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ORIGINAL PAPER

Efficacy of a Church-Based, Culturally Tailored Program to Promote Completion of Advance Directives Among Asian Americans

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Abstract Having an Advance Directive (AD) can help to guide medical decision-making. Asian Americans (AA) are less likely than White Americans to complete an AD. This pilot study investigated the feasibility and efficacy of a church-based intervention to increase knowledge and behavior change related to AD among Chinese and Vietnamese Americans. This study utilized a single group pre- and post-intervention design with 174 participants from 4 churches. Domain assessed: demographics; AD-related knowledge, beliefs, attitudes, and intentions; AD completion; and conversations with a healthcare proxy. Data were analyzed using Chi square and multiple logistic regression techniques. We observed significant increases in participants' AD-related knowledge, intentions, and a gain in supportive beliefs and attitudes about AD, resulting in 71.8 % AD completion, and 25.0 % having had a proxy conversation. Providing culturally-tailored intervention and step-by-step guidance can help to achieve significant changes in AD related knowledge and behavior in AA church goers.

Keywords Advance health care planning · Advance Directives · Culturally tailored · Church-based · Asian Americans

Background

Asian Americans are the fastest growing U.S. racial group. Almost three-quarters are foreign-born (74 %), with only half speaking English very well (53 %) [1]. Chinese and Vietnamese are two of the largest Asian American groups.

Advance Directives (AD) are legal documents whereby individuals communicate their end-of-life medical care

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wishes to family and health professionals in advance [2, 3]. The two major AD types in the U.S. are the Living Will and Health Care Power Attorney [4]. In California, they are combined into one form called the "California Health Care Directives" [5]. Having an AD can guide medical decision-making to avoid unnecessary suffering and family conflicts [6]. Asian Americans are less likely than Whites to complete AD [7–11]. Chinese Californians have lower rates of AD completion (20 %) than other ethnic groups (28–47 %) [12]. To date, there is no published data about AD completion in Vietnamese Americans. Barriers to AD completion include cultural, language and literacy factors, unclear instructions, and limited access to advance care planning information and assistance [6].

Asian Americans are less likely to discuss death and communicate their wishes for end-of-life care [13]. Reasons include fatalism [14], filial piety [15, 16], cultural taboo against discussing death and dying [17], and belief that discussing dying hastens death [15, 18, 19]. Few Asian Americans (15–36 %) have health care proxies [13, 20–22], possibly due to preference for family-based decision-making over individual decision-making [23].

In some ethnic groups, churches play a strong role in health promotion [24–30]. Promotion of AD completion has been successful in White and African American churches [31, 32]. This study is the first to examine a church-based, culturally-targeted program to promote AD completion among Asian Americans.

Theoretical Framework

Our intervention was guided by the Theory of Reasoned Action [33] which have been applied effectively in faith-based interventions to promote behavior change [34–36] and with cultures that emphasize collectivist decision-making [37–39]. Since spiritual and cultural beliefs influence attitudes about AD, we chose churches to promote discourse among peers about AD acceptability. The acceptance of AD by individuals, family, church members, and religious leaders form a subjective norm. Our intervention aimed to increase participants' completion of AD by providing education, creating a positive subjective norm about AD through their endorsement by church leaders, and providing instrumental support to complete the form.

Methods

This pilot study is a single group pre- and post-intervention design involving 174 participants from 4 churches. Participants attended a culturally-tailored educational intervention consisting of two educational sessions. Pre-intervention, immediate post-intervention, and 3-months post-intervention initiation surveys were conducted to assess changes in AD-related knowledge, beliefs, attitudes, and completion, and communication with a healthcare proxy.

Participants

Church staff from two Chinese Protestant and two Vietnamese Catholic churches recruited participants through announcements and telephone calls. Participant eligibility criteria were self-identification as Chinese or Vietnamese and age 35 years or older. Exclusion criteria were prior AD completion or involvement in this project's formative activities.

Intervention Development and Cultural Tailoring

We conducted nine in-depth in-language individual interviews with church leaders and four focus groups of participating church members. The findings guided the intervention message content, delivery format, messenger qualifications, and recruitment methods. Findings indicated that: (1) materials should be language-concordant; (2) health professionals should deliver messages; (3) sessions should be focused on patient rights to reduce stigma associated with AD, and (4) enough time (four weeks) should be provided between sessions to allow discussion between participants and family members. Chinese and Vietnamese participants shared similar AD-related beliefs and preferences, enabling a standardized intervention.

Intervention Procedures

The intervention consisted of two 2-hour group sessions held at each church four weeks apart. The sessions were conducted in Cantonese or Vietnamese and facilitated by research staff with health education experience. At both sessions, research staff were available to assist participants with AD form completion.

Session 1 consisted of a brief spiritually-based endorsement of AD by a church leader followed by a physician explaining AD's purpose, use, limitations and possible misconceptions. Research staff provided an overview of how to complete an AD form. Participants received a copy of the California Advance Care Directive Form [40] in their preferred language.

Research staff called participants, 2-days prior to Session 2, to remind them about the Session. At Session 2, the same church leader endorsed AD again. Research staff gave step-by-step instructions on completing the AD, helped those with low literacy, checked the form's completeness, and served as signature witnesses. Participants

received their completed AD form along with two copies for their health care proxy and clinician.

Data Collection

Feasibility of the intervention was assessed by participants' attendance at both sessions. Assessments were obtained at three time points (Times 0, 1 and 2). Participants completed a pre-intervention questionnaire before the start of Session 1 (Time 0) and an immediate post-intervention questionnaire at the end of Session 2 (Time 1). Participants who did not attend Session 2 or who had not completed an AD or had a proxy conversation by Session 2 were contacted for a telephone interview at 3 months following Session 1 (Time 2). Participants received $15 for completing each of the pre- and post–intervention questionnaires and $5 for the 3-month telephone interview.

Measures

Pre- and post-intervention questionnaires had the same items, except demographic items that were only in the pre-intervention questionnaire. The measures were:

1. Demographics: age, sex, birth country, years in the U.S., English proficiency (not at all, somewhat, or well), highest level of education, marital status, number of children, perceived general health (fair/poor vs. good/very good/excellent), and whether they had ever had a serious or life-threatening illness (yes/no).
2. AD-related knowledge was assessed by selecting the one correct description, "an AD is a legal document that specifies a person's medical treatment preferences in case of a life-threatening illness" (correct), versus "an AD only directs a physician to withhold treatment" (incorrect), "an AD specifies a person's wishes for financial matters should he die" (incorrect), or "don't know/never heard of it" (incorrect).
3. AD-related beliefs and attitudes were measured with 18 items using a 4-point Likert scale (from "strongly disagree" to "strongly agree"), including 15 items from the Advance Directive Attitude Survey (ADAS) [41], 2 items from the Brief Systems of Belief Inventory (SBI-15) [42], and 1 new item based on our formative research ("I think it is against my faith/religious belief to complete an AD"). The items covered 6 areas: spiritual beliefs (3 items); rights after AD completion (1 item); opportunity for treatment choices (3 items); effect on treatment (2 items); illness perception (2 items); and impact on the family (7 items). Items selected (Table 2) were recommended by Chinese and Vietnamese cultural experts. We examined each item and its association with the study outcomes individually rather than in scales because of the limited data on the validity of the scales in these populations and insufficient sample sizes to evaluate the psychometric properties of the ADAS or SBI-15 subscales.
4. Intention to complete AD were assessed by asking participants to indicate, using a 4-point Likert scale (from "not at all likely" to "very likely"), the likelihood that they would complete an AD or have a proxy conversation in the next 3 months (Table 2).
5. Completion of an AD was measured as participants' reporting whether they had ever completed an AD (yes/no) or a durable power of attorney for health care (yes/no) by 3-month post-intervention initiation (Time 2).
6. Proxy conversation was measured as participants reporting if they had ever had an in-depth conversation about advance care planning with a designated proxy (yes/no) by Time 2.

Statistical Analysis

Statistical analysis was performed using SAS version 9.3 (SAS Institute, 2012 Cary, NC). The data used for analyses was derived from the 174 participants attending Session 1. Descriptive statistics were computed for all measures, including means, standard deviations and percentages, separately for Chinese and Vietnamese subgroups, and the total sample (Table 1). Given their bimodal distribution, items measuring AD-related knowledge were dichotomized into "yes" versus "no", those measuring beliefs and attitudes were collapsed into "agree" versus "disagree", and those measuring intention, into "likely" versus "unlikely." For measures defined as "yes" versus "no", responses of "don't know" or missing data were included in the "no" category for analyses (Table 2).

We performed initial analyses on baseline data to explore the differences in demographic factors between Chinese and Vietnamese subgroups using Chi square tests for categorical variables and *t* tests for continuous variables; and tested for differences between those who completed one session versus both sessions.

The two primary outcomes (Table 3) were completing an AD (yes versus no) and having an in-depth proxy conversation about AD (yes versus no) by 3 months post-intervention initiation (Time 2). We used generalized linear models with a logit link function and repeated measures across participants while adjusting for correlations among participants within each church site. These models accounted for clustering of participant responses by church using generalized estimating equations (GEE)

Table 1 Sociodemographic characteristics of participants for ethnic subgroups and total sample

Characteristics	Chinese (N = 100) %	Vietnamese (N = 74) %	Total sample (N = 174) %	*P* value[a]
Sex				0.03
Male	28.0	44.6	35.1	
Female	72.0	55.4	64.9	
Age (years), mean ± SD	65.0 ± 12.9	62.4 ± 7.5	63.9 ± 11.1	0.13
Marital status				<0.01
Married	53.5	86.8	67.1	
Single/divorced/separated/	46.5	13.2	32.9	
Birthplace				–
U.S.	2.0	0.0	1.2	
China/Taiwan/Hong Kong	89.0	0.0	51.2	
Vietnam	8.0	100.0	47.1	
Other	1.0	0.0	0.6	
Years in U.S., mean ± SD	23.9 ± 16.1	21.5 ± 8.2	22.9 ± 13.5	0.25
English reading proficiency				0.69
Not at all/somewhat	71.7	68.9	70.5	
Moderately well/well	28.3	31.1	29.5	
Educational attainment				0.04
Elementary school graduate	31.0	14.3	24.1	
Some high school	22.0	25.7	23.5	
High school graduate	23.0	38.6	29.4	
University graduate or higher	24.0	21.4	22.9	
Annual household income				0.39
<$10,000	35.0	22.1	29.8	
$10,001–$25,000	16.0	23.5	19.1	
$25,001–$50,000	13.0	17.7	14.9	
>$50,001	11.0	11.8	11.3	
Don't know/refused	25.0	25.0	25.0	
Number of children in household, mean ± SD	2.5 ± 1.7	4.1 ± 2.1	3.1 ± 2.0	<0.01
Self-reported current health status				0.16
Good/very good/excellent	52.5	41.7	48.0	
Fair/poor	47.5	58.3	52.1	
Ever had serious or life-threatening illness				0.02
Yes	14.1	29.4	20.4	
No	85.9	70.6	79.6	

[a] *P* values for comparison of Chinese versus Vietnamese subsamples using Chi square tests for categorical variables and *t* tests for continuous variables

in bivariate and multivariate analyses. Using these methods, bivariate analyses were first performed for each variable to identify which to put into the multivariable models as covariates. The models included a covariate for the number of sessions attended ("1" or "2") to account for those who didn't attend both sessions. In addition, the models included preselected a priori covariates measured at baseline that were associated in the literature with AD completion and also found to be relevant from our formative interviews. Other variables attaining a *P* value ≤0.25 in the bivariate comparisons with either one of the major outcomes were included in the multivariable models [43] (Table 3). Odds Ratios (OR) with 95 % Confidence Intervals (CI) and *P* values for the relationship of each independent variable to the two major outcomes were determined. A *P* value of ≤0.05 was considered significant for all statistical tests.

Results

Table 1 shows the baseline characteristics of participants for the entire sample (N = 174) as well as by Chinese (N = 100) and Vietnamese (N = 74) participants. The

Table 2 Advance Directives-related knowledge, beliefs, attitudes, and intentions on pre-intervention (Time 0) and immediate post-intervention (Time 1) written surveys

Domains and items	Written survey prior to the start of Session 1 (Time 0) n/N[a] (%)	Written survey at the end of Session 2 (Time 1) n/N[a] (%)	*P* value[b]
Knowledge ("Yes" = chooses correct description)			
Identifies what is an Advanced Directive is	50/146 (33.8)	128/146 (86.5)	<0.01
Beliefs and attitudes ("Agree")			
Spiritual beliefs			
"It is against my faith/religious belief to complete an Advance Directive"	34/145 (23.0)	18/145 (12.2)	<0.01
"One's life and death follows a plan from God"	140/147 (94.6)	146/147 (98.7)	0.06
"I seek out people in my religious community when I need help"	133/145 (89.9)	139/145 (93.9)	0.25
Rights after advance directive completion			
"You cannot change your mind, once you fill out and sign an Advance Directive"	105/148 (71.0)	74/148 (50.0)	<0.01
Opportunity for treatment choices			
"I have choices about the treatment at the end of my life"	138/145 (93.2)	143/145 (96.6)	0.04
"My doctor would include my concerns about my treatment at the end of my life"	139/145 (93.9)	142/145 (96.0)	0.21
"My family would be given choices about the treatment I would receive"	133/145 (89.9)	137/145 (92.6)	0.47
Effect of an Advance Directive on treatment			
"My family or friends will make treatment decisions for me"	133/146 (89.9)	143/146 (96.6)	0.03
"Having an Advance Directive would make sure that I get the treatment at the end of my life that I do want"	137/142 (92.6)	142/145 (98.0)	0.26
Illness perception			
"I am not sick enough to have an Advance Directive"	52/144 (35.1)	35/144 (23.7)	0.01
"It is better to make an Advance Directive when I am healthy"	127/145 (85.8)	138/145 (93.2)	0.06
Impact of Advance Directive on the family			
"Having an Advance Directive would help to prevent guilt in my family"	111/141 (75.0)	128/141 (86.5)	0.03
"My family would want me to have an Advance Directive"	132/144 (89.2)	141/144 (95.3)	0.07
"Having an Advance Directive would prevent costly medical expenses for my family"	119/143 (80.4)	131/143 (88.5)	0.08
"Having an Advance Directive would make sure that my family knows my treatment wishes"	137/144 (92.6)	145/147 (98.6)	0.10
"Having an Advance Directive would keep my family from disagreeing"	137/146 (92.6)	142/146 (96.0)	0.25
"Having an Advance Directive would make my family feel left out of caring for me"	34/140 (23.0)	28/140 (18.9)	0.34
"Having an Advance Directive would have no impact on my family"	118/143 (79.7)	117/143 (79.1)	0.64
Intentions			
In the next three months, how likely are you to			
"Complete an Advance Directive?"	100/136 (67.6)	116/136 (78.4)	<0.01
"Have a detailed conversation about your health care wishes with your proxy?"	104/146 (70.3)	125/146 (84.5)	<0.01

[a] N = Total number of respondents to each item on both pre- and post-intervention surveys; n = Respondents answering affirmatively ("Yes" [Correct Description], "Agreed", or "Likely"); % = Percent of respondents answering affirmatively

[b] *P* values adjusted for site differences

Table 3 Multivariate logistic regression model: predictors of Advance Directive completions and of proxy conversations at 3 months post-intervention

Variables	Outcomes			
	Completed an Advance Directive between start of Session 1 (Time 0) to 3 months after Session 1 (Time 2)[a] (N = 174) Odds ratio (95 % CI)	*P* value	Had a proxy conversation between start of Session 1 (Time 0) to 3 months after Session 1 (Time 2)[b] (N = 160) Odds ratio (95 % CI)	*P* value
Demographics				
Ethnicity				
Chinese	0.92 (0.39, 2.12)	0.84	1.65 (1.14, 2.40)	0.01
Vietnamese (ref.)				
Age (years)	1.01 (0.97, 1.05)	0.67	1.00 (0.98, 1.02)	0.97
Sex				
Male	1.02 (0.78, 3.88)	0.178	1.85 (0.56, 6.10)	0.32
Female (ref.)				
Marital status				
Married	1.24 (0.70, 2.22)	0.46	1.77 (1.25, 2.49)	<0.01
Others (ref.)				
Years living in U.S.	1.02 (1.01, 1.03)	<0.01	1.02 (0.98, 1.05)	0.31
English proficiency	2.25 (1.62, 3.12)	<0.01	1.53 (0.69, 3.41)	0.30
Well				
Somewhat/not at all (ref.)				
Perceived general health	0.73 (0.44, 1.23)	0.24	1.03 (0.56, 1.91)	0.92
Excellent/good				
Fair/poor (ref.)				
Ever had serious illness				
Yes	0.59 (0.19, 1.84)	0.37	1.64 (0.94, 2.87)	0.08
No (ref.)				
Knowledge				
Able to select correct description of an Advance Directive				
Correct	1.48 (0.65, 3.37)	0.34	0.65 (0.34, 1.24)	0.20
Incorrect (ref.)				
Incorrect (ref.)				
Beliefs				
"I seek out people in my religious or spiritual community when I need help"[d]	0.91 (0.69, 1.20)	0.51	1.17 (0.54, 2.56)	0.69
"One's life and death follows a plan from God"[d]	0.71 (0.47, 1.09)	0.12	0.82 (0.30, 2.26)	0.70
"I think it is against my faith/religious belief to complete an Advance Directive"[c]	1.06 (0.55, 2.02)	0.86	1.80 (0.84, 3.88)	0.13
Agree				
Disagree (ref.)				
Attitudes				
"If I could not make decisions, my family would be given choices about the treatment I would receive"[d]	1.53 (1.27, 1.85)	<0.01	0.66 (0.37, 1.17)	0.16
"I think my family would want me to have an Advance Directive"[d]	3.55 (1.60, 7.87)	<0.01	15.03 (5.55, 40.73)	<0.01

Table 3 continued

Variables	Outcomes			
	Completed an Advance Directive between start of Session 1 (Time 0) to 3 months after Session 1 (Time 2)[a] (N = 174) Odds ratio (95 % CI)	*P* value	Had a proxy conversation between start of Session 1 (Time 0) to 3 months after Session 1 (Time 2)[b] (N = 160) Odds ratio (95 % CI)	*P* value
"An Advance Directive would keep my family from disagreeing over what to do"[d]	1.58 (0.67, 3.73)	0.30	0.44 (0.34, 0.58)	<0.01
Intentions				
Likely to complete an Advance Directive in the next 3 months				
Likely	2.63 (0.82, 8.42)	0.10	1.59 (1.17, 2.17)	<0.01
Not likely (ref.)				

[a] Model includes only participants who did not report having an Advanced Directive at baseline (Time 0)

[b] Model includes only participants who did not report an in-depth conversation with a proxy at baseline (Time 0)

[c] Item was inversely scored ranging from "strongly disagree" to "strongly agree"

[d] Item was used as a 4-point Likert scale ranging from 0 (strong agree) to 3 (strongly disagree)

mean age was 64 years (range 36–95, SD = 11.1) and 64.9 % were female. Two-thirds (67 %) were married. Most (99 %) were immigrants and 75 % had lived in the U.S. for at least 15 years (mean 22.9). A large proportion (70.5 %) had limited ("not at all" or "somewhat") proficiency in reading English. About half had graduated from high school (52.3 %) and had an annual household income under $25,000 (48.9 %). Most (79.6 %) had never had a serious or life-threatening illness.

All 174 participants attended Session 1, and 148 attended Session 2, resulting in a complete intervention attendance rate of 85.1 % (Chinese 77.0 %, Vietnamese 95.9 %). No significant differences were found in the demographic characteristics between those who attended one or both sessions.

Table 2 shows the knowledge, beliefs, attitudes and intentions related to AD before (Time 0) and immediately after the 2 sessions intervention (Time 1) of participants who attended both sessions (N = 148). The proportion of participants who were able to define an AD correctly significant increased from 33.8 to 86.5 % ($P < 0.01$); there was also a significant increase in the proportion who had a supportive attitude or belief about AD from 23.0 to 12.2 % inversely scored ($P \leq 0.05$). Intention to complete an AD increased from 67.6 to 78.4 % ($P < 0.01$) and intention to have a proxy conversation increased from 70.3 to 84.5 % ($P < 0.01$).

Figure 1 shows that by 3 months post-intervention (Time 2), 71.8 % (125 of 174) of participants (71.0 % Chinese and 73.0 % Vietnamese) reported having completed an AD. By Time 2 (Fig. 2), 25.0 % (40 of 160) participants (27.6 % Chinese and 21.2 % Vietnamese) had had a proxy conversation.

Table 3 presents the logistic regression models examining correlations between selected covariates and the two primary outcomes. Baseline variables that correlated with an increased likelihood of AD completion were: having lived in the U.S. longer (OR 1.02; CI 1.01, 1.03), having greater English proficiency (OR 2.25; CI 1.62, 3.12), believing an AD could provide family with treatment choices (OR 1.53; CI 1.27, 1.85), and having family support for AD (OR 3.55; CI 1.60, 7.87).

Baseline variables correlated with an increased likelihood of having had a proxy conversation were: being Chinese compared to Vietnamese (OR 1.65; CI 1.14, 2.40), being married (OR 1.77; CI 1.25, 2.49), having an intention to complete an AD (OR 1.59; CI 1.17, 2.17), and having family support to have an AD (OR 15.03; CI 5.55, 40.73). Believing that having an AD would keep the family from disagreeing over end-of-life treatment was associated with a decreased likelihood of having a proxy conversation (OR 0.44; CI 0.34, 0.58).

Discussion

Our findings demonstrated the feasibility and efficacy of a church-based, culturally-targeted, 2-session educational program promoting AD awareness and completion in Chinese and Vietnamese American church attendees. This intervention yielded a high rate of AD completion (72 %), and a substantial increase in proxy conversations (25 %).

The increase in AD completion from this intervention was greater than previous faith-based AD completion programs. Medvene et al. [31] achieved an increase in AD completion of 23 % in 17 of their faith communities. While

Fig. 1 AD completion

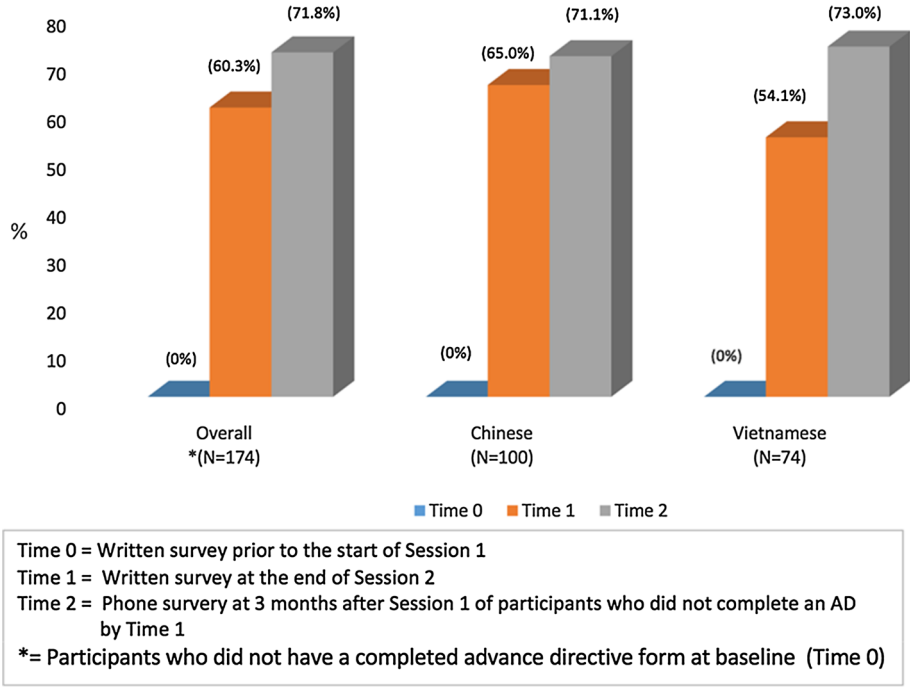
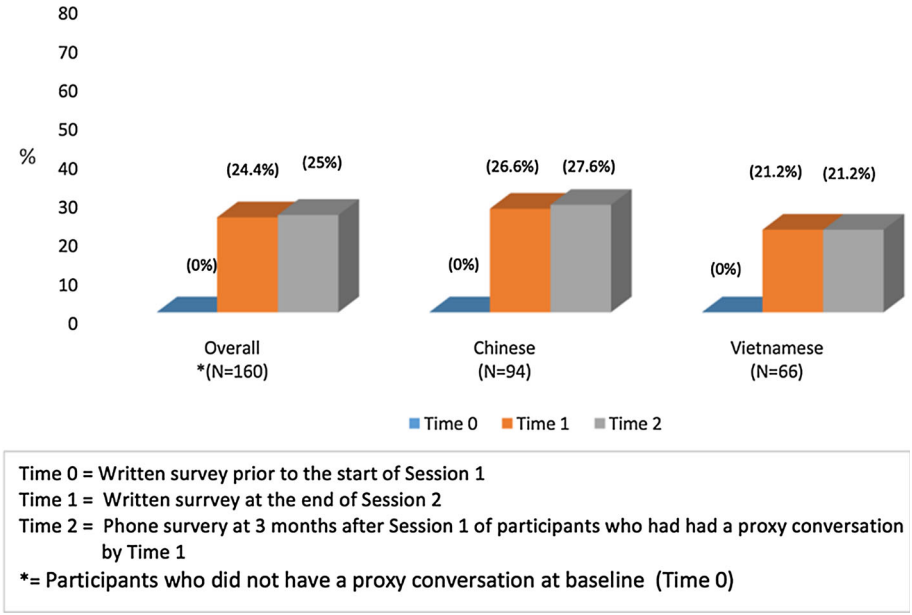


Fig. 2 Proxy conversation



studies among African Americans [32, 44] found that spiritual beliefs facilitated end-of-life decision-making, in our study, spiritual beliefs were not significantly associated with either AD completions or proxy conversations. Our intervention did result in an 11 % decrease in participants who believed that AD completion was against their religious belief. The intervention did not significantly change other measures of spiritual beliefs possibly because of a "ceiling effect" since the vast majority of participants endorsed similar spiritual views at baseline.

In previous studies, perceived higher social support from their religious community was associated with higher odds of AD completion [31, 32, 44]. Other studies suggest that older church attendees look to their churches for social and spiritual support and guidance on end-of-life issues [21, 45, 46]. In our study, help-seeking from their religious community was not changed by the intervention nor was it associated with AD completions or proxy conversations. Our formative findings showed little variability in attitudes, spiritual beliefs, and social norms [47].

In our study, limited English proficiency and shorter duration of residency in the U.S. were associated with low AD completion rates. This is consistent with similar findings in studies of other health behaviors such as cancer screening in immigrants [48–50]. Cultural taboos related to death and dying may contribute to low AD completion rates in Asian Americans [51, 52]. The high rate of AD completion in our study indicates that culturally-targeted faith-based interventions can lead to significant changes in behaviors that may be stigmatized in hard to reach populations [53–55].

Participants' perception of positive family support for having an AD was significantly associated with both AD completion and proxy conversations. The concept of an AD promotes Western values of independence and autonomy in medical decision-making, which may be in conflict with Asian values of collectivism and interdependence [52, 56–59]. In part, low AD completion in Asian American communities may reflect perceived conflicts between asserting individual autonomy and promoting family concordance in medical decision-making. The perception of family support for AD would ameliorate this potential deterrent. Individuals would be more likely to complete ADs and have proxy conversations if they perceive that doing so minimizes the practical and psychological burden on family members [60]. In our intervention, the 4 weeks between sessions provided opportunities for family discussions and support, perhaps contributing to the intervention's success.

Our intervention had a much greater impact on AD completion than on proxy conversations. The belief that having an AD prevents family disagreement over end-of-life treatment was associated with lower odds of having proxy conversations. These findings suggest that uneasiness may still permeate family discussions of advance care planning. The discrepancy between the higher rate of AD completion and lower rate of proxy conversations may be because participants perceived that an AD substituted for proxy discussions, or that such discussions were more easily conducted with a health care professional than a family member. Since the value of a completed AD is diminished without a proxy discussion, future research should address how to increase proxy discussion, possibly by including family members in the educational activities.

Interventions that provided instrumental support and interpersonal interaction increased AD completion [61, 62] more effectively than interventions that provided only educational materials [61, 63, 64]. Step-by-step AD completion guidance during Session 2 likely contributed to the intervention's success by providing hands-on assistance to overcome barriers such as unfamiliarity with forms, literacy, and lack of witnesses for signatures. Providing copies of the AD forms for participants, their proxies and clinicians may also have facilitated proxy conversations.

Limitations

Study limitations included the lack of a control group for the intervention which was beyond the scope of this study. Our knowledge measure for AD did not specify that it was in effect only if participants were unable to communicate medical wishes themselves. However, this was not a primary outcome, and we addressed this key distinction throughout the intervention. Convenience sampling may bias the results because individuals who were more open to AD at baseline were more likely to participate. However, the low rate of baseline AD completion suggests that there is a significant subset of the Asian American community who has not completed AD but would respond favorably to AD promotion. The sample size did not enable evaluation of the efficacy of each of the intervention's component parts. Nevertheless, the findings from this pilot study should help future studies to examine factors associated with advance care planning in various ethnic communities.

New Contribution to the Literature

To our knowledge, this is the first study to show that providing culturally-targeted education and step-by-step guidance in supportive church settings is successful in promoting Advance Directive completion and proxy conversations among Chinese and Vietnamese immigrants. Future research should be done to assess this intervention in a controlled trial with Asian Americans in church-based setting, other religious settings, or in secular setting as well as to evaluate the efficacy of specific intervention components.

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