Preferred Educational Delivery Strategies Among Limited Income Older Adults Enrolled in Community Nutrition Education Programs

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Abstract: The study reported here explored educational delivery preference of limited income older Oklahomans. Sixty participants 60 years or older enrolled in Community Nutrition Education Programs observed three educational delivery strategies and participated in a group discussion. Two researchers independently coded focus group transcripts and frequency counts to identify common themes and patterns related to preferred educational delivery. Findings indicate that educational delivery preference was rooted in the inclusion of experiential and relational aspects of the presentations. A combination of preferences for educational delivery strategies was noted, supporting the use of multiple educational strategies when developing Extension programs for older adults.

Introduction

Current trends indicate that the older adult population is increasing substantially and is among the fastest growing population segments in the United States. By the year 2030, it is projected that the number of people 65 years and older will exceed 71 million and increase to over 88 million by 2050 (US Census Bureau, 2008). Approximately one out of every five individuals in the United States will be classified as a senior citizen by 2030 (Morris & Ballard, 2003). Not only is the number of older adults expected to increase but also the years lived. A recent report indicates that life expectancy at birth has increased to 75 years for men and 80 years for women (NCHS, 2009). Increases in the number of older adults coupled with increased life expectancy will likely pose challenges and opportunities for Extension educators planning programs to effectively reach older adult populations (Nelson, 1987; Pollak & DiGregario, 1988).

Changes in demographic trends necessitate an increased demand to address issues affecting overall long-term health and quality of life for older adults. Effective nutrition and health education programs must be developed "to maintain health among successful agers and prevent or delay chronic disease morbidity" (Sahyoun, 2002). Although a substantial amount of health information is available for the older adults, reports indicate that such information is often not utilized and may not be appropriate for their learning needs (Barrett & Kirk, 2000; Sahyoun, Pratt, & Anderson, 2004; Higgins & Barkley, 2004).

"New perspective on the extended life span invites us to take bold steps to develop the human potential for growth and productivity to the end of life" (Maderer & Skiba, 2006). Educators working with older adult populations have an opportunity to develop and provide information perceived as beneficial, appropriate, and coinciding with preferred educational delivery methods (Duerr, 2003; Higgins & Barkley, 2003a; Higgins & Barkley, 2003b; Maderer & Skiba, 2006). The study reported here sought to determine preferred educational delivery methods among a limited resource older adult population enrolled in Community Nutrition Education Programs (CNEP) in rural counties of Oklahoma. Funding for the study was provided by the SNAP-Ed, formerly, Food Stamp Nutrition Education Program Grant through the United States Department of Agriculture.

Methodology

The sample population consisted of limited income adults 60 years of age and older currently or previously enrolled in Community Nutrition Education Programs (CNEP) within the state of Oklahoma. Teaching paraprofessionals recruited a convenience sample of older adult participants and asked them to participate in a group discussion about educational delivery preference. The study was conducted at locations where teaching paraprofessionals conduct educational sessions with older adult participants in each of nine units across Oklahoma. The research counties were identified as those having the greatest number of older adult participants using a demographic report provided by CNEP. An additional county was included for the piloting of procedures with participants who met CNEP eligibility requirements.

Upon arrival at the data collection site, participants completed a consent form followed by a survey of demographic information. After completing the forms, participants were presented a lesson about food storage in three different formats. Researchers identified food safety as the lesson topic because food safety is a core CNEP lesson and an educational series, Food Safety for Seniors (Brown, 2001), was available that included three educational delivery strategies. The educational delivery methods consisted of a PowerPoint presentation, a video, and a handout about food storage. Each educational method took approximately 10 minutes to administer.

A single researcher administered all educational delivery strategies to minimize procedural bias. The delivery order of the three educational strategies was determined via random selection prior to arrival at the study site to minimize selection effect. Once participants viewed all three educational formats, they were asked to engage in a focus group discussion about preferred delivery format. A research assistant not involved in the educational delivery process asked participants questions to minimize educator acceptance bias.

Participants were asked a series of questions to identify educational delivery method preference. The questions were modified from Austin-Wells, Zimmerman, & McDougall (2003). Questions were pilot tested with two groups of CNEP eligible participants to address face validity. The following key questions were included in the final question route.

- What are your thoughts about the slide presentation?

- What are your thoughts about the video presentation?

- What are your thoughts about the handout?

- Which presentational method held your interest the longest?

- Which presentation held your interest the least?

- If you were to attend an elderly nutrition education class for 1 hour for 4 weeks, which method of presentation of the material would you prefer?

- Which method of presentation would you least enjoy for the nutrition education classes?

- Are there other ways that you would like to receive information that we have not talked about today?

Following the pilot groups, a total of eight focus groups were conducted including four-10 participants per group. Each focus group lasted approximately 30 minutes. Before closing the focus group, the researcher confirmed her impressions of preferences with participants. The focus group did not end until the researcher and participants were in agreement. Focus groups were recorded using a digital recorder. Verbatim transcripts were created by the Bureau of Social Research at Oklahoma State University. Following each focus group, the researcher debriefed in the form of written notes. Transcripts were analyzed by two researchers using content analysis (Krueger, 1994). To determine educational delivery preferences, the researchers identified and reported major themes, patterns, and frequencies. Based on independent analyses, the two principal researchers came to a consensus of final themes included in this article.

Results

The sample population included 60 limited income adults who were 60 years of age and older, and Oklahoma residents currently or previously enrolled in CNEP. Demographic findings (Table 1) indicate that the majority of participants were female (93.2%), older than 70 years (61.4%) and white (46.7%).

Table 1.
Demographic Characteristics of the Sample Population (n= 60)

Characteristic	Frequency	Percent of Sample
Gender[a]		
Male	4	6.8
Female	55	93.2
Age Group[b]		
60-69	22	38.6
70-79	26	45.6

80-89	9	15.8
Racial/Ethnic Group		
African American	13	21.7
White	28	46.7
Native American	19	31.7
[a] One participant failed to report gender. [b] Three participants failed to report age.		

A total of 10 focus group sessions were conducted. Two of the 10 focus groups were pilot groups. Information gleaned from the pilot group sessions is included in the results because there were no noted differences in responses between pilot and subsequent focus groups sessions. Results are reported based on common themes agreed upon by the researchers. Frequency of educational delivery preference is presented in Table 2.

Table 2.
Older Adult Participants' Educational Delivery Preference

Discussion Group	Preference for Video	Preference for PowerPoint Presentation	Preference for Handout
Pilot site A	3*	0	0
Pilot site B	0	3	0
Location 1	1	0	3
Location 2	1	1	0
Location 3	4	2	0
Location 4	1	0	1
Location 5	3	1	0
Location 6	2	1	2
Location 7	1	0	2
Location 8	4	2	1
Total	20	10	9

*Indicates number of individuals who preferred selected educational strategy. All participants did not indicate a preference for a strategy.

Video Educational Delivery Strategy

The video educational delivery strategy was most preferred by participants, with twice as many individuals indicating a preference for this strategy over the PowerPoint and handout strategies. The primary themes identified for the preference of the video educational delivery strategy were *ability to relate*, *attention grabbing aspects,* and *ability to engage multiple*

senses.

The *ability to relate* theme was identified as why participants were most fond of the video. In the video, an elder was depicted in real-life situations similar to participants' everyday experiences. A participant conveyed an *ability to relate* to the elderly person in the video when she was reflecting on a particular segment of the video:

> Where he called his friend and said, "'Come on over and have something to eat. I brought it home from [somewhere or other]," and he opens the refrigerator and it's a dozen Styrofoam containers...Right now, I've got, I've got a thing of black Tupperware, great big bowl, and I've got smaller that I put stuff in, and it's been sitting out for I don't know how long.

Another participant corroborated the *ability to relate* to the video as well as *attention grabbing aspects* when she shared:

> I liked the video . . . it brings it to your attention, it brings it right to the attention of what they're trying to tell you as far as, you know, and is direct straight to the point because when he opened that refrigerator and he saw all the food, and the first thing I said, oh man he ain't got the time of day because I know that, he ain't had no stickers, no time, no dating, no nothing on anything, he's still piling it up.

Another theme associated with preference for the video format was the *ability to engage multiple senses.* One participant conveyed her preference for the video when she shared: "When you see something, it's better than just hearing it. You see it in action. One picture is worth a thousand words." Another participant indicated a preference for the visual and illustrative aspects of the video when she stated: *"*It shows you what not to do. Probably a lot of people do that [store foods improperly] more times than you think".

Although most participants indicated a preference for the video, some indicated a need to improve the strategy by attending to the volume level through comments like: *"*Well I thought it was good, except that it wasn't loud enough.*"* Themes pertaining to improvement of the video format were *simplicity* and *inclusion of few individuals to avoid confusion.* An individual who had a difficult time focusing on the video because of the number of individuals depicted shared:

> The videos are alright, but kind of like [name] said, if there are too many people in that video, if it had just stayed on one person, then you'll focus, but by it being up on the wall [PowerPoint] your attention is on what's up there and you're focused. If you're trying to watch a video sometimes you are trying to focus on too many things.

PowerPoint Educational Delivery Strategy

The PowerPoint was the second most favored medium. Participants commonly referred to the PowerPoint presentation as the "one on the wall" because they were not familiar with the terminology. The primary themes identified for the preference of the PowerPoint educational delivery strategy were *ability to engage multiple senses, simplicity in design,* and *inclusion of few individuals to maintain interest.*

Contributing to the theme *ability to engage multiple senses* was the perception of a participant who, after reflecting on the PowerPoint presentation, stated: "See and hear it is the thing because you saw the words up there and then she [presenter] said it, so two of your senses were involved in that lesson.*"* Similar themes that emerged for PowerPoint preference were *simplicity in design* and *inclusion of few individuals to maintain interest*, which were best conveyed by a participant who stated:

> Personally, I really think I got more out of the one you showed on the wall. My concentration was there more, it was continuous and with two or three people like in the video, sometimes I have to get reoriented

to another person's voice and to me I just got more out of the one on the wall.

Handout Educational Delivery Strategy

The primary themes identified for the preference of the handout educational delivery strategy were supplemental piece of information, reference for information forgotten, and strategy appropriate for hearing impaired. Comments that convey these themes included the following.

- "Because I can't hear that good and you don't always see everything up there because you're behind someone and I can read it much better than I can see it."

- "Well we just read it and stick it on the refrigerator or something other and remind us. I collect them."

- "But I like to go and get things and read over to see what I need to do and if I forgot something, I'll go read it."

- "Cause I can go home and re-read over it, you know. You can't take the slide with ya, but you can take the handout."

Themes pertaining to the lack of preference for handouts were *forget about it, handout overload, topical interest,* and *visual impairment.* Some participants shared that a handout would not be of value at a later time because they may *forget about it*. *Handout overload* was also mentioned as a reason that some participants did not prefer handouts.

- "Some people don't read. They get a handout and they get home and it goes into the trash."

- "What you see is what you get. You take it home with you and you think I'll pick it up later and look at it and you don't."

Other participants felt that visual and demonstrative educational delivery formats are better than handouts as conveyed in the following comments:

- "Well, some things you may not understand. You may need to see it presented with a video."

- "You can't see it. Some people are visual. Even though it is written down, it's nice to see the picture. And people even are more apt to watch the cartoons than they are on this."

- "No, it's got to be demonstrated."

Topical interest emerged as important when deciding whether to use a handout, best stated by one participant who shared that "when you wanna learn, yeah I would take it, but if it's something I'm not interested in I probably wouldn't. I mean I probably would take it, but I wouldn't take it seriously." *Visual impairment* also emerged as a reason for not using handouts, as shared by a participant who stated:

Because of my eyesight, uh literature doesn't mean that much to me because I, uh I have to get a

magnifying glass or something. So most, and to me it becomes a collecting thing that is just in my way and so I won't. I won't continue to pick it up and look at it again.

Multiple Educational Delivery Strategies

The theme of *integration of educational strategies* developed as a suggestion for educational delivery options. The importance of using multiple strategies in educational sessions was best conveyed by a participant who stated: "They're three very important things that you have shown and they tie together. If you take one apart then it loses, you lose some of the others, but if you put the three together you got a strong story."

Discussion

Insofar as educational delivery method preference is concerned, our findings indicate that the video medium was the most preferred educational strategy. The video we used included generational music and an elderly individual faced with food safety concerns, which appealed to seniors in the study because they could "relate" to the individual. Previous research has reported that participants enjoy peer-learning approaches and experience more enjoyment, mental stimulation, and satisfaction with peer-learning programs (Clark, Heller, Rafman & Walker, 1997; Strom, Strom, Fournet, & Strom, 1997). We speculate that participants in our study found the video more enjoyable and the educational material in the video more stimulating because an older individual with whom they could relate was depicted in the educational video.

The PowerPoint presentation was the next most preferred medium and was favored because of the simplicity of one person presenting the information. In previous literature, PowerPoint presentations were overwhelmingly preferred by older adults as indicated in a study conducted by Austin-Wells, Zimmerman & McDougall (2003), who evaluated instructional delivery preference using flip charts, an overhead projector, and a PowerPoint presentation. The participants in their study emphasized preference for the PowerPoint presentation due to the brighter colors, larger text, simplicity of text, and high novelty, which all reduced boredom and fatigue (Austin-Wells, Zimmerman, & McDougall, 2003). Our study was different from that of Austin-Wells, Zimmerman, & McDougall (2003) in that the video was more commonly preferred; however, their study did not include a video medium.

Johnson (2007) reported that memory loss is an important factor to consider and address with older adults. The handout was the least preferred delivery method in our study because it required less social interaction and fewer senses. Although the handout was least preferred, some participants indicated a preference for the handout because it prompted their memory of concepts learned at an earlier time. Our findings concerning the handout are in contrast to those of Morris and Ballard (2003), who found that older adults preferred independent-use instructional strategies such as newsletters or brochures so they could learn at their leisure. The study reported here supports the use of handouts as a supplemental resource to help older adults remember information following educational sessions.

Geragogical approaches may be important to consider when developing and delivering education for older adults (Schuetz, 1982; Maderer & Skiba, 2006). Geragogical education focuses on guiding learning in a manner such that individual learning and special needs are taken into consideration (Schuetz, 1982). Listening, speaking, problem solving, and social interaction have been described as fundamental components of older adult education (Schuetz, 1982). As such, incorporation of educational strategies that attend to the physical and mental states of older adults is necessary to address their specific learning needs.

Summary and Recommendations for Future Research

The findings from our study suggest that much can be done to enhance the quality of educational delivery strategies for older adult populations. In order to enhance the quality of education for older adults, educators should consider incorporating methods that involve multiple senses, provide opportunities for interaction, and complement education with

printed materials for at-home reinforcement.

Recommendations for future educational strategies include developing and using videos/DVDs depicting older adult individuals in real life settings and scenarios. Furthermore, because not all older adults in the study favored only one medium, it is important to use multiple educational delivery strategies whenever possible.

We suggest that additional research is necessary to determine learning topics that are of interest to older adults and specific to their individual health concerns so educational materials and strategies can be developed, made available, accessible, and tailored to the expressed needs of older adult populations. Future studies should also examine the amount of time that is needed for educational delivery to maintain interest and avoid fatigue on the part elder program participants.

References

Austin-Wells, V., Zimmerman, T., & McDougall, G. (2003). An optimal delivery format for presentations targeting older adults. *Educational Gerontolgy*. 29(6), 493-501.

Barrett, J., & Kirk, S. (2000). Running focus groups with elderly and disabled elderly participants. *Applied Ergonomics*. 31(6), 621-629.

Brown, B. (2001). *Food safety for seniors*. OSU Oklahoma Cooperative Extension Service. Retrieved March 9, 2010, from: http://fcs.okstate.edu/food/food/lessons/Video.htm

Clark, F., Heller, A., Rafman, C., & Walker, J. (1997). Peer learning: A popular model for seniors' education. *Educational Gerontology*. 23(8): 751-762.

Duerr, L. (2003). Assessing nutrition education wants and needs of older adults through focus groups. *Journal of Nutrition for the Elderly*. 23(2), 77-91.

Higgins, M., & Barkley, M. (2004). Barriers to nutrition education for older adults, and nutrition and aging: Training opportunities for educators, healthcare providers, volunteers and caregivers. *Journal of Nutrition for the Elderly*. 23(4), 99-121.

Higgins, M., & Barkley, M. (2003a). Important nutrition education issues and recommendations related to a review of the literature on older adults. *Journal of Nutrition for the Elderly*. 22(3), 65-78.

Higgins, M., & Barkley, M. (2003b). Tailoring nutrition education intervention programs to meet needs and interests of older adults. *Journal of Nutrition for the Elderly*. 23(1), 59- 79.

Johnson, S. (2007). Can Extension programs help communities educate older adults about age-associated memory loss? *Journal of Extension* [On-line], 45(2) Article 2IAW7. Available at: http://www.joe.org/joe/2007april/iw7.php

Krueger, R. (1994). *Focus groups: A practical guide for applied research*. Newbury Park, CA: Sage Publications, Inc.

Maderer, P., & Skiba, A. (2006). Integrative geragogy: Part 1: Theory and practice of a basic model. *Educational Gerontology*. 32(2), 125-145.

Morris, M., & Ballard, S. (2003). Instructional techniques and environmental considerations in family life education programming for midlife and older adults. *Family Relations*. 52(2), 167-173.

National Center for Health Statistics (NCHS). (2009). Health, United States, 2009. Retrieved March 9, 2010 from: http://www.cdc.gov/nchs/hus.htm

Nelson, P. T. (1987). Graying of America. *Journal of Extension* [On-line], 25(4) Article 4RIB3. Available at: http://www.joe.org/joe/1987winter/rb3.php

Pollak, P. B., & DiGregario, D. A. (1988). Aging-in-place. *Journal of Extension* [On-line], 26(4) Article 4FEA2. Available at: http://www.joe.org/joe/1988winter/a2.php

Sahyoun, N. (2002). Nutrition education for the healthy elderly population: Isn't it time? *Journal of Nutrition Education and Behavior*. 34(S1), S42-S47.

Sahyoun, N., Pratt, C., & Anderson, A. (2004). Evaluation of nutrition education interventions for older adults: a proposed framework. *Journal of the American Dietetic Association*. 104(1),58-69.

Schuetz, J. (1982). Geragogy: Instructional programs for elders. *Communication Education*. 31(4), 339â 347.

Strom, R., Strom, S., Fournet, L., & Strom, P. (1997). Cooperative learning in old age: Instruction and assessment. *Educational Gerontology*. 23(6), 581-599.

U.S. Census Bureau. (2008). *National population projections*. Retrieved March 9, 2010, from: http://www.census.gov/population/www/projections/summarytables.html