An Educational Video Intervention to Increase Advance Care Planning in A Geriatric Clinic: A Randomized Controlled Trial

Basmon Manomaipiboon, MD[1*]
Surin Assawawitoontip, MD[1]
Sudsri Kokaewichain, MD[1]
Bhorn-ake Manasvanich, MD[1]

[1] King Chulalongkorn Memorial Hospital, The Thai Red Cross society, Bangkok, Thailand

* Corresponding author, e-mail address : basmon@nmu.ac.th

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Abstract

Introduction: Advance care planning should ideally be discussed with every geriatric patient in the ambulatory settings. However, only a small percentage of geriatric patients have had the discussion with their providers. We hypothesized that an educational video intervention would better promote interest compared to verbal advice alone.

Objectives: To compare the levels of interest in advance care planning between the educational video interventional group and the control group at the geriatric clinic.

Methods: Older adults aged 60 years and older who visited the clinic between November and December 2018 were enrolled and randomized into 2 groups. The intervention group was shown an 8-min video with verbal advice while the control group received standardized verbal advice. Participants were administered a Likert scale questionnaire after the intervention. The primary outcome was the proportion of participants who expressed interests in completing an advance directive.

Results: Of the 110 enrolled participants [55 in intervention group and 55 in controls: mean age was 67 years, and most of them were female (83%)]. There was no difference in the baseline characteristics between the two groups including age, sex, education, marital status, income, and health status. Ninety eight percent of the participants in video group expressed interests to complete an advance care plan, whereas only 67% of the control group did (P<0.001).

Conclusion: An educational video significantly increased awareness and interests among geriatric clinic patients compared to verbal education alone.

Keywords: elderly, geriatric care, advance care planning, advance directive, video support tool

การใช้สื่อวีดีทัศน์เพื่อเพิ่มการทำหนังสือแสดงเจตนาไม่ประสงค์จะรับบริการสาธารณสุขที่เป็นไปเพียงเพื่อยืดการตายในวาระสุดท้ายของชีวิต หรือเพื่อยุติการทรมานจากการเจ็บปวด ณ คลินิกผู้สูงวัย สุขภาพดีโรงพยาบาลจุฬาลงกรณ์ สภากาชาดไทย : การศึกษาเชิงทดลองเปรียบเทียบระหว่างกลุ่มที่ใช้สื่อวีดีทัศน์และกลุ่มที่ได้รับคำแนะนำตามปกติ

บาศมน มโนมัยพิบูลย์ พบ.[1*]
สุรินทร์ อัศววิทูรทิพย์ พบ.[1]
สุทธ์ศรี กอแก้ววิเชียร พบ.[1]
ภรเอก มนัสวานิช พบ.[1]

[1] โรงพยาบาลจุฬาลงกรณ์, สภากาชาดไทย, กรุงเทพมหานคร, ประเทศไทย

* ผู้ติดต่อ, อีเมล: basmon@nmu.ac.th

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บทคัดย่อ

หลักการและเหตุผล: หนังสือแสดงเจตนาไม่ประสงค์จะรับบริการสาธารณสุขที่เป็นไปเพียงเพื่อยืดการตายในวาระสุดท้ายของชีวิต หรือเพื่อยุติการทรมานจากการเจ็บปวดเป็นเรื่องที่ผู้สูงอายุควรได้รับการให้คำแนะนำตามมาตรฐานการรักษาเพื่อเข้าใจถึงสิทธิในการเลือกวิธีการดูแลรักษาตนเองเมื่อไม่มีสติสัมปชัญญะเพียงพอในการตัดสินใจและแนวทางการรักษาเมื่อเข้าสู่วาระสุดท้ายของชีวิต ในการดูแลทั่วไปมีอุปสรรคหลายอย่างทำให้ผู้สูงอายุที่เข้ารับบริการไม่ได้รับคำแนะนำตามที่ควรได้รับ

วัตถุประสงค์: เพื่อศึกษาเปรียบเทียบสัดส่วนของผู้สนใจทำหนังสือแสดงเจตนาฯระหว่างกลุ่มอาสาสมัครที่ได้ดูวีดีทัศน์แนะนำแนวทางการรักษาเมื่อเข้าสู่วาระสุดท้ายของชีวิต และกลุ่มอาสาสมัครที่ได้รับการให้คำปรึกษาตามปกติในผู้เข้ารับบริการคลินิกผู้สูงวัย

วิธีดำเนินการวิจัย: ผู้สูงอายุที่มีอายุตั้งแต่ 60 ปีขึ้นไป ที่ได้เข้ารับบริการในคลินิกผู้สูงวัยสุขภาพดีในระหว่างเดือนพฤศจิกายน ถึง เดือนธันวาคม พ.ศ. 2561 ที่ได้เข้าร่วมโครงการวิจัยจะถูกแบ่งออกเป็น 2 กลุ่ม กลุ่มที่ได้รับการดูวีดีทัศน์จะได้รับชมวีดีทัศน์ความยาว 8 นาที และได้รับการให้คำแนะนำ ในขณะที่กลุ่มควบคุมจะได้รับการให้คำแนะนำตามมาตรฐาน หลังจากได้รับการให้ข้อมูลทั้งสองกลุ่มจะได้รับการประเมินความสนใจด้วยแบบประเมิน Likert scale วัตถุประสงค์หลักเพื่อดูอัตราส่วนความสนใจในการทำหนังสือแสดงเจตนาฯ

ผลการศึกษา: ผู้สูงอายุที่เข้าร่วมการศึกษามีจำนวน 110 คน แบ่งเป็นกลุ่มที่ได้รับการให้คำแนะนำตามปกติ 55 คน (ร้อยละ 50) และกลุ่มที่ได้รับการดูวีดีโอแนะนำ 55 คน (ร้อยละ 50) พบว่าหลังได้รับคำแนะนำกลุ่มที่ได้รับการดูวีดีโอมีความสนใจในการทำหนังสือแสดงเจตนาฯ คิดเป็น 98% และกลุ่มที่ได้รับคำแนะนำตามปกติสนใจทำหนังสือแสดงเจตนาฯ คิดเป็น 67% ซึ่งกลุ่มที่ได้รับการดูวีดีทัศน์มีความสนใจในการทำหนังสือแสดงเจตนาฯ มากกว่ากลุ่มได้รับคำแนะนำตามปกติอย่างมีนัยสำคัญทางสถิติ (อัตราส่วนออด 33.35, 95% ช่วงความเชื่อมั่นที่ร้อยละ 4.33 to 4.69, P<0.05)

สรุป: กลุ่มที่ได้รับการดูวีดีโอมีความสนใจทำหนังสือแสดงเจตนาฯมากกว่ากลุ่มที่ได้รับคำแนะนำตามปกติ ในระยะเวลารับคำแนะนำที่เท่ากัน

คำสำคัญ: ผู้สูงอายุ, พินัยกรรมชีวิต, หนังสือแสดงเจตนาฯ, การให้คำแนะนำ, วีดีโอ

Introduction

The number of older persons is highly increasing globally[1]. Thailand has entered to aging society since 2014 and is predicted to become aged society in this coming future[2]. The important key to serve the elderly is to respect their autonomy even in the end of life[3-4]. Advance directive (AD) is introduced to protect patients' preferences by documented the goals of care before facing the serious health event[6-8]. Advance directive has strong potential benefits in helping medical providers and the family to choose the right way to treat the patient as they wish[5-6].

In Thailand, Patient Self-Determinant Act of 2007 were endorsed the advance care plan and advance directive for all population to decide their own option. Still, end of life care is limit to discuss when patients were already in the emergency stage or at the end of life, and only small number of people know their right to complete advance directive[9-10]. Guidelines for elderly care also suggest the Advance directive during the routine health visit. There still have several limitations such as limitation of time, limitation health care providers, and uncomfortable feeling to discuss the topic[11-13].

Educational visual media is an innovative solution to reduce the barriers and better communication in complex health information[14-16]. The previous study shown the benefit on completing advance care planning about cardiopulmonary resuscitation in progressive pancreas and hepatobiliary cancer patients[16]. We hypothesized that an educational video intervention would better promote interest in Advance Directive compare to verbal communication alone. This randomized controlled trial was done in a comprehensive geriatric clinic.

Methods

Participants were recruited from a comprehensive geriatric clinic in King Chulalongkorn Memorial hospital, The Thai Red Cross Society, Bangkok, Thailand. Recruitment occurred during 1st November 2018 to 31st December 2018. The inclusion criteria were age 60-year-old and older, capable to communicate in Thai and absence of cognitive impairment based on mini-mental standard examination (MMSE) score of ≥24. The exclusion criteria were history of psychiatric problems or neurologic problems. All the participants were informed and obtained the inform consent. A total of 110 participants were enrolled.

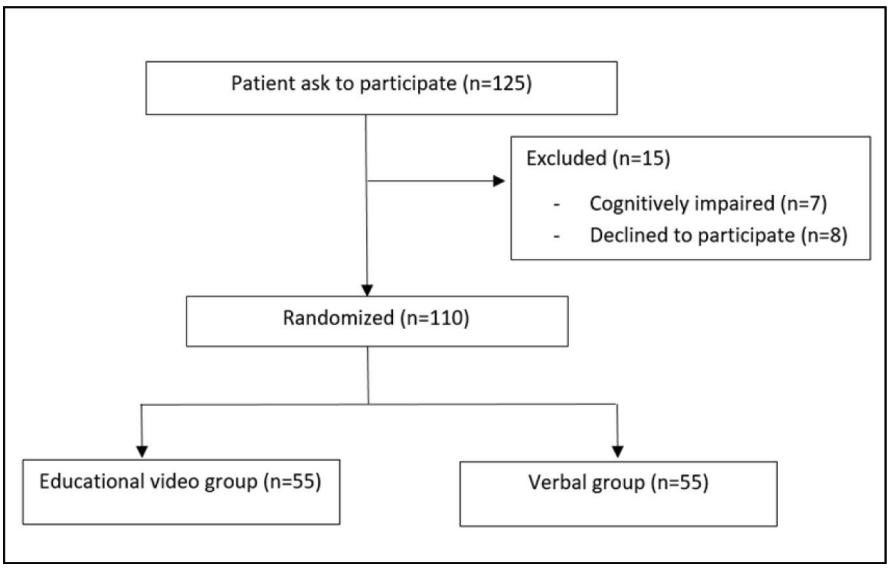

Figure 1: Flow diagram of the study

The participants were randomized into two groups by simple randomization computed by a member of research team. The intervention group watched the educational video before verbal advice and the control group received only standardized verbal communication advice. The educational video was an 8-minute movie consist of a story about *an 80-year-old male patient was in a wheelchair with their family and then was fainted. The man was transferred to an emergency room and was found cardiac arrest. The emergency doctor tried to resuscitate by 30-minute cardiopulmonary resuscitation, endotracheal tube insertion through the cardiac arrest guideline but the patient did not response with the treatment. The doctor talked to his family about the prognosis and treatment option, but the family were too confused to decide anything for this unexpected situation.* The video presented the information about cardiopulmonary resuscitation, endotracheal tube insertion, nasogastric tube insertion, intravenous fluid supplement and also the role of advance directive whereas the standardized verbal communication described the information regard all of those procedure and the role of advance directive. Before filming, we obtained consent from the patient and his family to film the patient and to use the video for research. The video was approved in terms of both standard care and ethical issue by three medical staffs from department of palliative, department of internal medicine and department of family medicine.

The participants were interviewed with blinded research assistant by two questionnaires. Eight-item question for demographic data consisted of age, sex, marital status, education, religion, medical condition, income, and health satisfaction. Three-section for the advance directive data consisted of experience in advance directive, the interest in completing advance directive and the level of interest (five-point likert scale). The member of the research team, who was not blinded to the randomization group, used the demographic data questionnaires to interview participants then participants were received information follow the group randomization. The advance directive questionnaire was collected after receiving the verbal communication or watching the educational video.

The primary outcome was to compare the interest in completing advance directive between the educational video intervention group and standardized verbal communication group (control). The secondary outcome was to find the association between participants factor and the interest in completing advance directive.

Statistical analysis was done by SPSS software version 22. Categorical variable of descriptive data was calculated in percent and compared using Pearson Chi-square. Continuous of descriptive data was calculated in mean (SD). The association factors were calculated in binary logistic regression. The level of interest was calculated in minimum to maximum and median.

Results

Among the 110 participants, baseline characteristic including age, sex, marital status, education, income, health satisfaction, previously known about advance directive and previously completing advance directive were similar between the two groups (P>0.05). (Table 1)

After received the intervention, the video group had greater likelihood of interest in completing advance directive more than the verbal group (OR = 33.35, 95% confident interval 4.33 to 4.69, P=0.001) (Table 2). The level of interest was significantly increase in video group (min to max 3-5, median 5) compare to verbal group (min to max 0-5, median 3). (Table 3)

The association between participants' factor (sex, marital status, education, income, and self-reported health satisfaction) and the interest in completing advance directive had no impact in each factor. (Table 4)

Table 1:

Baseline characteristic of participants

Parameter	Count (%)		p-value
	video intervention group (n = 55)	Control group (n = 55)	
Mean age ± SD	68 ± 5	67 ± 5	0.759
Sex			
Male	7(12)	12(21)	0.207
Female	48(87)	43(78)	
Status			
Single	23(42)	15(27)	0.128
Married	22(40)	22(41)	
Divorced	1(2)	6(11)	
Widowed	10(16)	18(21)	
Education			
Elementary	7(13)	9(16)	0.657
High school	6(11)	3(6)	
College	9(16)	7(13)	
Postgraduate	33(60)	36(65)	
Religion			
Buddhism	55(100%)	55(100%)	-
Income (Bath/month)			
<10,000	24(44)	18(33)	0.657
10,000 - 20,000	8(14)	9(16)	
20,000 - 50,000	22(40)	22(40)	
50,000 - 100,000	1(2)	4(7)	
>100,000	0	2(4)	
Self-reported health satisfaction			
Excellent	3(5)	6(11)	0.616
Very good	22(40)	17(31)	
Good	27(49)	26(47)	
Fair	2(4)	4(8)	
Poor	1(2)	2(4)	

Table 2:

The interest in completing AD after receiving the educational video or verbal counseling

Intervention	Interest in completing AD (%)	Not interest in completing AD (%)	OR (95%CI)	P-value
Educational video intervention group	54(98)	1(2)	33.35	0.001
Control group	34(67)	21(33)	(4.33 to 4.69)	

Table 3:

The level of interest between two groups

Intervention	Level of interest (likert scale) Min to max	Median
Educational video intervention group	3-5	5
Control group	0-5	3

Table 4:

Association between participants' factor and interest in completing advance directive

Variables	Interest in completing AD (%)	No interest in completing AD (%)	OR (95%CI)	P-value
Sex				
Male	13(15)	4(24)	1.712	1.712
Female	76(85)	13(76)	(0.49 to 5.98)	
Status				
Single	34(38)	3(18)	1.589	0.429
Married	35(39)	8(47)	(0.48 to 1.36)	
Widowed	20(23)	6(35)		
Education				
Elementary	10(11)	2(12)	1.305	0.909
High school	6(7)	3(18)	(0.95 to 1.77)	
College	15(17)	1(6)		
Postgraduate	58(65)	11(65)		
Income				
<10,000	34(38)	6(35)	1.09	0.744
10,000 - 20,000	13(15)	3(18)	(0.64 to 1.87)	
20,000 - 50,000	35(39)	8(47)		
50,000 - 100,000	5(6)	0		
>100,000	2(2)	0		
Self-reported health satisfaction				
Excellent	8(9)	1(6)	1.584	0.191
Very good	33(37)	6(35)	(0.79 to 3.16)	
Good	43(48)	9(53)		
Fair	3(3)	1(6)		
Poor	2(2)	0		

Discussion

In Educational video, with the emergency care story were presented to stimulate participants' interest. Then the story informed about the procedures to resuscitate patients and the important role of advance directive to protect patient's preference and to help their family to decide the proper way of treatment. Viewing the video both improve patients' interest and knowledge of end of life care.

The study showed the significantly increase of the interest in completing advance care plan after watching the video (OR = 33.35, 95% confident interval 4.33 to 4.69, P=0.001) and the level of interest was also higher in the video educational group similar to other randomized controlled trial[15-16].

The associated factors had no effect on the interest in completing advance directive. This result was different from the previous published data[17-18] showing that educational level was associated with the higher number of completing advance directive. Participants received over 12-year of education had significantly complete the advance directive. The study was conducted in multiple nursing home and long-term service and support setting with higher number of participants. The participants were from one setting and the number of participants were small. This study has few limitations. First, the educational video can be manipulated to favor the participants' perspective. Second, the participants were all Buddhists. So, our finding might not be generalizable to other groups (such as Christians and Muslims). Third, our study did not compare the functional status and activities daily living.

In summary, elderly patients often face the complex decision-making, and the family have to make unprepared options for stressful emergency situations[19]. Patient and Family should be informed about their planned option, their goals of care, and their preferences during a routine health assessment. Educating the patients by using the video provide more concrete context compared to verbal communication alone and increase the level of the interest. Future studies could extend the completion of advance directive, the patients' preferences, and the effectiveness of advance directive. The study has shown that educational video enhances the interest level, this can be implemented in the ambulatory care setting for educate elderly patients visiting any clinic.

Conflict of interest

The authors declare that there are no conflict of interests.

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Ethical consideration

Ethic approval was obtained from Institutional review board, faculty of medicine, Chulalongkorn University (COA No. 1011/2018, IRB No. from all participants 404/61). Informed, written consent was obtained.

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