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Health Care Professional Factors Influencing Shared Medical Decision Making in Korea

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Abstract

Till date, the medical decision-making process in Korea has followed the paternalist model, relying on the instructions of physicians. However, in recent years, shared decision making at the end-of-life between physicians and nurses is now emphasized in Korea. The purpose of this study was conducted to explore how health care professionals' characteristics, attitude toward dignified dying, and moral sensitivity affect their shared medical decision making. The design was descriptive survey. This study was undertaken in two university hospitals in two metropolitan cities, South Korea. The participants were 344 nurses and 80 physicians who work at university hospitals selected by convenience sampling method. Data were collected from January 10 through March 20, 2014 using the Dignified Dying Scale, Moral Sensitivity Scale, and Shared Medical Decision-Making Scale. Shared medical decision making, attitude toward dignified dying, moral sensitivity, age, and working experience had a significant correlation with each other. The factors affecting shared medical decision making of Korean health care professionals were moral sensitivity and attitude toward dignified dying. These variables explained 22.4% of the shared medical decision making. Moral sensitivity and a positive attitude toward dignified dying should be promoted among health care professionals as a part of an educational program for shared medical decision making.

Keywords

nursing, behavioral sciences, moral sensitivity, dying, dignity, shared decision making

Introduction

As our contemporary society has extended its focus beyond well-being to well-dying, the health care system has also turned its attention to physicians' decision making in accommodating the process of end-of-life care, such as issuing advance directives and withdrawing treatment from individuals in view of the right to die with dignity (Jo, 2011). Unfortunately, end-of-life decision-making process has not evolved beyond the traditional culture of physicians' paternalism due to the physician's duty toward beneficence and nonmaleficence (Jo, An, & Kim, 2012). If patients were to refuse treatment, it could provoke internal conflicts. Some families may be more comfortable speaking with the nursing staff (Siegel, 2009).

To date, the medical decision-making process in Korea has followed the paternalist model, relying on the instructions of physicians (Lee, Kim, & Lee, 2009). However, in recent years, shared decision making between physicians and nurses regarding end-of-life care is now emphasized in Korea. In other words, the paradigm of the medical decision-making approach has been changed with the recent development of the shared medical decision-making model (Jo, 2011).

Shared medical decision making is defined as an approach by which a health care choice is made jointly by the health care professionals and the patient. It is said to be the crux of patient-centered care. Therefore, health care professionals should work with patients to make the best possible health care decisions together (Sassen, Kok, Schepers, & Vanhees, 2014). Patients are encouraged to deliberate about the possible attributes and consequences of options and to arrive at an informed decision regarding the best course of action, a decision which respects patient autonomy, as well as ethical and legal norms. The shared medical decision-making model is a comprehensive and clinical concept that shares the responsibility of medical treatment decisions based on the patient's values and autonomy, as well as family opinions, and distributes the duties and roles of the health care professionals of terminally ill patients (Jo, 2011).

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Most terminally ill patients are unable to participate in medical decision making due to the severity of their illness, because they are unable to speak for themselves (Sulmasy et al., 2007). In an effort to respect the ethical principle of autonomy, health care professionals engage the patient's family in medical decision making during end-of-life care (Hickman, 2011). Well-conducted meetings can promote optimal decisions and family satisfaction (Siegel, 2009). They result in better patient outcomes when health care professionals encourage their patients and their family to be involved in decision making (Sassen et al., 2014). Nevertheless, there still is a large difference of opinions on the shared end-of-life decision making commonly applied by Korean health care professionals.

In light of this, it is important for health care professionals to establish how oriented they are toward dignified dying. Chochinov (2006) presented a new view of dignified dying by systemizing the properties of human dignity in end-of-life situations. Empirical research has proposed that dignified deaths in Korea should not depend on mechanical devices, but should conform to nature, involve the family, be meaningful and not self-destructive, and be performed with the sympathetic help of professional health providers (Jo et al., 2012; Jo & Kim, 2011).

Our society's needs regarding death with dignity are also related to the moral sensitivity of the health care professionals, which influences their ethical judgment in complicated clinical situations (Han, Kim, Kim, & Ahn, 2010). Moral sensitivity can be described as a capacity for recognizing and interpreting moral situations involving ethical issues. It affects whether and how we see others, note moral concerns, respond delicately in a given situation, and navigate complex social interactions, moral obligations, and conflicting aims. In cases of dying patients faced with complex issues related to physical, emotional, and spiritual needs, health care professionals with moral sensitivity can have a particularly significant impact on the medical decision-making process (Han, 2005). Therefore, personal efforts and institutional support are required to cultivate moral sensitivity in health care professionals.

It is the health care professionals' essential duty and noble purpose to help a human being end his or her life with dignity (Mallory, 2003). In fact, Asian cultures are pessimistic and afraid of death, so patients have a strong tendency to depend on their families. As a consequence, the decision-making process can be uncertain and cause confusing emotions due to an ambiguous decision-making system that does not primarily reflect the patient's needs in medical decision-making situations. Thus, health care professionals have to suppress their personal opinions toward dignified dying (Jo, An, & Kim, 2011).

Previous studies related to dignified dying (Coenen, Doorenbos, & Wilson, 2007; Doorenbos et al., 2011; Jo, 2011; Jo & Kim, 2011), moral sensitivity (Comrie, 2012; Kim, 2010; Lützén, Dahlqvist, Eriksson, & Norberg, 2006; Yoo & Shon, 2011), and shared decision making (Bryant, 2012; Dy & Purnell, 2012; Epstein & Street, 2011; Jo, 2012; Suh & Lee, 2010) have recently been conducted, but these have mostly focused on one separate concept. However, the identification of a complex interaction of factors associated with health care professionals is needed to guide the development of shared decision-making process support strategies at end-of-life.

Therefore, the purpose of this study is to understand the correlations between the attitude toward dignified dying, moral sensitivity, and the shared medical decision making of nurses and physicians. In addition, we identify the characteristics of health care professionals influencing shared medical decision making.

Method

Research Design

This cross-sectional correlative research study was conducted using a questionnaire survey and face-to-face interviews.

Samples

A total of 424 nurses and physicians working in the university hospitals of P city and D city were selected for this study. The selected participants understood the shared medical decision-making concept and had more than 1 year of clinical experience. The participants understood the purpose of the study and gave their written informed consent. As calculated with a two-tailed student *t* test based on a probability of $\alpha = .05$, a medium effect size of 0.2, and a power level of $1 - \beta = .8$ according to the G*power 3.1.2 program, a minimum sample size of 394 subjects was required. Taking the dropout rate into account, the target number of subjects for this research was 430, and a sufficient sample size was therefore selected to obtain a representative sample. A total of 424 people comprising 80 physicians and 344 nurses participated in the study.

Instruments

Attitude toward dignified dying. The tool developed by Jo (2011) is comprised of five sub-factors. There are a total of 30 items on a 5-point Likert-type scale. The lowest and highest scores to be obtained from this scale are 30 and 150, respectively. A higher score indicates a hope for dignified dying. The tool was developed with a reliability of Cronbach's $\alpha = .92$, and the reliability in this study was Cronbach's $\alpha = .94$.

Moral sensitivity. Moral sensitivity is the key element of the initial ethical decision-making process, enabling the decision maker to identify the appropriate behavioral course, as well as ethical issues in specific situations (Clarkeburn, 2002). This study used the Korean modified complementary

Table 1. Demographic Characteristics of the Participants (*N* = 424).

Characteristics	Categories	Physicians (*n* = 80)	Nurses (*n* = 344)
Mean age (year)	*M* ± *SD*	29.57 ± 7.94	29.71 ± 7.39
Education	Junior college	0 (0.0)	237 (68.9)
	University	71 (88.8)	86 (25.0)
	Graduate school	9 (11.2)	21 (6.1)
Working experience (year)	<1	33 (41.2)	39 (11.4)
	1 ~ 5	32 (40.0)	136 (39.5)
	<5	15 (18.8)	169 (49.1)
Working department	Medical ward	35 (41.3)	126 (36.6)
	Surgical ward	33 (41.2)	108 (31.4)
	Emergency room	12 (17.5)	27 (7.9)
	Intensive care unit	0	83 (24.1)
Religion	Yes	44 (55.0)	179 (52.0)
	No	36 (45.0)	165 (48.0)
Experience in the end-of-life decision making	Yes	28 (35.0)	127 (36.9)
	No	52 (65.0)	217 (63.1)

version (Han et al., 2010) of the moral sensitivity questionnaire (Lützén, Evertzon, & Nordin, 1997). This instrument is comprised of five sub-factors, with a total of 27 items on a 5-point Likert-type scale. The lowest and highest scores to be obtained from this scale are 27 and 135, respectively. A higher score indicates a greater degree of moral sensitivity. The tool was developed with a reliability of Cronbach's α = .76, and the reliability in this study was Cronbach's α = .91.

Shared medical decision making. The tool developed by Jo (2012) is comprised of seven sub-factors, with a total of 34 questions on a 5-point Likert-type scale. The lowest and highest scores to be obtained from this scale are 34 and 170, respectively. A higher score reflects a high degree of application of shared medical decision making. This tool was developed with a reliability of Cronbach's α = .94, and the reliability in this study was Cronbach's α = .94.

Data Collection

Approval for this study was obtained from the University Hospital Research Ethics Committee (CR-10-043-RES-01-R) prior to data collection. The data collection period ranged from January 10, 2014 to May 20, 2014. The researchers visited University Hospitals in P city and D city and received permission to survey the employees from the hospitals.

The participants were selected through random sampling based on staff lists. Three trained research assistants distributed self-reporting questionnaires to the participants, who had signed informed consent forms after being explained the purpose of the study, the autonomy in the research participation, and the confidentiality policy. The questionnaires were filled out individually and sealed in an envelope. The response rate of the participants was 92.8%.

Statistical Analysis

The collected data were analyzed with the IBM SPSS Statistics Win 19.0 program (IBM Co., Armonk, New York, United States). The standard deviation and mean of the degree of the participants' attitudes toward dignified dying, moral sensitivity, and shared medical decision making were calculated, and the differences between nurses and physicians were analyzed using a *t* test. The Pearson's correlation coefficient and multiple regression analyses were used to analyze the predictor variables and affect the shared medical decision making of the participants.

Results

Demographic Characteristics of the Participants

In terms of demographic characteristics, the mean age of the participants was 29.57 for physicians and 29.71 for nurses. A total of 71 (88.8%) physicians had a Bachelor's degree, and 237 (68.9%) nurses had graduated from a junior college. The average amount of work experience among physicians was 2.7 years versus 6.4 years among nurses. With 33 physicians (41.3%) and 126 nurses (36.6%), the most represented working department was the internal medicine department. Forty-four physicians (55%) and 179 nurses (52%) had a religion. Twenty-eight physicians (35%) and 127 nurses (36.9%) had previous experience with participating in end-of-life decision making (Table 1).

Attitudes Toward Dignified Dying, Moral Sensitivity, and Shared Medical Decision Making

The mean of the attitude toward dignified dying was 2.86 ± 0.31 (46 ~ 113) for the physicians and 2.95 ± 0.29 (60 ~ 115) for the nurses. There was a significant difference between the

Table 2. Levels of Attitude Toward Dignified Dying, Moral Sensitivity, and Shared Medical Decision Making (N = 424).

Variables	Physicians (n = 80)	Nurses (n = 344)	$t(p)$
	M (SD)		
Attitude toward dignified dying	2.86 (0.31)	2.95 (0.29)	2.348 (.021)
Maintaining emotional comfort	2.90 (0.39)	2.98 (0.34)	1.704 (.091)
Arranging social relationship	2.91 (0.40)	2.99 (0.36)	1.755 (.082)
Avoiding suffering	2.77 (0.37)	2.91 (0.40)	2.889 (.005)
Maintaining autonomical decision making	3.01 (0.50)	3.12 (0.42)	1.979 (.048)
Role preservation	2.73 (0.34)	2.76 (0.41)	0.796 (.428)
Moral sensitivity	3.48 (0.30)	3.49 (0.37)	0.110 (.913)
Patient-oriented care	3.66 (0.47)	3.86 (0.47)	3.425 (.001)
Professional responsibility	3.81 (0.36)	3.79 (0.44)	0.398 (.691)
Conflict	3.62 (0.47)	3.49 (0.54)	1.956 (.051)
Moral meaning	3.17 (0.59)	3.21 (0.57)	0.573 (.568)
Benevolence	3.14 (0.53)	3.06 (0.54)	1.105 (.272)
Shared medical decision making	3.90 (0.37)	4.10 (0.39)	3.750 (.000)
Sharing information	4.02 (0.50)	4.18 (0.51)	2.529 (.013)
Constructing system	3.82 (0.50)	4.02 (0.55)	3.108 (.002)
Explanation as a duty	4.07 (0.56)	4.34 (0.52)	4.002 (.000)
Autonomy	3.63 (0.59)	4.07 (0.56)	6.024 (.000)
Capturing time	3.90 (0.55)	3.94 (0.56)	1.097 (.275)
Participation of family	3.92 (0.66)	4.20 (0.63)	3.507 (.001)
Human respect	3.93 (0.62)	3.94 (0.60)	0.157 (.875)

two occupations (t = 2.348, p = .021). Out of the five sub-factors, a particularly significant difference was found in the "avoiding suffering" and "maintaining autonomic decision-making" factors. The mean of the moral sensitivity was 3.48 ± 0.30 (59 ~ 122) for the physicians and 3.49 ± 0.37 (61 ~ 132) for the nurses, showing no significant difference between the two occupations. Among the sub-factors, a difference between the two occupations was only found in the patient-oriented care. The mean of the shared medical decision making was 3.90 ± 0.37 (78 ~ 127) for the physicians and 4.10 ± 0.39 (80 ~ 138) for the nurses, revealing a significant difference between the occupations (t = 3.750, p = .000). Significant differences were found in five of the seven sub-factors, excluding the "capturing time" and "human respect" factors (Table 2).

Correlations Among Attitudes Toward Dignified Dying, Moral Sensitivity, and Shared Medical Decision Making

There were significant correlations between the attitude toward dignified dying, and moral sensitivity (r = .403, p < .001), shared medical decision making (r = .377, p < .001), age (r = .243, p < .001), and work experience (r = .300, p < .001). Moral sensitivity also had a significant correlation with shared medical decision making (r = .413, p < .001), age (r = .127, p = .009), and work experience (r = .158, p = .001). Shared medical decision making had a significant correlation with age (r = 131, p = .007) and work experience (r = .157, p = .001). However, there were no correlations between the variables and the various hospital departments (Table 3).

Factors Influencing Shared Medical Decision Making

The significant correlations with age, work experience, attitude toward dignified dying and moral sensitivity were used as independent variables to determine the factors that affected the shared medical decision making of the participants. The results were analyzed with a multiple regression using the Enter method and are shown in Table 4. Multicollinearity, residuals, and specific values were calculated to test the predictions of the regression analysis of independent variables. First, correlation coefficients between independent variables were .02 to .58, which do not have an explanatory variable greater than .80. Therefore, predictor variables were confirmed to be independent. The Dubin–Watson statistic was 1.717 in an autocorrelation (independent) test, so there was no problem in autocorrelation. In addition, the multicollinearity results showed .60 to .91 of tolerance with less than 1.0, but more than 0.1, and the variance inflation factor was 1.10 to 1.66. This did not exceed 10, so multicollinearity is not a problem. Next, test results to meet the predictors of residuals satisfied linearity, error term normality, and homoskedasticity. The maximum value of Cook's Distance to review specific value was 0.9, which is not greater than 1.0, so there was not a specific value. Therefore, assumptions for

Table 3. Correlations Among Attitude Toward Dignified Dying, Moral Sensitivity, and Shared Medical Decision Making (N = 424).

	Attitude toward dignified dying	Moral sensitivity	Shared medical decision- making	Age	Working experience	Working department
Variables			*r* (*p*)			
Attitude toward dignified dying	1					
Moral sensitivity	.403 (<.001)	1				
Shared medical decision making	.377 (<.001)	.413 (<.001)	1			
Age	.243 (<.001)	.127 (.009)	.131 (.007)	1		
Working experience	.300 (<.001)	.158 (.001)	.157 (.001)	.881 (<.001)	1	
Working department	−.032 (.517)	−.033 (.495)	.014 (.770)	−.095 (.051)	−.059 (.222)	1

Table 4. Variables Influencing Shared Medical Decision Making (N = 424).

Predictor	*B*	*SE*	β	*t*	*p*
Constant	1.667	.265		6.282	<.001
Attitude toward dignified dying	.359	.073	.241	4.944	<.001
Moral sensitivity	.376	.057	.310	6.594	<.001
Age	.000	.005	.005	.051	.960
Working experience	.000	.001	.032	.344	.731
		R^2	Adjusted R^2	*F*	*p*
		.224	.217	30.320	<.001

the regression equation were met, and regression analysis results were considered reliable. Factors that influence shared decision making of subjects were attitude toward dignified dying, moral sensitivity, age, and work experience. Out of these four variables, the attitude toward dignified dying and moral sensitivity were shown to be the most significant predictors. The greatest influencing factor on shared medical decision making of the participants was shown to be moral sensitivity (β = .310), followed by the attitude toward dignified dying (β = .241). In other words, greater moral sensitivity and a more positive attitude toward dignified dying increased the degree of shared medical decision making. These variables explained 22.4% of shared medical decision making (F = 30.320, p < .001).

Discussion

The hospital is a complex environment where physicians and nurses are key members who share specific duties to provide qualified health services to patients. In this study, the nurses showed significantly higher scores than the physicians in their attitudes toward dignified dying, and there were significant differences between the two occupations for two of the five sub-factors. These results were explained by 60.7% of the nurses feeling closer to the concept of death from working in intensive care units and internal medicine departments, where they experienced many deaths. Nurses' preoccupation with dignified dying is thought to result from their end-of-life care experience, which informs a common value judgment in their attitude toward dignified dying (Oyekale & Oyekale, 2010).

In the Korean Accreditation Board of Nursing Education, it is mandatory to take more than four humanities and social studies courses (more than eight credits) as part of the nursing curriculum. Since the early 2000s, nursing students have been required to study subjects such as psychology, sociology, and human development. As the concept of death is connected to life integration (Wilson, Coenen, & Doorenbos, 2006), these characteristics of nursing education emphasize the social aspects of human psychology and Erikson's theory through the taking of humanities courses, presumably creating a strong awareness of human dignity in Korean nurses. It is therefore necessary to emphasize the humanities and social science courses that deal with humans from a spiritual and social-psychological approach, rather than focusing solely on physical aspects in hospital training or continuing education. Given the increasing concern with well-dying in an aging population faced with a high risk of chronic disease, active efforts are required to encourage health care professionals to develop a more positive attitude toward dignified dying.

There were no significant differences between the physicians and nurses in terms of moral sensitivity, except with respect to "patient-oriented care." These results were thought to reflect nurses' role as patient advocates and their strong professional ethics. Health care professionals' clinical decision making is a key skill that requires responsibility, medical knowledge, and technology (Jo et al., 2012). It is also a skill that involves ethical issues and benevolence, requiring moral sensitivity. Value judgments, including one's attitude toward dignified dying and moral sensitivity, can be understood from an overall perspective by considering the environmental

factors of the individual, objective social criteria, and each individual's subjective point of view. This means that opinions on dignified dying and medical decision making can vary according to individual's personal attitudes toward life and death, raising the need to assess the detailed value factors that affect the attitude toward dignified dying and the moral sensitivity of health care professionals.

Overall, shared medical decision making was shown to be significantly higher in nurses than physicians. These results mean that the attitude toward dignified dying is less positive in physicians, who have a leading role in the medical decision-making process, than in nurses in regard to shared medical decision making. In particular, the "recognition of the patient's autonomy" sub-factor presented the lowest score (3.63), which is evidence of the persistence of strong physician paternalism. This suggests that a strategy is needed to promote patients' autonomy through an open decision-making process utilizing authentically delivered information, an obligation to provide details to the patients, and the development of an information-sharing culture and cooperative system.

In this study, all the factors, including the attitude toward dignified dying, moral sensitivity, shared medical decision making, age, and work experience, showed significant correlations with one another. This is believed to reflect the values of moral sensitivity based on human dignity and integrity, which are necessary to inform the attitudes toward dignified dying in shared medical decision making. Previous research confirmed the crucial role of nurses in supporting and advocating on behalf of patients in end-of-life situations and in providing the best holistic care until the last moment (Coenen et al., 2007; Doorenbos et al., 2011). Meanwhile, Jo and Kim (2010) proposed that the expertise of nurses is required in the decision-making process and that nurses' advocacy role is very important in the consideration of dignified dying in relation to the autonomy of patients in end-of-life decision making. Briggs and Colvin (2002) also demonstrated that providing information and the advocacy role played important parts in the medical decision-making process.

Age and work experience also showed a significant correlation with attitude toward dignified dying, moral sensitivity, and shared medical decision making. However, the type of hospital department did not. Age and years of work experience are thought to increase moral sensitivity and attitude toward dignified dying, as reflected by patient-centered values, through greater experience of close contact with patients, and end-of-life care in more seasoned physicians and nurses. Given the increasingly complex medical environment and severity of cases, this result is based on having health care professionals with many clinical experiences rather than specializing in specific fields, such as hospice care. In contrast, according to Hickman's (2011) study, one's chosen specialty has an influence on end-of-life decision making. Therefore, repeated studies with larger samples are needed to clarify this contradiction.

In this study, moral sensitivity had the greatest impact on the shared medical decision making of the participants ($\beta = .310$). This is believed to reflect health care professionals' professional conflicts and accountability generated by the complex medical conditions of modern society. It is understood that the moral sensitivity of health care professionals is the top priority in improving the quality of the shared medical decision-making process. In this regard, Han (2005) noted that the moral issues that arise in clinical practices should be treated with sensitivity and should respect the ethics, dignity, and worth of others. Therefore, it is necessary to develop and measure the degree of moral sensitivity of health care professionals to ensure the morally sensitive handling of medical situations and the making of decisions to the best benefit of the patients.

The second most influential factor with regard to shared medical decision making was the attitude toward dignified dying ($\beta = .241$). The attitude toward dignified dying was shown to affect shared decision making, confirming the findings of a previous study by Jo et al. (2012). In other words, we can infer that shared medical decision making is easier to implement between health care professionals with a positive attitude toward dignified dying. Shared medical decision making provides a holistic care system based on respecting the human right to face death with dignity in end-of-life situations and promotes legitimate decision making through education. Health care professionals' attitude toward dignified dying is therefore an important component in the medical care of end-of-life patients (Frank, 2009).

In light of this view, education about death is needed to change health care professionals' attitudes toward dying. Health care professionals need to be trained as healers accepting inevitability and showing deep sympathy in end-of-life situations. Inadequate education results in difficulties in understanding the dying patient's and patient's family's physical, emotional, and spiritual needs, an important gap in the professional ability to effectively apply clinical knowledge and standards (Mallory, 2003). They need to recognize the value of dignified death as well as human life. This shows that individual moral sensitivity and the attitude toward dignified dying have a more significant effect than age and work experience on the willingness to apply shared medical decision making and to discuss end-of-life treatment with patients.

Based on these results, shared medical decision making appears to call for a reflection on the quality of end-of-life care, engaging with contemporary Korean society's growing interest in dignified death. Death is not only an individual and familial problem but also a societal one. Health care professionals therefore have some responsibility in constructing a death culture based on human dignity. For this reason, diligence is required to inspire health care professional's moral sensitivity and attitude toward dying. For example, they should cultivate a deep awareness of life and issues of human dignity. The development of a multidimensional training program to promote a mutual and open shared decision-making process is urgent.

This study determined the influencing factors and correlations between the attitude toward dignified dying, moral sensitivity, and the shared medical decision making of health care professionals when considering death-related issues, which have been emerging as increasingly important issues in contemporary Korean society. However, the patients should be included in shared medical decision making, so further study needs to include patients and to develop the strategies for shared medical decision making. This study was significant in providing data to identify the need for a clinical practice-based education system to develop efficient shared medical decision making in the future.

Limitations

This study has limitations that should be considered when interpreting its findings. One limitation is the study was performed in only two university hospitals. We used a convenience sampling method to recruit participants, and the participants may not be truly representative of health care professionals in general. In addition, nearly all the nurses were female and nearly all the physicians were male. Therefore, gender, as well as discipline, may have influenced the results.

Conclusion

As per our results, the main factors affecting shared medical decision making were shown to be the attitude toward dignified dying and moral sensitivity. This suggests that changeable factors, such as moral sensitivity and attitude toward dignified dying, should be considered important variables when developing educational programs for health care professionals. Educational programs should be initiated to assess and promote moral sensitivity and a positive attitude toward dignified dying among health care professionals involved with shared medical decision making. Further studies are needed to understand which inhibitory factors have the greatest influence on shared decision making among health care professionals, patients, and their families.

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