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Formative Assessment of Assistance Needed with Grocery Shopping and Preparing Food Among Rural Community-Dwelling Older Adults

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Abstract: The study reported here assessed assistance needed with grocery shopping and food preparation among 369 rural community-dwelling older adults. Needing assistance with grocery shopping and food preparation was reported by 21% and 16% of participants, respectively. Among participants needing assistance with grocery shopping and food preparation; 25% and 33%, respectively, reported they never or rarely received the needed assistance. Approximately two-thirds of participants reported they were most likely to receive assistance from their spouse or children. Education on assistive technology designed to facilitate independent living could assist with many physical limitations community-dwelling older adults experience with grocery shopping and food preparation.

Introduction

Adults 65 years of age and older are the most rapidly increasing population group, and it is estimated that one in every five Americans will be 65 years or older by the year 2030 (Niedert & Dorner, 2004). The majority of older adults live in community rather than institutional settings (Dausch, 2003) and aspire to live independently and in good health for as long as possible (Johnson, Mahon, & McLeod, 2006). Adequate nutrition is an important factor in maintaining health, independence, and quality of life (Dausch, 2003; American Dietetic Association, 2000).

Although many community-dwelling older adults live full and independent lives, physical changes that occur with aging can result in decreased functional ability (Johnson, Mahon, & McLeod, 2006). Functional limitations can affect older adults' ability to grocery shop and prepare food, which can affect food intake (Evans, 2005; Keller, 2005). Decreased functional ability can also result in increased dependence on others for grocery shopping and food preparation (Evans, 2005; Keller, 2005). Functional limitations with grocery shopping and preparing food may be particularly difficult for rural-dwelling older adults due to limited access to grocery stores and lack of community services to assist with grocery shopping and food preparation (Zulkowski & Coon, 2008; Souter & Keller, 2002).

The purpose of the study reported here was to conduct a formative assessment of self-reported physical assistance needed and social assistance received with grocery shopping and food preparation among rural community-dwelling older adults. This process can assist Extension professionals in identifying approaches and resources to address difficulties among rural community-dwelling older adults related to grocery shopping and food preparation.

Methods

A telephone survey was developed to assess physical assistance needed and social assistance received with grocery shopping and food preparation among rural community-dwelling rural older adults. Prior to data collection the project was approved by the Oklahoma State University Institutional Review Board for Human Subjects.

An independent telephone survey company using trained interviewers conducted the survey using random digit dialing across all 68 Oklahoma rural counties. Older adults 65 years of age and older were asked to participate in the survey. Demographic characteristics were collected on gender, race, age, and living arrangement. Participants were asked if they needed physical assistance with either grocery shopping or food preparation using a three category response (yes, sometimes, and no).

Participants who reported they needed assistance with grocery shopping or food preparation were asked if they had difficulty with six functional activities related to either grocery shopping or food preparation respectively, using a two category response (yes and no). Participants who reported they needed assistance with either grocery shopping or food preparation were also asked how often they received the assistance they needed with grocery shopping or food preparation using a five category response (always, often, sometimes, rarely, and never) and an open-ended question about who was most likely to assist them with grocery shopping or food preparation.

Frequencies were calculated using PC SAS for Windows, Version 8 (SAS Institute, Cary, NC). For the questions on needing assistance with either grocery shopping or food preparation, "yes" and "sometimes" responses were collapsed as "yes." For the questions on who was most likely to help with either grocery shopping or food preparation, responses were coded as: no one, spouse, children, other family (which included grandchildren, niece, and nephew), friends, caregiver, and other.

Results and Discussion

Four hundred and four rural Oklahomans, 65 years of age and older, completed the telephone survey. The telephone survey response rate was 52%, of those living in a rural area who heard the study description and met participation criteria of being 65 years of age or older. Because the project focused on independently living older adults, only those who reported living in their own home were included in the data analysis. Three hundred and sixty-nine participants met the criteria of living in their own home. The majority of participants were female (73%), Caucasian (86%), and 65 to 74 years of age (55%). Forty-five percent of participants reported they lived alone, and 55% reported they lived with others (Table 1).

Table 1.

Demographic Characteristics of Rural Community-Dwelling Older Adult Participants

Demographic variable	n	(%)*
Gender (n = 369)		
Male	100	(27%)
Female	269	(73%)
Race (n = 369)		
African-American	7	(2%)
Asian	1	(<1%)
Caucasian	319	(86%)
Hispanic	8	(2%)
Native American	34	(9%)
Age (n = 367)		
65-74 years	203	(55%)
75-84 years	122	(33%)
85 + years	42	(11%)
Living arrangement (n = 369)		
Lives alone	166	(45%)
Lives with others	203	(55%)
*Due to rounding some characteristics may not sum to 100%.		

Needing physical assistance with grocery shopping and food preparation was reported by 21% and 16% of rural community-dwelling older adult participants, respectively (Table 2). These results are similar to a study that found 21.8% and 13.5% of community-dwelling older adults needed assistance with grocery shopping and food preparation, respectively (Keller, 2005).

Table 2.

Activities Reported as Difficult Among Rural Community Dwelling Older Adults

Who Needed Assistance with Grocery Shopping and Food Preparation

Need physical assistance with grocery shopping (n = 369)	n	(%)	Need physical assistance with food preparation (n = 369)	n	(%)
Yes	78	(21%)	Yes	59	(16%)
No	291	(79%)	No	310	(84%)
Grocery shopping activities reported as difficult (n = 78)			Food preparation activities reported as difficult (n = 59)		
Driving self to the store	39	(50%)	Opening a jar	34	(58%)
Getting groceries in and out of a vehicle	36	(46%)	Carrying a 5 pound bag	25	(42%)
Moving around in the store	30	(39%)	Holding utensils while cutting, turning or stirring	13	(22%)
Getting items off the shelves	30	(39%)	Turning faucets on and off	9	(15%)
Getting in and out of a Vehicle	26	(33%)	Moving objects across a counter top or table	8	(14%)
Reading labels on cans or Shelves	17	(22%)	Using timers or Thermometers	8	(14%)

Grocery shopping activities most frequently reported as being difficult in the study were "driving to the grocery store," "getting groceries in and out of a vehicle," "moving around in the grocery store," and "getting items off the shelves" (Table 2). These findings are similar to those found by others who reported older adults had difficulty driving locally, moving around the grocery store, bending down to reach items on lower shelves, reaching up for items on higher shelves, and carrying groceries (Keller, 2005; Wylie, Copeman, & Kirk, 1999).

Food preparation activities most frequently reported as difficult in this study were "opening a jar," "carrying a five-pound bag," and "holding utensils while cutting, turning, or stirring" (Table 2). Older adults have reported similar difficulties with food preparation, including difficulty opening jars, bottles, or cartons; getting down or lifting a five-pound object; using a manual can opener; bending down to ovens or lower shelves; and having to sit down to prepare food (Sharkey et al., 2002; Wylie, Copeman, & Kirk, 1999).

In the study, among participants who needed assistance, 58% and 47% reported they either "always" or "often" received the assistance they needed with grocery shopping and food preparation, respectively (Table 3). However, 25% and 33% reported they either "rarely" or "never" received the assistance they needed with grocery shopping and food preparation, respectively (Table 3). Thus, although the majority of participants in the study reported they received the assistance they needed, a sizable proportion reported they did not receive the assistance they needed with grocery shopping and food preparation. These results are consistent with a study of community-dwelling older adults with restricted mobility in which one-third

of participants reported they did not feel they received the assistance they needed (Wylie, Copeman, & Kirk, 1999).

Table 3.
Assistance Received Among Rural Community Dwelling Older Adults Who Needed Assistance with Grocery Shopping and Food Preparation

	How often receive assistance with			
	Grocery Shopping (n = 76)		Food Preparation (n = 59)	
	n	(%)	n	(%)
Always	33	(43%)	25	(42%)
Often	11	(15%)	3	(5%)
Sometimes	13	(17%)	12	(20%)
Rarely	7	(9%)	8	(14%)
Never	12	(16%)	11	(19%)
	Who is most likely to provide assistance with			
	Grocery Shopping (n = 75)		Food Preparation (n = 53)	
	n	(%)	n	(%)
No One	5	(7%)	7	(13%)
Spouse	18	(24%)	15	(28%)
Children	32	(43%)	19	(36%)
Other Family	9	(12%)	2	(4%)
Friends	3	(4%)	2	(4%)
Caregiver	4	(5%)	5	(9%)
Other	4	(5%)	3	(6%)

Approximately two-thirds of participants who needed assistance with grocery shopping or food preparation reported they were most likely to receive assistance from either their spouse or children (Table 3). Others have reported rural communities often lack community services to assist older adults with grocery shopping and food preparation and, as a result, rural older adults tend to rely on family members for assistance with these activities (Zulkowski & Coon, 2008; Souter & Keller, 2002). The majority of informal care has been typically provided by the spouse, followed by the children, with friends and neighbors only providing supplemental support (American Dietetic Association, 2000).

Implications for Extension

Extension is positioned to address many issues older adults face, particularly in rural areas (Gerrior & Crocoll, 2008). One approach that could be used to address many of the difficulties with grocery shopping and food preparation reported in the study is providing older adults with education and resources on

assistive technology. Assistive technology is any device that helps a person engage in life more easily (Oklahoma ABLE Tech, 2009). In a study evaluating the impact of specialized kitchen equipment use among older adults with physical limitations affecting food preparation, the majority of participants indicated food preparation tasks were easier using the specialized equipment. Further, many participants reported performing food preparation tasks more frequently using the specialized kitchen equipment (Kelsheimer & Hawkins, 2000).

Many community-dwelling older adults need, but do not own basic assistive technology devices (Edwards & Jones, 1998). Education and hands-on demonstration can help increase awareness of and access to assistive technology. A valuable partner for Extension professions in providing assistive technology education and resources is the assistive technology act program, which is located in every U.S. state and territory (Association of Assistive Technology Act Programs, 2010). The assistive technology program works to increase consumer access to and acquisition of assistive devices through device demonstration centers and device short-term loans. Increased assistive technology acquisition is accomplished through device reutilization (exchange or reuse) programs and device state financing activities (low interest bank loans) (Oklahoma ABLE Tech, 2009).

In the study reported here, rural community-dwelling older adults reported they were most likely to receive assistance with grocery shopping and food preparation from family members. Thus, in addition to providing education directly to older adults, providing education to family members can improve the acceptance and support of assistive technology to facilitate independent living. Although caregivers were not identified as a major source of assistance to older adults in the study, providing education to community care professionals can increase awareness and community engagement with rural aging issues (Gerrior & Crocoll, 2008). An Extension program addressing assistive technology needs of agricultural workers with disabilities reported that caregivers and community professionals also benefited from the educational program and resources (Jones & Field, 2005). Using an integrated approach to education including the individual, family, and community can facilitate the formation of a collaborative framework from which to address issues facing rural older adults (Corrigan, 2004).

Limitations

A limitation of the study reported here was that information was not collected on the type of physical disability that resulted in participants needing physical assistance with grocery shopping or meal preparation. It would be valuable to know if participants needed assistance due to a degenerative condition such as arthritis or due to physical limitations with mobility, strength, energy, endurance, or vision.

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