exploring either causative factors or antecedents of autonomy—and inferences may be limited by differences in responders’ context of practice—we wished to address autonomy, nurse-physician collaboration, and moral distress simultaneously in a sample of European ICU nurses to gain preliminary insight into potential associations.

In traditionally medically driven health care systems, because of an unequal power relationship, nurses’ contributions are either unsanctioned or ignored. Nurse-physician collaboration has been identified as a way of redressing the power relationship and supporting nurses’ autonomy. For example, Baggs et al reported that effective nurse-physician collaboration was associated with significantly better clinical outcomes. Professional collaboration, in particular, is a precondition and an outcome of autonomy. Moreover, autonomy, control over nursing practice, and satisfactory interpersonal collaboration are deemed core elements of nursing practice in Magnet hospitals and are linked to improved outcomes for patients.

In contrast, limited autonomy and problematic interdisciplinary collaboration may inhibit nurses’ ability to apply personal and professional moral reasoning, a situation that may lead to moral distress. ICU nurses encounter ethical, professional, and patient-care situations that can provoke moral distress and, if not managed, possibly compromise job satisfaction and retention. Moral distress occurs when clinicians are unable to translate their moral choices into moral action. In a recent study on end-of-life decisions, nurses who experienced high levels of moral distress were less likely than nurses who experienced lower levels to be satisfied with the level of care and with the ethical environment and were more likely to report lower levels of collaboration.

The purpose of our study was to explore professional autonomy, nurse-physician collaboration, and moral distress among European ICU nurses. Objectives included the investigation of perceived levels of autonomy, collaboration, and moral distress; potential differences among national groups; and

Increased autonomy for intensive care unit nurses is strongly linked with improved patient outcomes.
Delegates attending an international conference in Europe were invited to participate in the study.

Discrepancies in the levels of nurse autonomy exist between countries.

Methods

Design and Sample

The investigation was a descriptive, correlational, cross-sectional study. A convenience sample of delegates attending the 2009 joint European Federation of Critical Care Nursing Associations (EfCCNa) and L’associazione Nazionale Infermieri di Area Critica (Aniart) international 3-day conference were invited to participate. Our aim was to recruit practicing ICU nurses. During registration, delegates received a letter of invitation, a participant information and consent sheet, and a copy of the questionnaire, which was available in English, Italian and Greek.

Data Collection Instruments

Autonomy was assessed by using the scale developed by Varjus et al.11 with their permission. This Likert 6-point scale includes 18 items on the knowledge, action, and value bases of autonomy. The knowledge base includes decision making as a cognitive process. The items provide a measure of nurses’ views on their independence in decision making, right to participate in decisions, and responsibility for the decisions made and for development of the knowledge base. The action base provides a measure of nurses’ opinions of their independence in nursing actions and in actions to organize a unit’s operations. The value base is a measure of whether nurses are able to follow their own nursing values in providing care and in the unit.

A modified Corley Moral Distress Scale25 also was used with permission. This scale consists of 21 items describing situations that could engender moral distress. Respondents rate both the frequency and the level of disturbance (intensity) that the situation causes on a scale of 0 (never occurred/not disturbing) to 4 (occurred very frequently/greatly disturbing). For measuring current level of moral distress, the frequency and intensity scores for each item are multiplied. Each item product of frequency and intensity ranges from 0 to 16. These products are added to obtain a composite score. This scoring scheme allows all items marked as never experienced or not disturbing to be eliminated from the score, reflecting actual moral distress.

Permission was also granted to use the Collaboration and Satisfaction About Care Decisions Scale.24 This 10-item 7-point Likert scale is used to measure nurses’ perceptions of the level of collaboration in sharing responsibility for solving problems and making decisions. In addition, participants completed a short questionnaire on demographics, educational background, and their ICU and answered questions about the frequency of participation in continuing education programs, clinician to patient ratios, degree of job satisfaction (on a scale of 1-10), importance of job independence for the participant (on a scale of 1-10), and how much participants thought people in their country valued the importance of critical care nurses’ work (on a scale of 1-10).

Forward and back translations (English-Greek/English-Italian) were performed to ensure accuracy of translation. Face validity, feasibility, comprehensibility, and test-retest reliability of the Greek questionnaire and the internal consistency of the scales were established during a pilot study with a random sample of 160 ICU nurses. The Cronbach α coefficients for all scales were greater than 0.8. Test-retest reliability was tested in a convenience sample of 20 ICU nurses (Kendall τ = 0.989, P < .001 for 2 consecutive administrations of the scales 1 week apart). The reliability of internal consistency for all scales was also tested with the study sample from the conference. Participants were advised to complete the survey independently.

Data Analysis

For sufficient power, a sample size of approximately 250 respondents was required. Respondents returned 1197 completed valid questionnaires; among these, 958 were from Italian delegates. In order to avoid overrepresentation, 60 questionnaires from Italian delegates were randomly selected by using Excel software (Microsoft Office 2003, Microsoft Corporation, Redmond, Washington). After outliers and missing data were excluded, 255 questionnaires representing 17 countries were available for analysis.

Data were analyzed by using SPSS software, version 17.00 (SPSS IBM Corporation, Armonk, New York). Descriptive and inferential statistics were used. A nominal significance level (α = .05) was used, and Bonferroni adjustment (α = .01 to .001, corresponding to the number of simultaneous tests) was used for multiple bivariate comparisons and associations.
Some variables, including autonomy and nurse-physician collaboration scores, did not fit the criteria for normality and were fairly resistant to transformation because they originated from different populations. For variables for which normality transformation was not sufficient, nonparametric tests were used. Parametric (t test, analysis of variance) and nonparametric (Mann-Whitney test, Kruskal-Wallis test) comparisons between country, education, and type of unit groups were performed. Because of the small number of respondents from specific countries, nonparametric analyses (Kruskal-Wallis test) were performed, and the results were confirmed with the exclusion of countries with fewer than 10 respondents. Spearman p and partial correlation coefficients were reported for bivariate associations and partial associations to control for the effect of background variables. Scale scores were calculated according to the instructions provided by the developers of the respective scales.

Ethical Issues
Ethics review approval was obtained from the EFCCNa research and development review board and the University of Athens, School of Nursing, scientific review board. Questionnaires were returned anonymously in sealed envelopes. Return of a completed questionnaire was considered equivalent to a participant’s consent to have the data included in the study and used in publications and conference presentations.

Results
Internal consistency was sufficient for the autonomy scale ($\alpha = 0.878$); the subscales of knowledge base ($\alpha = 0.698$), action base ($\alpha = 0.75$), and value base ($\alpha = 0.818$); moral distress frequency ($\alpha = 0.87$) and intensity ($\alpha = 0.87$) subscales and composite moral distress subscale ($\alpha = 0.86$); and the collaboration subscale ($\alpha = 0.91$).

Background and Demographic Data
The highest percentage of respondents was from Italy (21.3%; Figure 1). Among the entire sample, respondents had a mean of 12.07 (SD, 7.9) years of nursing experience in intensive care, and 83.1% were women (Table 1). Participants were rather satisfied with their ICU position (mean job satisfaction score, 7.66; SD, 1.27; scale range, 1-10). They regarded their job independence as very important (mean score, 8.2; SD, 1.04; scale range, 1-10), but they did not think that people understood the importance of critical care nursing (mean score, 6.8; SD, 2.15; scale range, 1-10). The typical patient to nurse ratio was approximately 2.5, with larger standard deviations during night shifts and significant differences between countries.

Descriptive Statistics of Main Variables
The mean autonomy score was greater than moderate (84.26; SD, 11.7; scale range, 18-108), as were subscale scores for knowledge, action, and value bases of autonomy. The mean reported moral distress frequency was low (25.46; SD, 11.89; scale range, 0-84), and differences among national groups were significant. The intensity of moral distress was higher (mean, 56.99; SD, 16.76; scale range, 0-84), and differences among national groups were not significant. The mean composite moral distress score was moderate but varied widely according to the participant’s nationality (mean, 73.67; SD, 39.19; scale range, 0-336). The mean composite moral distress score per item in the scale was 3.52 (range, 0.5-7.69).

The mean collaboration score was 47.85 (SD, 11.63; scale range, 7-70), suggesting moderate levels of collaboration and satisfaction about care decisions. The most frequent morally distressing situations were related to futile care (Table 2). Similarly, the highest composite moral distress scores were associated with futility of care, collaborating with inappropriately skilled colleagues, and compromised care due to cost restraints. Differences in mean frequencies of individual moral distress items were evident between countries. As for autonomy, respondents reported highest scores for decisions about nursing care and pertinent skills and lowest scores for decisions about unit organization (Table 2).
The highest collaboration scores (mean, 5.23; SD, 1.58; scale range, 1-7) were for “open communication between physicians and nurses about patient care always takes place.” Lowest values (mean, 3.95; SD, 1.44; scale range, 1-7) were for “how satisfied are you with collaboration in this hospital overall?”

Differences in Autonomy, Moral Distress, and Collaboration Among Participants From Different Countries

Despite obvious trends in the data, including higher scores for nurses from Northern Europe, differences in autonomy scores between countries were not significant.

Differences between individuals of participating countries were significant for the severity and frequency of reported moral distress (P < .001; Figure 2) and for nurse-physician collaboration (P < .001; Figure 2). Nurses from Italy and the United Kingdom reported less severe moral distress than did nurses from Greece (P = .003-.007) and Germany (P = .02-.04). Nurses from Greece reported higher frequency of morally distressing situations than did nurses from other countries (P = .001-.005), except for participants from Belgium, Spain, Germany, and Croatia. Additionally, Norwegian nurses reported significantly less frequent moral distress than did nurses from Greece or Germany (P = .02-.03).

Nurses from Belgium, Slovenia, Spain, Germany, and Greece had higher cumulative moral distress scores than did nurses from other countries (P = .001-.007). Nurses from Italy and the United Kingdom had low scores for moral distress, but only when compared with nurses from Greece (P = .004-.007). In contrast, nurses from Norway had lower scores than did nurses from several other countries (P < .001). The perceived effectiveness of nurse-physician collaboration was significantly lower among nurses from Italy and Greece than among nurses from Norway, Denmark, and Sweden (P < .001).

Bivariate Associations Among Main Study Variables

Autonomy. Autonomy scores had a positive association with collaboration scores (r = .319; P < .001) and an inverse association with scores of moral distress frequency (r = −.174; P = .04; Table 3A). The value of the correlation coefficient between autonomy and collaboration, between autonomy and moral distress frequency, and between autonomy and composite moral distress increased when the effect of level of education, previous ICU experience, and patient to nurse ratios were controlled for (Table 3B). Likewise, scores corresponding to the knowledge base of autonomy were positively associated with collaboration scores (Table 4).

Moral Distress. Composite moral distress scores had significant moderate associations with
collaboration scores ($p = -0.337; P < .001$) and with action base of autonomy scores ($p = -0.208; P = .02$). The frequency of morally distressing situations was inversely associated with collaboration scores ($p = -0.339; P < .001$) and with value ($p = -0.207; P = .01$) and action ($p = -0.210; P = .01$) base of autonomy scores.

**Collaboration.** Collaboration scores were positively associated with autonomy scores ($p = 0.319; P < .001$) and with knowledge ($p = 0.336; P < .001$), action ($p = 0.236; P = .003$), and value ($p = 0.253; P < .001$) base of autonomy scores and inversely associated with composite moral distress scores ($p = -0.337; P < .001$) and frequency of morally distressing situations ($p = -0.339; P < .001$).

**Associations Between Autonomy, Moral Distress and Collaboration and Employee, Organizational, and Professional Factors**

Significant moderate associations were noted between autonomy scores and length of ICU nursing experience ($p = 0.155; P = .01$), frequency of attendance at continuing education programs ($p = -0.230; P = .001$), level of work satisfaction ($p = 0.369; P < .001$), significance of job independence ($p = 0.159; P = .005$), and perceived status of intensive care nursing ($p = 0.211; P = .001$). Scores corresponding to the knowledge base of autonomy were positively associated with the level of educational attainment, length of ICU experience, frequency of attendance at continuing education programs, level of work satisfaction, significance of job independence, and perceived status of intensive care nursing (Table 4).

Significant associations were noted between the frequency of morally distressing situations and patient to nurse ratios ($p = 0.262-0.312; P < .001$), and perceived job status ($p = -0.300; P < .001$).

**Table 2**

<table>
<thead>
<tr>
<th>Most frequent morally distressing situations</th>
<th>Score, mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Initiating extensive life-saving actions” when “they only prolonged death”</td>
<td>2.43 (1.05)</td>
</tr>
<tr>
<td>“Carrying out physician’s orders for futile care”</td>
<td>2.21 (1.17)</td>
</tr>
<tr>
<td>“Continuing to participate in the care of a hopelessly injured person”</td>
<td>2.035 (1.22)</td>
</tr>
<tr>
<td>“Working with colleagues who are not as competent as the patient care requires”</td>
<td>1.91 (0.96)</td>
</tr>
<tr>
<td>“Following the family’s wishes to continue life support even though it is not in the best interest of the patient”</td>
<td>1.82 (1.17)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Least frequent morally distressing situations</th>
<th>Score, mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Responding to a patient’s request for assistance with suicide”</td>
<td>0.22 (0.57)</td>
</tr>
<tr>
<td>“Following a physician’s request not to discuss death with a dying patient”</td>
<td>0.54 (0.92)</td>
</tr>
<tr>
<td>“Ignoring situations of suspected patient abuse by caregivers”</td>
<td>0.56 (0.90)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Items with highest composite moral distress scores (frequency x level of disturbance)</th>
<th>Score, mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Initiating extensive life-saving actions” when “they only prolonged death”</td>
<td>7.68 (4.54)</td>
</tr>
<tr>
<td>“Carrying out a physician’s orders for futile care”</td>
<td>6.90 (4.79)</td>
</tr>
<tr>
<td>“Working with colleagues who are not as competent as the patient care requires”</td>
<td>6.38 (4.05)</td>
</tr>
<tr>
<td>“Continuing to participate in the care of a hopelessly injured person”</td>
<td>6.25 (4.66)</td>
</tr>
<tr>
<td>“Assisting a physician who is providing incompetent care”</td>
<td>5.58 (4.14)</td>
</tr>
<tr>
<td>“Following the family’s wishes to continue life support even though it is not in the best interest of the patient”</td>
<td>5.16 (4.28)</td>
</tr>
<tr>
<td>“Providing less than optimal care due to pressures to reduce costs”</td>
<td>4.72 (4.59)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Items with the highest scores</th>
<th>Score, mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>“I am responsible for my decisions concerning nursing care”</td>
<td>5.54 (0.72)</td>
</tr>
<tr>
<td>“I am responsible for developing my knowledge base”</td>
<td>5.56 (0.70)</td>
</tr>
<tr>
<td>“I am responsible for developing my nursing skills”</td>
<td>5.48 (0.79)</td>
</tr>
</tbody>
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<thead>
<tr>
<th>Items with the lowest scores</th>
<th>Score, mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>“I can make independent decisions concerning my unit’s operation”</td>
<td>3.51 (1.84)</td>
</tr>
<tr>
<td>“I can take independent action to organize unit operations”</td>
<td>3.63 (1.29)</td>
</tr>
</tbody>
</table>

*Scores for most and least frequent morally distressing situations are on a Likert scale of 0 to 4; scores for items with highest composite moral distress scores are from 0 to 16; and scores for the autonomy scale items are on a Likert scale of 1 to 6.*
Overall, no differences were noted for sex, except for higher perceived status appraisal among female respondents ($P = .02$). The Kruskal Wallis test revealed significant differences by type of unit with respect to composite moral distress ($P = .047$), moral distress frequency scores ($P = .01$; highest mean of ranks at burn/neurosurgical units), collaboration scores ($P = .04$, highest mean of ranks at medical/surgical and burn/neurosurgical units), and patient to nurse and patient to physician ratios ($P = .001$; highest mean of ranks at burn/neurosurgical units). Nurses who worked in medical/surgical ICUs reported higher nurse-physician collaboration than did nurses who worked in cardiac surgery units ($P = .007$).

**Intention to Quit**

Intention to resign a post because of morally distressing situations was associated positively with composite moral distress scores ($r = 0.229; P = .01$) and frequency of morally distressing situations ($r = 0.257; P = .004$) and inversely with autonomy ($r = -0.142; P = .03$) and collaboration scores ($r = -0.337; P < .001$). Significant associations were noted between intention to quit and patient to nurse ratios per shift ($r = 0.160$ to $0.165; P < .001$). Significant inverse associations were noted between intention to quit and respondents’ educational level, years of ICU experience, and job satisfaction (Table 4).

**Discussion**

We investigated specific indices of autonomy, collaboration, moral distress, and job satisfaction simultaneously in a sample of European intensive care nurses. Our results indicated moderate practice autonomy scores, with lower scores for issues of control over unit organization and policy; moderate moral distress; moderate nurse-physician collaboration and satisfaction with care decisions; and significant differences among participants from different countries for moral distress and nurse-physician collaboration scores. Although differences in autonomy scores among nurses from different countries were not significant, lower levels of autonomy were associated with increased episodes and intensity of moral distress, lower perceived nurse-physician collaboration, and increased intention to resign. The lack of significance despite obvious trends for autonomy in different national groups may be attributed to statistical power limitations and to limitations of the instrument due to the conceptual complexity of autonomy in nursing. Additionally, respondents who had increased levels of autonomy were more likely to report higher levels of collaboration and

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Status appraisal ($r = 0.284$). Significant inverse associations were noted with nurse-physician collaboration and patient to nurse ratios per shift ($r = -0.151$ to $0.224; P < .001$).
satisfaction with care decisions and to describe fewer morally distressing situations than were nurses with less autonomy. These results are important in implicating autonomy as a factor associated with experiences of moral distress and the intricate relationship between collaborative practices, nurses’ perceived autonomy, and moral distress.

However, these findings on autonomy should be viewed in the context of the limitations of the methods we used in the study. We could not control for several confounding variables, including patients’ severity of illness, which may have had an impact on the associations explored. Further, the country of origin of participants were from the United Kingdom, Greece, and Italy. Moreover, the use of a convenience sample and the high percentage of head nurses (Table 1) might have resulted in the overestimation of autonomy levels, job satisfaction, and notions of collaborative practices.

Lack of sample heterogeneity was also a limitation. Additionally, the lack of established norms for assessing the level of the main study constructs leads to difficulties in confirming whether the reported levels of nurses’ autonomy and satisfaction are satisfactory or not. Further, the results are limited by the self-reported data. Moreover, some ICU environments closely regulate the work of nurses via well-defined guidelines and protocols. In such circumstances, nurses may perceive that the ability to exercise autonomy is limited. Units that actively support informed decision making by caregiving staff may increase nurses’ expectations of autonomy—and therefore the nurses’ perceptions of the degree of autonomy they experience. An additional limitation is that many participants did not complete the questionnaire in their mother language.

Seago noted that nurses’ assessment of their ability to exercise autonomy may be exaggerated, a situation typical of the behavior of an oppressed
operation and management, suggesting that the nurses thought they had limited control over their practice. Control over nursing practice and autonomy are distinct concepts. The former refers to a nurse’s ability to shape departmental and organizational policies, whereas the latter is related to decision making pertaining to patient care. Studies have indicated that control over nursing practice is associated with increased job satisfaction and improved patient outcomes and with decreased job-related stress, burnout, and staff turnover. The association between less autonomy and increased nurses’ intentions to resign, along with decreased job satisfaction, is in accordance with previous findings and emphasizes the importance of exercising autonomy in some aspects of nursing work. Although low clinical decision-making autonomy has been reported among Hellenic intensive care nurses, the levels of autonomy in our study are difficult to compare with the levels in previous studies because of differences in the instruments used. In a previous study

### Table 4
Correlation analysis results with Spearman ρ correlation coefficients and P values

<table>
<thead>
<tr>
<th></th>
<th>Knowledge base of autonomy</th>
<th>Intention to quit</th>
<th>Composite distress score</th>
<th>Distress frequency</th>
<th>Collaboration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge base of autonomy</td>
<td>1.000</td>
<td>-0.149</td>
<td>-0.116</td>
<td>-0.120</td>
<td>0.336a</td>
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<tr>
<td></td>
<td>0.08</td>
<td>0.19</td>
<td>0.16</td>
<td></td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Intention to quit</td>
<td>1.000</td>
<td>0.229b</td>
<td>0.257b</td>
<td>-0.207b</td>
<td></td>
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<tr>
<td></td>
<td>0.01</td>
<td>0.04</td>
<td></td>
<td></td>
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<tr>
<td>Composite cumulative distress score</td>
<td>1.000</td>
<td>0.903a</td>
<td>-0.337a</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>&lt;0.001</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Cumulative distress frequency</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td>-0.339a</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Collaboration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
</tr>
<tr>
<td>Highest level of education</td>
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<tr>
<td>ICU working experience</td>
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<tr>
<td>Position type</td>
<td></td>
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<tr>
<td>Continuing education</td>
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<tr>
<td>Work satisfaction</td>
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<tr>
<td>Job independence</td>
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<tr>
<td>Status appraisal</td>
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a Significant after Bonferroni adjustment at the .004 level. b Significant at the .05 level.
among Finnish ICU nurses in which the investigators used the same instrument we did, trends of autonomy were similar to those in our study.

Moral distress is equally a problem and is increasingly prevalent, especially among ICU nurses, because the ICU itself is a stressful environment. In a recent European survey of ICU nurses, the majority of nurses reported that participating in end-of-life decision making was often associated with moral distress. One item associated with increased moral distress in our study was delivery of suboptimal care because of resource constraints. Differences among countries for this item were significant, and it warrants more study.

The higher levels of moral distress reported by nurses from Greece and Germany are interesting and merit further investigation because the findings may reflect the inequality of power relations between nurses and physicians. Factors including culturally driven health care systems, the educational preparation of nurses, and professional empowerment may be relevant. For example, in Greece and Germany, the transition of nursing education from technically oriented schools to universities is not yet complete, and this situation may undermine the decisional authority of nurses in these countries. Low clinical decision-making autonomy and diminished perceived public image of ICU nurses have been previously

### Table: Correlation Matrix

<table>
<thead>
<tr>
<th>ICU working experience</th>
<th>Educational level</th>
<th>Continuing education</th>
<th>Work satisfaction</th>
<th>Job independence</th>
<th>Status appraisal</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.168&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.225&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-0.246&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.325&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.187&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.167&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>0.04</td>
<td>0.004</td>
<td>0.002</td>
<td>&lt;0.001</td>
<td>0.02</td>
<td>0.03</td>
</tr>
<tr>
<td>-0.092</td>
<td>0.27</td>
<td>-0.039</td>
<td>0.11</td>
<td>-0.167&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-0.028</td>
</tr>
<tr>
<td>0.94</td>
<td>0.64</td>
<td>0.90</td>
<td>0.04</td>
<td>0.74</td>
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<td>-0.054</td>
<td>0.038</td>
<td>-0.278&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
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<td>0.86</td>
<td>0.54</td>
<td>0.67</td>
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<tr>
<td>0.164&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.081</td>
<td>-0.087</td>
<td>0.274&lt;sup&gt;a&lt;/sup&gt;</td>
<td>-0.099</td>
<td>0.284&lt;sup&gt;a&lt;/sup&gt;</td>
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<tr>
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<td>-0.28</td>
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Absence of nurse-physician collaboration is a main source of moral distress.

Collaboration in and satisfaction with care decisions were associated with lower levels of moral distress.

reported among intensive care nurses in Greece. Low appreciation of the importance of ICU nursing work by a unit’s interdisciplinary team may affect ICU nurses’ professional status and the quality of professional interactions among the members of the team.

Our finding of a negative association between the level of reported autonomy and frequency of moral distress reveals the importance of nursing autonomy as a factor in mediating moral distress. When nurses lack decisional authority over patient care, they may experience moral incongruence. Because of the ongoing advancements of life-support technology, nurses may regularly experience situations that trigger moral distress. However, creating opportunities for open dialogue and debriefing may facilitate resolution of such situations and minimize escalation of further moral challenges.

Addressing the quality of nurse-physician collaboration on care decisions may be part of the overall strategy to reduce moral distress. Gutierrez identified the absence of nurse-physician collaboration as a main source of moral distress. In our sample, mean collaboration scores were higher than the scores in a previous investigation in nurses in the United States in which researchers used the same instrument that we used. The reasons for the discrepancy in scores are unclear, because the difference may reflect changes in practice in the 15 years between the US study and our study and/or differences in nurses’ expectations and in unit policies. Moreover, in our study, increased perceived collaboration in and satisfaction with care decisions were associated with lower levels of moral distress. Although extensive empirical evidence is not available, the association between nurse-physician relationships and nurses’ moral distress has been discussed.

Conclusions and Implications

The importance of autonomy, accountability, and collaboration in critical care nursing cannot be overstressed. Enhancement of nurses’ autonomy and control over nursing practice is an intricate task because of interconnected professional, sociological, educational, and personal factors. Similar to recent findings, our results suggest that nurses think that laypersons do not appreciate the importance of ICU nursing work. To expand their autonomy, ICU nurses must publicly communicate the nature of their unique expertise and their role in promoting safety, preventing complications, and contributing to patients’ health outcomes.

In conclusion, although rigorous testing is needed to confirm our results, the findings provide insight into the factors that may be associated with the autonomy and moral distress of intensive care nurses in Europe and highlight discrepancies among nurses from different countries.

In order to improve autonomy, nurses’ contribution to clinical decision making and their input to unit-level decisions and organization must be specifically targeted. Educational practices that empower and promote a critical approach and engagement in continuous professional development can support recognition of professional autonomy of nurses. However, developing, implementing, and sustaining effective nurse-physician collaboration are also imperative. Various approaches for the enhancement of collaboration have been investigated. Unit-based programs to improve communication and use of multidisciplinary rounds appear to be effective and to result in improved patient outcomes and economic gains. Moreover, on the basis of our results, enhancement of collaboration and autonomy can be expected to translate into fewer experiences of moral distress and improved appreciation of nurses’ input in patients’ outcomes.

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FINANCIAL DISCLOSURES

None reported.
REFERENCES

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