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Original Article

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Factors that Influence Attitudes toward Advance Directives among Hemodialysis Patients

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Purpose: Advance directives (ADs) are legal documents that outline a person's preferences or decisions regarding end-of-life care ahead of time. In Korea, there is insufficient awareness and knowledge about ADs among patients undergoing hemodialysis. This study explored the relationship between perceptions of a good death, knowledge about ADs, and attitudes toward ADs in this patient population. **Methods:** This cross-sectional survey enrolled 119 hemodialysis patients from a secondary hospital in 2021. The participants completed a self-administered questionnaire, and the data were analyzed using the t-test, analysis of variance, Pearson correlation coefficients, Spearman rank correlation coefficients, and multiple regression analysis. **Results:** The average score for perceptions of a good death among hemodialysis patients was 2.80 out of 4, with clinical symptoms identified as the most critical factor. The average scores for knowledge about ADs and attitudes toward ADs were 5.69 out of 9 and 2.79 out of 4, respectively. There was a positive correlation between perceptions of a good death and attitudes toward ADs (r=0.34, P<0.001), as well as between knowledge about Ads and attitudes toward ADs (r=0.19, P=0.037). Factors influencing attitudes toward Ads included employment status (β=0.22, P=0.011), education level (β=0.22, P=0.013), and perceptions of a good death (β=0.29, P=0.001), which accounted for 24.8% of the variance in attitudes toward ADs. **Conclusion:** A positive perception of a good death among patients undergoing hemodialysis was associated with a positive attitude toward ADs. Educational programs are needed to improve individuals' understanding of a good death and encourage the development of end-of-life care plans.

Key Words: Advance directives, Death, Renal dialysis, Terminal care

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INTRODUCTION

1. Background

End-stage renal disease (ESRD) is characterized by a glomerular filtration rate (GFR) that has declined to 15% or lower, necessitating lifelong dialysis or kidney transplantation. Around 70% of patients receiving renal replacement therapy for ESRD are treated with hemodialysis, and the incidence of new dialysis patients is increasing rapidly. Cardiovascular and vascular diseases are the primary causes of mortality in individuals with ESRD on dialysis. Given the notably low 10-year survival rate of 40.7%, coupled with the substantial social and economic burden of ESRD, there is a critical need for specific and individualized end-of-life care [1,2].

Previous research has found that 36% of patients undergo-

ing dialysis were unable to decide whether to receive life-sustaining treatments because they experienced sudden deaths from rapidly worsening cardiovascular diseases [3,4]. With the recent surge in interest in "well-dying," there is an increased recognition of the importance of the right to die with dignity, the right to a good death, and the right to self-determination [5]. A previous study involving patients with ESRD on peritoneal dialysis has shown that patients experience a good death when they plan hospice and palliative care with medical professionals or family members, have their pain managed, spend time with significant people in their lives, and pass away comfortably within these interactions [6]. However, the unexpected deaths of many dialysis patients also suggest that they had little chance to prepare for a dignified end of life. Therefore, it is important to provide patients on dialysis with opportunities to prepare for a good death at the end of their lives. Studies conducted in Korea on the concept of a good death have included nurses [7], nursing college students [8], and older adults [9,10]. Research focusing on patients has examined perceptions of a good death among those with chronic heart diseases [11] and cancer [12,13]. Therefore, to assist individuals on dialysis due to ESRD in preparing for a good death, it is necessary to investigate their perceptions of what constitutes a good death.

Before making decisions about life-sustaining treatments as they prepare for the end of life, individuals with ESRD engage with healthcare providers to discuss their wishes concerning hospice and palliative care. Following the enactment of the Act on Decision of Life-sustaining Treatment in 2018, patients in Korea have had the opportunity to complete an advance directive (AD) [14]. An AD is a document for individuals aged 19 and older that records their preferences for life-sustaining treatments as they approach the dying process [14]. However, a study with older adults in nursing homes revealed that only 22.1% were aware of ADs [5]. Another study with elderly cancer patients found that 80.2% had not completed an AD, largely due to unfamiliarity with the concept [15]. Involving ESRD patients in decisions about their life-sustaining treatments has been shown to increase their trust in healthcare providers, enhance adherence to treatment, and enable medical staff to tailor treatment plans to the patients' wishes from the initiation of dialysis to the end of life [16]. Additionally, being informed about ADs has been associated with an improved quality of life, as it positively affects patients' involvement in decision-making regarding dialysis [17]. Therefore, healthcare professionals should evaluate the knowledge and attitudes of ESRD patients towards ADs and take the necessary steps to support them in preparing for a dignified end of life.

A study on the relationship between perceptions of a good death and attitudes toward ADs found middle-aged adults exhibited a positive attitude toward ADs if they believed that managing their physical and psychological symptoms, their diseases, and having close relationships with people around them contributed to a good death [18]. Additionally, research on elderly cancer patients indicated that perceptions of a good death had the largest influence on attitudes toward ADs [15], and knowledge about ADs also positively impacted these attitudes [19,20]. Previous studies have reported that knowledge about ADs and attitudes toward them are crucial factors affecting the completion rate of ADs [21]. However, there is limited research on the perceptions of patients undergoing dialysis regarding a good death and their attitudes toward ADs [17,22]. Therefore, this study aimed to explore the perceptions of individuals undergoing hemodialysis due to ESRD regarding a good death, their knowledge about ADs, and their attitudes toward ADs. This information will assist in planning end-of-life care and enable medical professionals to make collaborative decisions with these patients.

2. Purpose

This study aimed to evaluate the awareness of patients with ESRD on hemodialysis about the concept of a good death. It also sought to assess their knowledge about ADs and their attitudes toward ADs, and to determine how their perceptions of a good death and knowledge about ADs influenced their attitudes toward ADs.

METHODS

1. Study design

This descriptive correlational study examined perceptions of a good death, knowledge about ADs, and attitudes toward ADs among patients undergoing hemodialysis for ESRD. Additionally, it explored the factors influencing their attitudes

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toward ADs.

2. Participants

This study was conducted with adult patients aged 19 and older who were undergoing hemodialysis after being diagnosed with ESRD at the Artificial Kidney Unit of a university hospital in a medium sized city, Gyeonggi Province. Eligible participants were those who understood the study's content, were able to participate voluntarily, and had the ability to communicate effectively. Individuals with mental illnesses or cognitive disorders that impaired communication were excluded from the study. Using G*Power 3.1.9, we calculated a required sample size of 112 to achieve a significance level of 0.05, an effect size of 0.30, and a power of 0.90. During the recruitment period, 124 participants were initially recruited. However, the final analysis was conducted on data from 119 participants, as five individuals declined to participate during the course of the study.

3. Data collection

The study received approval from the Institutional Review Board (No. UC20QASI0182) of the university hospitals to which the researchers were affiliated. Data collection occurred from February to March 2021. Participants who understood the purpose of the study and voluntarily signed the consent form were given questionnaires to complete. The survey took place in the Artificial Kidney Unit after the participants had received their dialysis treatment. Completing the questionnaire required approximately 15 to 40 minutes. For those unable to fill out the questionnaire independently, researchers assisted by reading the questions aloud and recording the participants' responses to ensure the clarity of their answers.

4. Study tools

1) Perceptions of a good death

The Korean translation of "The Concept of Good Death," a tool developed by Schwarz et al. [23] for measuring perceptions of good deaths was utilized in this research. The instrument is comprised of various subscales, including five items addressing clinical symptoms that emphasize natural deaths free from pain and mechanical intervention, three items pertaining to maintaining physical and psychological control until life's end, and nine items related to achieving a sense of closure through interactions with significant individuals and attaining psychological satisfaction. The tool employs a 4-point Likert scale across a total of 17 items, with responses ranging from "not necessary (1 point)" to "essential (4 points)." A higher score indicates that the respondent views the conceptual attributes of death—clinical symptoms, personal control, and a sense of closure—as important components of a good death. At the time of the tool's development, Cronbach's alpha for each subscale was 0.66 for the sense of closure, 0.83 for personal control, and 0.70 for clinical symptoms. In the current study, the Cronbach's alpha values were 0.79 for the sense of closure, 0.76 for personal control, and 0.70 for clinical symptoms.

2) Knowledge about advance directives

Yoo and Yi [24]'s revised and supplemented version of a tool for assessing knowledge about ADs, originally developed by Hong and Kim [25], was utilized. This tool was initially created to measure knowledge about end-of-life treatment and palliative care, which are aspects of advance directives, as well as understanding of the AD document itself. For this study, only the 9 items pertaining to the AD document were employed to gauge the participants' knowledge about ADs. Responses to each item were categorized as "yes," "no," or "unknown." Incorrect and "unknown" responses were scored as 0 points, while correct responses were scored as 1 point. Scores could range from 0 to 9, with higher scores indicating greater knowledge about ADs. At the time of the tool's development, Cronbach's alpha for knowledge about the AD document was 0.85, and in this study, the Kuder-Richardson formula 20 yielded a reliability coefficient of 0.82.

3) Attitude toward advance directives

Lee and Park [26]'s adaptation, revision, and supplementation of the Advance Directive Attitude Scale (ADAS), originally developed by Nolan and Bruder [27], was utilized to assess attitudes toward ADs. The ADAS is composed of four items addressing "opportunities to select treatment," eight items concerning the "effect of ADs on family members," three items related to the "effect of ADs on treatment," and one item on the "perception of diseases." This instrument employs

a 4-point Likert scale across 16 items, ranging from 1 point, indicating a negative attitude, to 4 points, reflecting a positive attitude. Scores for items phrased in the reverse were recalculated, with higher scores indicating a more favorable attitude toward ADs. Cronbach's alpha for the scale was 0.74 at the time of its development and 0.67 in the current study [26].

5. Data analysis

Data were analyzed using SAS for Windows version 9.4 (SAS Institute Inc., Cary, NC, USA). We examined participants' general characteristics by calculating frequencies, percentages, means, and standard deviations. We also analyzed participants' perceptions of a good death, their knowledge about ADs, and their attitudes toward ADs based on their general character-

Table 1. General Characteristics of Participants and Perceptions of Good Death, Knowledge about Advance Directives, and Attitudes toward Advance Directives (N=119).

Characteristics	n(%)	Perceptions of good death		Knowledge about advance directives		Attitudes toward advance directives	
		M±SD	t/F (P)	M±SD	t/F (P)	M±SD	t/F (P)
Gender							
Male	73 (61.3)	46.48±9.39	-1.67 (0.098)	6.04±2.44	-1.54 (0.124)	44.48±3.87	0.23 (0.818)
Female	46 (38.7)	49.20±7.29		5.13±2.96		44.76±4.55	
Age (yr)							
<65	77 (64.7)	47.78±7.97	0.42 (0.674)	6.31±2.32	-3.25 (0.001)	45.16±4.48	-2.70 (0.007)
≥65	42 (35.3)	47.07±10.0		4.55±2.93		43.55±3.17	
Religion							
Yes	54 (45.4)	49.41±7.87	2.18 (0.031)	5.67±2.99	0.47 (0.635)	45.22±3.46	1.58 (0.118)
No	65 (54.6)	45.97±9.11		5.71±2.41		44.06±4.57	
Employment status							
Yes	30 (25.2)	48.40±7.06	0.63 (0.529)	6.27±2.39	1.34 (0.181)	46.70±3.69	3.38 (0.001)
No	89 (74.8)	47.24±9.21		5.49±2.75		43.88±4.04	
Education level*							
Elementary[a]	12 (10.1)	49.92±8.92	7.04 (0.071)	3.58±3.55	9.68 (0.022)	43.33±4.16	21.34 (0.000)
Middle[b]	20 (16.8)	46.70±6.91		4.90±2.67	a, b<d	43.00±2.88	a, b, c<d
High[c]	63 (52.9)	46.22±9.14		5.92±2.49		44.29±3.85	
University or higher[d]	24 (20.2)	50.46±8.29		6.79±1.96		47.33±4.61	
Comorbidities							
Yes	73 (61.3)	48.81±7.70	2.05 (0.043)	5.55±2.86	0.36 (0.716)	44.92±3.64	1.03 (0.305)
No	46 (38.7)	45.50±9.85		5.91±2.37		44.07±4.80	
Admission history							
Yes	101 (84.9)	48.36±7.82	1.89 (0.073)	5.64±2.72	0.33 (0.744)	44.56±4.09	-0.15 (0.882)
No	18 (15.1)	42.89±11.82		5.94±2.48		44.72±4.44	
Education experience of advance directives							
Yes	32 (23.9)	49.47±10.13	1.48 (0.141)	6.25±1.97	0.81 (0.419)	45.50±3.43	1.47 (0.145)
No	87 (73.1)	46.82±8.06		5.48±2.88		44.25±4.33	
Intention to discuss advance directives							
Yes	72 (60.5)	49.54±8.70	3.25 (0.002)	5.61±2.89	-0.08 (0.939)	44.86±3.56	0.84 (0.406)
No	47 (39.5)	44.45±7.84		5.81±2.35		44.17±4.88	
Knowledge of the registration authority for advance directives							
Yes	29 (24.4)	48.38±9.07	0.60 (0.548)	6.45±1.72	1.14 (0.256)	45.38±3.60	1.19 (0.237)
No	90 (75.6)	47.26±8.62		5.44±2.88		44.33±4.27	
Intention to complete an advance directive							
Yes	84 (70.6)	48.01±8.57	0.94 (0.351)	5.75±2.54	0.05 (0.960)	45.06±3.78	1.95 (0.053)
No	35 (29.4)	46.37±9.03		5.54±3.02		43.46±4.74	

*Bonferroni test.

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istics using a t-test and ANOVA. The correlation between participants' perceptions of a good death and their attitudes toward ADs was determined using Pearson's correlation coefficient. Due to the non-normal distribution of scores for knowledge about ADs, Spearman's rank correlation coefficient was employed to analyze the correlation between perceptions of a good death, knowledge about ADs, and attitudes toward ADs. A multiple linear regression analysis was conducted to identify factors affecting participants' attitudes toward ADs. Five variables were significant in the univariate analysis and were included in the model: age, employment status, education level, perceptions of a good death, and knowledge about ADs.

RESULTS

1. General characteristics of participants

Regarding the participants' gender distribution, there were 73 males, accounting for 61.3% of the sample. The mean age was 60.7 years, with a standard deviation of 11.39, and ages ranged from 33 to 90 years. A total of 77 participants (64.7%) were aged 65 or younger. In terms of religious affiliation, 65 participants (54.6%) reported having no religion. Employment status revealed that 89 individuals (74.8%) were unemployed. With respect to educational attainment, 63 participants (52.9%) had completed high school. Concerning health status, 73 participants (61.3%) had comorbidities, and 101 (84.9%) had a history of hospitalization. When it came to awareness and education about ADs, 87 participants (73.1%) reported not having received information or education on ADs. However, 72 individuals (60.5%) expressed a desire to receive such information or education. Additionally, 90 participants (75.6%) were unaware of institutions that register ADs, yet 84 (70.6%) were willing to complete an AD (Table 1).

2. Participants' perceptions of a good death, knowledge about advance directives, and attitudes toward advance directives

The mean score for participants' perceptions of a good death was 2.80±0.33 out of 4 points. The scores for each subscale of perceptions of a good death were as follows: clinical symptoms at 2.96±0.33, sense of closure at 2.77±0.35, and personal control at 2.62±0.19 (Table 2).

Table 2. Perceptions of a Good Death and Attitudes toward Advance Directives (N=119).

Variables	Possible range	M±SD
Perceptions of a good death	1~4	
Clinical symptoms		2.96±0.33
Personal closure		2.77±0.35
Personal control		2.62±0.19
Total		2.80±0.33
Attitudes toward advanced directives	1~4	
Effect of advance directives on treatment		2.97±0.09
Opportunity for treatment choices		2.79±0.24
Impact of advanced directives on the family		2.78±0.27
Illness perception		2.32±0.66
Total		2.79±0.26

Table 3. Knowledge about Advance Directives (N=119).

Items	Correct answers n (%)
A patient has a right to permit or reject treatment offered	115 (96.6)
A patient has a right to permit or reject Life-sustaining Treatment	85 (71.4)
Advance directives are supposed to be prepared while one is competent	67 (56.3)
A living will is an instruction where a person specifies what actions should be taken for his or her health if he or she is no longer able to make decisions due to illness or incapacity	70 (58.8)
A living will cannot be changed or revoked once written	71 (59.7)
A health care proxy is a person authorized to make care decisions for a person who designates him/her as a proxy	77 (64.7)
A health care proxy cannot be changed or revoked once designated	80 (67.2)
A lawyer is needed to complete an Advance directive	47 (39.5)
Any change or revocation is possible at any time or place	65 (54.6)
Total mean score (M±SD)	5.69±0.13

The mean score for all items concerning the knowledge about ADs was 5.69±0.13 out of 9 points. Seven items had correct response rates of 70% or lower (Table 3). The item "a patient has a right to permit or reject treatment offered" received the highest correct response rate, with 115 participants (96.6%) answering correctly. The item with the lowest correct response rate was "advance directives involve expenses during the archiving period."

The mean score for participants' attitudes toward ADs was 2.79±0.26 out of 4 points. The scores for the subscales were as follows: 2.97±0.09 points for the effect of an AD on treatment, 2.79±0.24 points for the opportunity for treatment choices, 2.78±0.27 points for the impact of advanced directives on the family, and 2.32±0.66 points for illness perception. As shown in the figures, the highest score was found for the effect of an AD on treatment.

3. Differences in perceptions of a good death, knowledge about advance directives, and attitudes toward advance directives based on participants' general characteristics

Participants' perceptions of a good death varied significantly across different groups, with distinctions based on religion (t=2.18, P=0.031), comorbidities (t=2.05, P=0.043), and the desire to receive information and education about ADs (t=3.25, P=0.002) (Table 1). Additionally, there were notable differences in participants' knowledge about ADs when analyzed by age (t=−3.25, P=0.001) and education level (F=9.68, P=0.022). In particular, those with a university degree or higher scored significantly higher in knowledge about ADs than participants who had only completed elementary or middle school education. Attitudes toward ADs also differed among participants, with significant variations observed based on age (t=−2.70, P=0.007), employment status (t=3.38, P=0.001), and education level (F=21.34, P≤0.001). Participants holding a university degree or higher demonstrated a significantly higher mean score in their attitudes toward ADs compared to the other three groups (Table 1).

4. Correlations between participants' perceptions of a good death, knowledge about advance directives, and attitudes toward advance directives

Perceptions of a good death and attitudes toward ADs among patients undergoing hemodialysis were positively correlated (r=0.34, P=0.001). Similarly, knowledge about ADs and attitudes toward them among this patient population showed a positive correlation (r=0.19, P=0.037). However, there was

Table 4. Correlations between Perceptions of a Good Death, Knowledge about Advance Directives and Attitudes toward Advance Directives (N=119).

Variables	Perceptions of a good death	Knowledge about advance directives
	r (P)/rs (P)	
Knowledge about advance directives	−0.02 (0.828)*	-
Attitudes toward advance directives	0.34 (<0.001)†	0.19 (0.037)*

*Spearman's rank correlation coefficient, †Pearson's correlation coefficient.

Table 5. Factors That Influenced Attitudes toward Advance Directives (N=119).

Variables	B	SE	β	t	P
Age (yr)					
≥65	ref				
<65	0.35	0.77	0.04	0.45	0.652
Employment status					
No	ref				
Yes	2.07	0.80	0.22	2.58	0.011
Education level					
High school or below	ref				
Bachelor's degree or higher	2.24	0.88	0.22	2.53	0.013
Perceptions of a good death	0.14	0.04	0.29	3.56	0.001
Knowledge about advance directives	0.12	0.13	0.08	0.89	0.373
		F (P)=7.9 (<0.001)			
		Adjusted R^2=0.259			

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no significant correlation between perceptions of a good death and knowledge about ADs (r=−0.02, P=0.828) (Table 4).

5. Factors affecting participants' attitudes toward advance directives

Age, employment status, education level, perceptions of a good death, and knowledge about ADs were identified as significant factors in the univariate analysis. These variables were subsequently selected as independent variables for regression analysis. The analysis revealed that employment status, education level, and perceptions of a good death significantly influenced participants' attitudes toward ADs. Participants who were employed (β=0.22, P=0.013) and those with university degrees or higher (β=0.22, P=0.011) showed higher attitude scores toward ADs. Furthermore, higher perceptions of a good death (β=0.29, P=0.001) were associated with more positive attitudes toward ADs. The combined explanatory power of these variables for attitudes toward ADs was 25.9% (F=7.90, P<0.001) (Table 5).

DISCUSSION

This study explored the perceptions of a good death, knowledge about ADs, and attitudes toward ADs among patients with ESRD on hemodialysis, as well as to identify factors influencing their attitudes toward ADs. The findings indicated that perceptions of a good death and knowledge about ADs in ESRD patients on hemodialysis were associated with their attitudes toward ADs. Additionally, factors such as perceptions of a good death, employment status, and level of education were determined to influence attitudes toward ADs.

The mean score for perceptions of a good death in this study was 2.80±0.33 out of 4 points. Among the conceptual attributes of a good death—control of clinical symptoms and a sense of closure—the alleviation of clinical symptoms was deemed the most essential factor. The participants' level of awareness was comparable to the average score of 2.87 points found among cancer patients [12] and was somewhat lower than the 3.37-point average from a study with elderly patients in nursing homes. The prioritization of clinical symptoms aligns with findings from research on elderly nursing home residents and patients with chronic heart diseases [5,11]. However, this contrasts with studies involving nursing college students without any diseases and middle-aged adults, where a sense of closure was highlighted as the most important [8,18]. These differences suggest that the awareness of what constitutes a good death may be influenced by the presence or progression of underlying diseases. Additionally, 73 (61.3%) of the patients in this study had comorbidities. Patients with ESRD on hemodialysis appear to place significant importance on the effective management of clinical symptoms as a component of a good death, likely because they experience a variety of symptoms simultaneously [28]. Therefore, it is important for healthcare professionals to address ways to alleviate the clinical symptoms that patients on hemodialysis face when discussing end-of-life care.

The mean score for knowledge about ADs among patients undergoing hemodialysis who participated in this study was 5.69±0.13 out of a possible 9 points. This score was lower than those reported in other studies using the same assessment tool, which included patients with chronic heart diseases (6.84 points) [11], middle-aged adults (7.51 points) [18], and community-dwelling older adults (5.84 points) [29]. The question with the highest correct response rate pertained to a patient's right to accept or refuse treatment, mirroring findings from Joung's study [17] with a similar patient population. This may reflect increased patient awareness of their rights due to mandatory explanations of patient rights and responsibilities at hospital admission. Additionally, the majority of patients undergoing hemodialysis had been hospitalized previously. However, 90 (75.6%) of the study participants were not aware of where to register ADs, highlighting the need for better promotion and information dissemination about ADs. Participants aged 65 or younger, or those with university degrees or higher, scored better on knowledge about ADs. This aligns with previous research involving cancer patients [12] and patients undergoing hemodialysis [17]. The higher scores in the younger age group may be attributed to the recent implementation of the Act on Decision of Life-sustaining Treatment, which has led to increased societal promotion of ADs and enhanced access to medical systems. The influence of higher education levels in this demographic also appears to be a contributing factor. Consequently, there is a need for the development of tailored and differentiated educational programs. Significant

differences in knowledge about ADs were observed among participants with different religious backgrounds, comorbidities, and intentions to receive education on ADs. This may be due to the fact that those who participate in religious activities, have multiple diseases, or are open to education on ADs are more likely to have considered death and ADs. With 84 (70.6%) participants expressing a desire to complete ADs, there is a clear demand for education on ADs among patients with ESRD.

The mean score for attitudes toward ADs in this study was 2.79±0.26 out of 4 points, indicating relatively positive attitudes toward ADs. This score was slightly lower than the 2.84 points reported in a study involving older adults admitted to nursing homes [5] and the 3.46 points reported in a study involving cancer patients [12], yet it was comparable to the 2.74 points found in research with middle-aged adults [18]. Among the subscales, the perceived effect of ADs on treatment received a score of 2.97±0.09 and was deemed the most significant. This likely reflects the patients' belief and hope that their decisions regarding ADs will be implemented as intended upon completion of the ADs. Therefore, it appears essential to assist patients undergoing hemodialysis in planning their end-of-life care in advance and making autonomous decisions. Furthermore, this study revealed that participants who were 65 years old or younger, employed, and had university degrees or higher exhibited more positive attitudes toward ADs. This finding is consistent with research involving middle-aged adults [18] and older adults attending community centers [30]. Consequently, it seems that education and promotion are necessary for ESRD patients over the age of 65 with an education level of high school graduation or lower to foster an interest in ADs. Additionally, Cronbach's alpha for the reliability of the tool used to assess attitudes toward ADs in this study was 0.67, which is lower than that of the original tool. This discrepancy may be due to the recent surge in interest in ADs in Korea following the enactment of the Act on Decision of Life-sustaining Treatment, as opposed to the longstanding active discussions on ADs in Western societies. Since perceptions of death and ADs can be influenced by cultural characteristics, it is necessary to develop diverse tools that are more attuned to the sentiments and circumstances in Korea.

Although knowledge about ADs did not directly influence attitudes toward ADs, it was positively correlated with them. This is consistent with findings from studies involving cancer patients [12], patients undergoing hemodialysis [17], adults in a specific region [19], and nursing college students [20]. These results suggest that a higher level of knowledge about ADs is associated with more positive attitudes toward them. In this study, among the 119 participants, 8 patients (6.7%) had completed ADs, and 72 patients (60.5%) expressed their intention to do so. Additionally, 84 patients (70.6%) indicated their willingness to receive education or information about ADs, demonstrating a significant demand for such education among the hemodialysis patient population. Therefore, it is necessary to improve knowledge about ADs in this group by providing adequate information and education, which may in turn foster more positive attitudes toward ADs. Awareness of what constitutes a good death was identified as a factor influencing attitudes toward ADs. Recognizing clinical symptom management, personal control, and the sense of closure—attributes associated with a good death—were linked to positive attitudes toward ADs. This finding is in line with research on hospitalized older adults [5], patients with chronic heart diseases [11], and cancer patients [12], suggesting that those with end-stage diseases may have had more opportunities to consider their acceptance of death and its meaning. This also implies that a positive view of a good death is related to proactive engagement in end-of-life decision-making. Furthermore, the growing acceptance of discontinuing end-of-life care is seen as a reflection of recent improvements in economic status and a heightened interest in dying well and the right to die with dignity [17]. Consequently, it has been shown that high perceptions of a good death can lead to a positive shift in attitudes toward ADs among patients undergoing hemodialysis. To promote perceptions of a good death, it is necessary to identify what patients undergoing hemodialysis consider important for a good death, and to develop and provide nursing education programs on death preparation based on these findings.

This study offers important insights into end-of-life decision-making by examining the perceptions of a good death, knowledge about ADs, and attitudes toward ADs among ESRD patients on hemodialysis who typically avoid discussions about death. However, there are several limitations to consider. The research was conducted with patients at a single

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university hospital in one city, which limits the ability to generalize the findings. Additionally, the cross-sectional nature of the study means it can only identify correlations between variables, not causation. Future longitudinal studies with a larger cohort are necessary to observe changes over the course of the disease. Since perceptions of a good death can be influenced by individual characteristics, cultural, and environmental factors, further research should include variables that account for participant characteristics related to family information or disease progression. Moreover, given the scarcity of research on the concepts of a good death and ADs among dialysis patients in Korea, we recommend replication research on these topics.

In future research, it is necessary to develop educational programs targeting groups with limited knowledge about ADs. These programs should be evaluated for their effectiveness in increasing awareness of dignified death and empowering patients undergoing hemodialysis to proactively plan their end-of-life care. Furthermore, we recommend conducting studies to assess the influence of patient education on ADs—specifically, education that focuses on promoting the concept of a dignified death—on the completion rates of ADs among hemodialysis patients.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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AUTHOR'S CONTRIBUTIONS

Conception or design of the work: all authors. Data collection: all authors. Data analysis and interpretation: all authors. Drafting the article: all authors. Critical revision of the article: all authors. Final approval of the version to be published: all authors.

SUPPLEMENTARY MATERIALS

Supplementary materials can be found via https://doi.org/10.14475/jhpc.2024.27.1.11.

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