

ORIGINAL ARTICLE

Relationship of social support and decisional conflict to advance directives attitude in Korean older adults: A community-based cross-sectional study

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Abstract

Aim: The aim of this study was to clarify the relationship between social support, decisional conflict, and attitude towards advance directives, and determine whether decisional conflict mediates the relation between social support and advance directives attitude among older adults in South Korea.

Methods: In total, 209 community-based older adults (mean age, 74.82 years) participated in this cross-sectional study. Demographic characteristics, self-perceived health status, social support, decisional conflict, and advance directives attitude were investigated via a structured questionnaire. Data analysis was carried out using Pearson's correlation and path analyses.

Results: The mean score of advance directives attitude was 48.01 (range, 35–61). Decisional conflict and social support were both significantly related to advance directives attitude ($P < 0.001$). Additionally, decisional conflict was a mediator between social support and advance directives attitudes.

Conclusion: The results confirmed the importance of social support for reducing decisional conflict and encouraging positive attitudes toward advance directives. Future studies are needed to support the development of culturally sensitive educational approaches regarding advance directives for older adults in Korea.

Key words: advance directives, conflict, elderly, end of life care, social support.

INTRODUCTION

With the advancement of medical technology, various life-sustaining treatments are now available to patients. This may result in desirable outcomes for some patients at the end-of-life (EOL) stage, but not for others. Advance directives (AD) are documents on how treatment decisions should be made in the event that the patient loses the capacity to make decisions, and which are completed ahead of such events. Family members and healthcare providers can become confused trying to provide care if they are not aware of the incompetent patient's wishes regarding EOL decisions. AD are

essential to respecting patients' autonomy and helping their caregivers avoid confusion at the EOL. However, discussing death or EOL in advance can be difficult, even while individuals are still healthy, because of patients' varying levels of discomfort with the topic (Htut, Shahrul, & Poi, 2007; Kim, Hong, Eun, & Koh, 2012a). In this respect, AD are a major issue related to autonomous decision-making for EOL treatment plans (Cohen-Mansfield, Libin, & Lipson, 2003; Lawrence, 2009).

Since the legislation of the Patient Self-Determination Act (Public Law no. 101–508) in the USA, several researchers have examined older adults' attitudes about AD (Hirschman, Abbott, Hanlon, Prvu Bettger, & Naylor, 2012; Htut *et al.*, 2007; McAdam, Stotts, Padilla, & Puntillo, 2005; Nolan & Bruder, 1997; Salmond & David, 2005). They reported that many older adults did not have AD. However, older adults

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were interested in AD because they had had chronic illnesses or experiences of hospitalization that had turned their attention to EOL issues (Douglas & Brown, 2002; Hirschman *et al.*, 2012). In South Korea, several EOL issues have attracted public attention, but legislation regarding AD has not yet been enacted. AD are not widely used despite interest in them in South Korea (Kim, 2011; Kim *et al.*, 2012b).

The ability to make decisions is required to determine EOL care. Previous studies have reported that many patients want decision-making authority over their EOL care, and that AD should be devised by patients themselves autonomously (Becker *et al.*, 2010; Kim, 2010). AD would be helpful at EOL by allowing older adults to autonomously determine EOL care and relieving their families of the burden of confronting the treatment of patients in the terminal stages of disease (Kim, Hahm, Park, Kang, & Sohn, 2010; Lawrence, 2009). In critical situations, however, older adults may experience anxiety over possible negative outcomes of the AD decision and find it difficult to determine the best course of action; this has been supported by some previous research, in that patients show some discomfort in making decisions about EOL (Douglas & Brown, 2002; Kwak & Salmon, 2007). Decisional conflict involves a state of uncertainty about selecting competing choices that all involve risk, regret, challenges, and benefits (O'Connor, 1995). Many older adults experience decisional conflict in EOL decision-making, and this can influence their AD preferences (Allen, Allen, Hilgeman, & DeCoster, 2008).

In EOL decision-making, communication and support between family members are important (Ott, 2008). Family involvement in EOL decision-making is highly regarded among Korean adults and elderly (Kim, 2010; Kwak & Salmon, 2007). Song and Sereika (2006) also emphasized the importance of family members and loved ones in patients' EOL decisions. Essentially, personal relationships help older adults obtain knowledge about AD and feel supported in EOL decision-making, and reduce decisional conflict. Although patients' decisional conflict decreases with healthcare professionals' providing appropriate knowledge about EOL care and AD, the family has been found to be very important in healthcare decision-making as well as EOL planning in South Korea. This seems to be affected by family-centered characteristics as Koreans are likely to make much of family members' opinion in decision-making situation (Chang, Lee, Kim, & Lee, 2008; Kim, 2011). Altogether, it appears that social support – namely, reciprocity within a familiar network – appears to be crucial in EOL decision-making. However, to further establish

the precise mechanisms of social support, it would be necessary to evaluate in detail the association of decisional conflict with AD attitudes in a social context. Because social support is apparently associated with AD attitude (Kim, 2011), the present authors expected that a meaningful relationship between social support, decisional conflict, and AD attitude would be observed (Kim, 2010, 2011; Kwak & Salmon, 2007; Ott, 2008; Song & Sereika, 2006).

Advance directives makes older adults determine EOL care with autonomy and relieve the burden on their families when confronted with the dilemma of treating patients in the terminal stages of disease (Kim *et al.*, 2010; Lawrence, 2009). Although the present authors understood the likely role of social support in AD attitude formation, there is so far no concrete empirical evidence of how exactly decisional conflict fits into EOL planning and attitudes towards AD. In a previous study, patients' perceived difficulties in determining future treatment preferences – namely, decisional conflict – have been found to be negatively associated with AD attitude (Allen *et al.*, 2008).

In sum, in this study, the present authors examined AD attitudes among Korean older adults. More specifically, they aimed to: (i) determine the relationship between social support, decisional conflict, and AD attitudes; and (ii) evaluate the potential mediating effect of decisional conflict between social support and AD attitudes in Korean older adults.

METHODS

Research design

This study employed a descriptive cross-sectional survey design to examine the relationship between social support, decisional conflict, and AD attitude, and the mediating effect of decisional conflict in the relationship between social support and AD attitude among older adults in South Korea.

Study participants

Participants were community-dwelling Korean adults over 65 years of age living in “S” city, South Korea. Inclusion criteria were: (i) being community-dwelling; (ii) cognitively intact; (iii) aged 65 years or older; and (iv) having the ability to provide informed consent. More than 200 were recommended for path analysis or structural equation modeling (Schumacker, Randall, & Lomax, 2004). Of the 224 participants initially contacted, a total of 209 responses were analyzed (response

rate, 93.3%) following the elimination of responses with a large proportion of missing data.

Ethical considerations

This study was approved by and conducted in accordance with the procedures of the institutional review board of Ewha University, Seoul, Korea (IRB2011-6-7).

Data collection

This study was conducted from September 2011 to January 2012. The authors were given permission by the directors of two senior welfare centers in “S” city to recruit study participants. The centers were located in urban areas. Data collection was conducted by the authors and three college-level research assistants. Two meetings were held before data collection began, during which the research assistants were instructed regarding the data collection methods and the purpose of the study.

Face-to-face interviews were conducted directly by trained researchers administering a standardized questionnaire. Before each interview, the researchers explained the purpose and procedure of the study, answered participants’ questions, and confirmed participants’ understanding of the purpose and procedure. Completion of the questionnaire took approximately 15 min. Participation was voluntary, and participants were compensated approximately \$US 5.00 for their participation.

Measures

Demographic characteristics of age, marital status, religion, educational background, income, comorbidities, and pain were collected. Information on comorbidities was obtained by asking participants about their diagnosed diseases, allowing for multiple answers. Self-reported pain was measured with a numerical rating scale ranging 0–10. AD attitudes, decisional conflict, social support, and perceived health status were measured by standardized questionnaires.

Health status

Health status was measured using three items: “What is your current health status?”, “What is your health status compared to three years ago?”, and “What is your health status compared to others in your age group?”. These items had adequate validity as it was reported that participants’ perceived health status was significantly accordant with health professionals’ evaluations (Speake, Cowart, & Pellet, 1989). These three items were scored on a 5 point Likert-type scale

with scores ranging from 1 (“extremely poor”) to 5 (“extremely good”). This produced a total range of health status scores of 3–15; higher scores indicated better health status. The Cronbach’s alpha (a measure of internal consistency) was 0.85 in Speake *et al.*’s (1989) study. The Korean version of the scale was translated by Hwang, who reported a Cronbach’s alpha of 0.87 (Hwang, 2007), and the Cronbach’s alpha for the current study was 0.74.

Social support

Social support was measured by the Multidimensional Scale of Perceived Social Support (MSPSS), an instrument that measures the respondent’s perception of his or her social support system, including family, friends, and significant others (Zimet, Dahlem, Zimet, & Farley, 1988). The MSPSS consists of 12 items rated on a 7 point Likert-type scale that ranges from 1 (“very strongly disagree”) to 7 (“very strongly agree”). Higher scores indicate greater levels of perceived social support. The Korean version of the MSPSS was translated by Lee (2000), and the Cronbach’s alpha was reported as 0.92. The Cronbach’s alpha of the MSPSS was 0.92 in this study.

Decisional conflict

Decisional conflict was measured using the Decisional Conflict Scale (DCS), an instrument that measures personal uncertainty in making decisions regarding healthcare options, perceptions of modifiable factors contributing to the uncertainty, and perception of the decision-making process (O’Connor, 1995). Thus, the DCS consists of three subscales: (i) uncertainty about choosing among alternatives; (ii) factors contributing to this uncertainty; and (iii) the perceived effectiveness of the decision. Items on each subscale are scored on a 5 point Likert-type scale ranging from 1 (“strongly agree”) to 5 (“strongly disagree”). Item scores are summed and divided by the total number of items to yield the average item score; final scores thus range from 1 (“low decisional conflict”) to 5 (“high decisional conflict”). Scores of 2 or less are normally associated with a lack of difficulty in decision-making and the behavioral implementation of decisions. The reliability of the DCS is supported by previous findings of Cronbach’s alphas ranging 0.78–0.92 (O’Connor, 1995, 2002). The Cronbach’s alpha of the Korean version, translated by Sun *et al.* (2006), was reported as 0.69 in a sample of 312 postmenopausal women. In this study, the Cronbach’s alpha was 0.90.

AD attitude

Attitudes toward AD were measured using the Advance Directive Attitude Survey (ADAS), originally composed of 17 items but later modified into a 16 item instrument; this study used the 16 item version (Nolan & Bruder, 1997). The ADAS was developed to determine the extent to which one considered AD to be positive or negative. The ADAS items are rated on a 4 point Likert-type scale ranging from 1 (“strongly disagree”) to 4 (“strongly agree”). Three items (negative statements) are reverse scored. The survey contains four subscales: (i) the opportunity for treatment choices; (ii) the impact of AD on the family; (iii) the effect of AD on treatment; and (iv) the perception of illness. Total scores can range between 16 and 64. Higher scores indicated a more positive attitude toward AD. The Cronbach’s alpha was 0.74 in an earlier study (Nolan & Bruder, 1997), while in this study, the Cronbach’s alpha was 0.86.

Data analysis

Statistical analysis was conducted using IBM SPSS Statistics version 18.0 and AMOS version 7.0 (IBM, Armonk, NY, USA); the significance level was set at $P < 0.05$. Participants’ general demographic characteristics were analyzed for frequency and percentage. The main variables (health status, decisional conflict, social support, and AD attitudes) were analyzed for means and standard deviations (SD); Pearson’s correlations between main variables were then calculated. Further, a path analysis was conducted to test the hypothesized paths between variables, as follows: the effect of social support on decisional conflict, the effect of social support on AD attitude, the effect of decisional conflict on AD attitude, and the mediating effect of decisional conflict. The recommendations of Baron and Kenny (1986) were applied to identify the possible mediating effects of decisional conflict, social support, and AD attitudes.

RESULTS

Demographic characteristics

The majority of participants were female (63.9%) with a mean (SD) age of 74.82 years (6.16). Approximately 31% of participants were Protestants and 24% were Buddhists. The majority of participants reported educational attainment below the elementary and middle school levels (36.7% and 19.3%, respectively); the average number of years of education was 7.5 (5.12), and most participants’ income was reported to be less

than \$US 1000/month. Approximately 82% of participants had been diagnosed with a disease, most commonly cardiovascular disease (35.4%), musculoskeletal disease (21.1%), and endocrine diseases such as diabetes mellitus (16.3%). The mean (SD) self-rated pain level was 2.94 (3.19), indicating a somewhat low level of pain. The majority of participants participated in social activities provided by welfare services for older adults in the community (Table 1).

Descriptive statistics for the main variables

The descriptive statistics for the main variables are summarized in Table 2. Participants’ self-report health status was at a moderate level in this study. Overall, participants’ perceived social support level scores indicated that they had positive social support systems. The mean total DCS score was less than 2, indicating less difficulty in making decisions; however, for the uncertainty domain, scores were rather high, indicating difficulty in decision-making. AD attitudes scores ranged 35–61 and had a mean of 48.01.

Relationship between the main variables

Table 3 presents the zero-order correlations between AD attitudes and the other variables. Social support and decisional conflict were significantly related to AD attitudes ($P < 0.001$), and social support was significantly negatively related with decisional conflict ($P < 0.001$). Health status was significantly associated with social support and decisional conflict, although it was not related to AD attitudes.

Advance directive attitudes were positively associated with perceived social support ($\beta = 0.34$), but negatively associated with decisional conflict level ($\beta = -0.56$). Further analysis of the indirect effects of social support was conducted based on the direct relationship between the main variables, and the β -value decreased from 0.34 to 0.21. Figures 1 and 2 depict the mediating effect of decisional conflict between social support and AD attitudes that was revealed in this study subjects.

DISCUSSION

In this study, the present authors examined Korean older adults’ attitudes about AD and identified the relationship between social support, decisional conflict, and AD attitude in this population. Furthermore, they confirmed that decisional conflict acts as a mediator between social support and AD attitude. The results showed statistically significant correlations between these three variables;

Table 1 Demographic characteristics ($n = 209$)

Categories		N (%)	Mean (\pm SD)
Sex	Male	75 (36.1)	74.82 (6.16)
	Female	133 (63.9)	
Age			
Religion	Protestant	64 (31.2)	7.5 (5.12)
	Catholic	50 (24.4)	
	Buddhist	49 (23.9)	
	None	39 (19.0)	
	Other	3 (1.5)	
Educational background	Below elementary school	76 (36.7)	
	Middle school	40 (19.3)	
	High school	45 (21.7)	
	College level	4 (1.9)	
	University	35 (16.9)	
	Over graduate program	7 (3.4)	
Education (years)			
Income (\$US/month)	<1000	83 (52.5)	7.5 (5.12)
	1000–2000	42 (26.6)	
	2000–6000	31 (19.6)	
	>6000	2 (1.3)	
Diagnosed disease	Yes	163 (81.9)	
	No	36 (18.1)	
Disease type [†]	Cardiovascular disease	74 (35.4)	2.94 (3.19)
	Musculoskeletal disease	44 (21.1)	
	Endocrine disease	34 (16.3)	
	Cancer	10 (4.8)	
	Gastrointestinal disease	9 (4.3)	
	Cerebrovascular disease	7 (3.4)	
	Other	40 (19.1)	
Pain level			
Participating in social activity	Yes	179 (86.9)	2.94 (3.19)
	No	27 (13.1)	

[†]Multiple selections were allowed for disease type question. SD, standard deviation.

Table 2 Descriptive statistics for the main variables ($n = 209$)

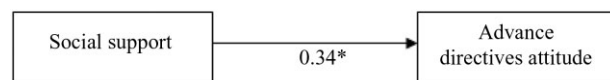
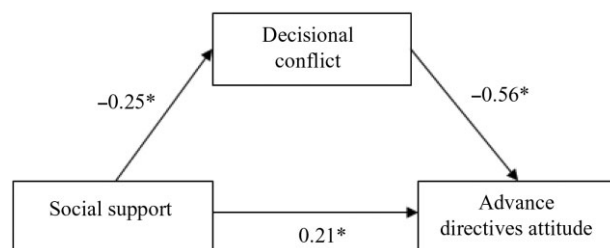
	Minimum	Maximum	Mean \pm SD
Health status	3.00	15.00	9.61 \pm 2.51
Social support	12.00	84.00	66.00 \pm 14.21
DCS	0.00	2.88	1.31 \pm 1.20
Subscale 1: uncertainty about choosing alternatives	0.00	4.33	2.62 \pm 1.60
Subscale 2: factors contributing to uncertainty	0.00	3.33	1.50 \pm 1.23
Subscale 3: perceive effectiveness of the decision	0.00	3.00	0.93 \pm 0.69
AD attitudes	35.00	61.00	48.01 \pm 5.34
Subscale 1: opportunity for treatment choices	4.00	16.00	12.97 \pm 2.03
Subscale 2: impact of AD on the family	16.00	32.00	23.69 \pm 2.94
Subscale 3: effect of an AD on treatment	5.00	12.00	9.66 \pm 1.65
Subscale 4: perception of illness	1.00	4.00	1.64 \pm 0.73

AD, advance directives; DCS, Decisional Conflict Scale; SD, standard deviation.

Table 3 Correlations among the main variables ($n = 209$)

	AD	Health	SS	DCS
Health status	0.133 0.062			
Social support	0.336** <0.00	0.416** <0.001		
DCS	-0.562** <0.001	-0.188** 0.006	-0.250** <0.001	

** $P < 0.001$. AD, advance directives; DCS, Decisional Conflict Scale; SS, Social Support.

**Figure 1** Direct effect of social support on advance directives attitudes. * $P < 0.01$.**Figure 2** Mediation of decisional conflict between social support and advance directives attitudes. * $P < 0.01$.

additionally, decisional conflict was a confirmed partial mediator between social support and AD attitude.

The mean score of AD attitude in this study was 48.01, which was similar to the scores of 45.12 ($SD = 6.41$) in Lee's (2012) study of 180 community-dwelling Korean older adults. Thus, AD attitude appears to be rather positive in Korean older adults, despite the generally low awareness and implementation of AD (Kim, 2010; Kim *et al.*, 2012) in this population. These positive attitudes suggest that older adults are primed for implementing AD; thus, understanding why the rate remains low is still necessary. One possible reason is that individuals' lack of knowledge about EOL care can have a negative impact on their AD attitudes (Eisemann & Richter, 1999; Kim, 2011; Matsui, 2007). Similarly, Resnick and Andrews (2002) reported the effect of nurse practitioners' education on AD completion. Therefore, improving EOL care knowledge would be helpful in improving AD attitudes and implementation.

The present study found that AD attitudes were negatively correlated with decisional conflict. Of the three subcategories of the DCS, the uncertainty domain was particularly high in this population, indicating some degree of decision-making difficulty. Thus, it is possible that some older adults demonstrate negative attitudes toward AD because of anxiety provoked by uncertainty in their choice. Patients who lack knowledge about their health status, EOL care options, or AD may feel anxious about whether they are making the right choice, or may have difficulty in making decisions by themselves (Allen *et al.*, 2008; Song & Sereika, 2006). Previous studies have reported that providing more medical information reduced decisional conflict for older adults who were selecting medical treatment (Allen *et al.*, 2008; Eisemann & Richter, 1999). Song and Sereika (2006) reported that patients were satisfied that they had made choices consistent with their values when they received adequate information and support during the EOL decision-making process. Therefore, the provision of information about disease prognosis, treatment, alternatives, risks, and benefits serves an important role in reducing decisional conflict and facilitating EOL care decisions (Allen *et al.*, 2008; Eisemann & Richter, 1999; Song & Sereika, 2006).

Interestingly, social support had an effect on AD attitudes via decisional conflict. Older adults with lower perceived social support reported more decisional conflict and more negative attitude toward AD. The family's role as a source of social support in EOL decision-making differs by cultural background (Bellamy & Gott, 2013; Parks *et al.*, 2011). Koreans tend to give much consideration to family members' opinions in healthcare decision-making, and also discuss EOL issues mostly with their family rather than with healthcare providers because of the family-oriented culture. Ko and Lee (2009) reported ethnic differences between Korean Americans and non-Hispanic Caucasians in communicating about EOL issues: non-Hispanic Caucasian participants had discussed EOL issues with family, friends, doctors, or lawyers, while Korean Americans had done so mostly with family or friends. Thus, the present authors' results have likely been affected by the family-oriented Korean culture (Chang *et al.*, 2008; Ko & Lee, 2009; Song & Sereika, 2006). Decision-making about treatment plans is not a simple process because many conditions have to be considered, including individuals' health status, choice of medical service, socioeconomic status, beliefs about EOL, and so on. Therefore, it is necessary to evaluate patients' social support levels and encourage close relationships with their family, relatives,

friends, family lawyers, and healthcare professionals to receive adequate information and assistance in EOL care planning. When necessary, it is also important to include family members in the educational process and implementation of the AD.

The present authors found that AD attitude did not differ significantly by health status. This finding was consistent with a previous study reporting that older adults' EOL plans were not influenced by self-rated health status (Carr & Khodyakov, 2007). However, older adults' health status, especially severe illness, may still be associated with AD attitudes because their experiences related to illness likely would influence their involvement in healthcare decision-making and the desire for treatment at the EOL (Allen *et al.*, 2008; Say, Murtagh, & Thomson, 2006). It is possible that the relationship was obscured because participants in the present study were relatively healthy, as they had been recruited from community senior welfare centers rather than from hospitals or nursing homes. Thus, further research with a broader sample is needed to clarify if there is a relationship between health status and AD attitude in the elderly.

This study has several limitations. First, the results of the present study cannot be generalized to all Korean older adults, given that the data were collected from two urban community senior welfare centers using convenience sampling. Convenient sampling reduces the representativeness of the sample. Second, the participants were active in their community senior welfare centers and thus may have been more socially active than other elderly people. The level of social support may be influenced by the characteristics of this social activity. Despite these limitations, this study identified the relationship between social support, decisional conflict, and AD attitudes, and the influence of social support on decisional conflict and AD attitudes among Korean older adults.

The findings of this study suggest a few directions in EOL care planning. Some patients may perceive documenting AD as untimely. However, documenting AD makes patients consider their EOL plan while they are physically and mentally able to do so. This suggests that legal and institutional readability – namely, how accessible AD information is to patients – would be necessary to enhance awareness of AD and increase their use (Hinders, 2012; Kim *et al.*, 2012). Institutional readability for AD involves standardizing the process of issuing AD, establishing a communication system between patients and healthcare providers, and the development of user-friendly documents (Kim *et al.*, 2012a).

Further, the participants in this study experienced decisional conflict, particularly as a result of uncertainty about their choice, and decisional conflict was negatively associated with AD attitudes. Although patient autonomy is a basic right for patients in determining their medical care with “self-determination, freedom, independence, liberty of choice and action,” it does allow for healthcare providers' help (Collopy, 1988, p. 10). In South Korea, numerous adults preferred themselves to be the primary decision-makers regarding EOL planning, whereas patients with terminal illnesses were more likely to depend on healthcare providers; some participants even wanted medical staff to make decisions about their treatment planning (Kim, 2010; Mo *et al.*, 2012). Thus, the role of healthcare providers is important, especially for those with severe illness. Some researchers have suggested that healthcare providers, who must be able to consider patients' health status, treatment options, and individual values simultaneously, should initiate EOL discussions before patients develop physical or mental illnesses (Crane, Wittink, & Doukas, 2005; Hinders, 2012; Kim *et al.*, 2012). For better decision-making, comprehensive assessment of patients' status, sharing patients' priorities based on expertise through a multidisciplinary approach, and encouraging patients to disclose their preferences have also been suggested (Menard, Merckaert, Razavi, & Libert, 2012). During EOL discussions, healthcare providers should facilitate communication in terms that are easy for patients to understand, and draw mutually acceptable goals through considering patients' cultural background (Hinders, 2012; Kim *et al.*, 2012).

Finally, social support was found to have a direct effect on AD attitude and an indirect effect on AD attitude via decisional conflict. Healthcare providers should be aware that the role of social support varies according to cultural background and should attempt to involve patients' families and loved ones in EOL care planning (Bellamy & Gott, 2013; Kim, 2011; Ko & Lee, 2009). Effective nursing strategies are especially needed to help patients and their families effectively cope with these difficult situations. Nurses must therefore fill the role of educator, advocate, and liaison with the family as well as the healthcare team. The full scope of the topic, from patients' values about EOL care to specific treatment preferences, should be discussed with respect to patients' autonomy.

In conclusion, this study suggests that healthcare providers can assist older adults by providing adequate information regarding EOL issues, and that social support should be encouraged in EOL care planning.

Social support involves relatives, religion, and health-care providers as well as family, so it should be considered within the context of each patient's cultural background. Future studies are needed to support the development of culturally sensitive educational approaches regarding AD for older adults.

CONFLICT OF INTEREST

All authors declare that they have no competing interests.

AUTHOR CONTRIBUTIONS

J. H. and D. Y. contributed to the study design and intellectual input. J. H., D. Y., and M. K. were responsible for data collection and analysis. In addition, all authors read and approved the final manuscript.

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