

Studies of the nutritional status of older adults (by marital status) and of older women recently widowed suggest that widows are nutritionally vulnerable. Yet few studies have examined nutrition-related behaviors among widows to see why this is true. We conceptualize these behaviors as nutritional self-management strategies, encompassing behaviors related to obtaining food, consuming it, and maintaining food security. Data come from in-depth interviews conducted with 64 widowed women age 70+ in rural North Carolina (23 African American, 24 European American, 17 Native American). Transcripts were coded and analyzed using a systematic text-analysis procedure. Length of widowhood ranged from less than 1 year to 39 years. Themes identified in recent widows' interviews and corroborated in those widowed longer indicate that there are varied responses to widowhood. Some may have a positive impact on nutritional strategies (e.g., following own dietary needs), but most are likely to be negative (e.g., meal skipping, reduced home food production, less dietary variety). Rural communities need to develop ways to identify such widows and assist them in finding acceptable ways to meet nutritional needs.

Key Words: Food, Diet, Food security, Marital status, Gender

Nutritional Self-Management of Elderly Widows in Rural Communities

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Research on the relationship of marital status to health and longevity has shown that widows and widowers are at greater risk of mortality and poor health than are their married counterparts (Goldman, Korenman, & Weinstein, 1995). Some of this difference in health and survival is attributed to selection; the rest is assumed to be because more positive health behaviors are practiced by married couples than by single individuals (Schone & Weinick, 1998). Research on specific health behaviors, including diet, has sometimes borne this out. However, findings do not always show a consistent, negative effect of widowhood (Davis, Randall, Forthofer, Lee, & Margen, 1985), and point to gender differences in the effects of widowhood on well-being (Schone & Weinick, 1998). This study examines the effects of widowhood on the nutritional self-management of older women in rural communities. In addition to describing the way women report that their nutritional strategies change with widowhood, the analyses identify characteristics of the rural environment

that can promote or impede successful nutritional adaptation to widowhood.

Background

Gerontological research on widowhood has shown that the loss of a husband brings changes in a variety of aspects of life for older women. Social relations change, as most widows live alone: many reduce their participation in social activities. Some reduce their food preparation efforts, and change the patterns of food consumption (Rosenbloom & Whittington, 1993; Quandt, Vitolins, DeWalt, & Roos, 1997). Widowhood is often a transition preceded by a period of caregiving and of institutionalization of the husband. This period can prepare a woman for widowhood, although greater caregiver burden has been found to predict greater bereavement strain (Bass & Bowman, 1990). For some women, widowhood is not a completely negative transition. Many widows express greater self-efficacy than do married women (Arbuckle & de Vries, 1995). A period of caregiving may allow women to prepare emotionally and practically for being alone (Lopata, 1986; Wells & Kendig, 1997).

Nutritional self-management is the conceptual framework guiding this study (Quandt, Arcury, & Bell, 1998). This framework posits that nutritional status is a function of the set of behaviors used to accomplish three food-related tasks: obtaining food, preparing and consuming food, and maintaining food

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security. Individuals carry out these tasks by drawing on a set of resources, including self-care, informal support, formal services, and medical care. The resources available to them—and which resources they prefer to use—will depend on their life course and their community.

Eating is both a social and biological activity (Quandt, 1999). Older adults are considered to be at nutritional risk because so many factors related to both the biological and social dimensions of nutrition change in old age. Dental problems, less efficient absorption of nutrients, and polypharmacy are among the biological aspects of aging that can place older adults at nutritional risk (Atkinson & Fox, 1992; Campbell, Crim, Dallal, Young, & Evans, 1994; Roe, 1989). Likewise, reduced income, lack of transportation, reduced social interaction, and depression are nutritional risks of a social nature (Burt, 1993; Posner, Jette, Smith, & Miller 1993; Quandt & Rao, 1999; Rosenberg & Miller, 1992; Ryan & Bower, 1989). Several studies have linked dietary quality to marital status or living alone. McIntosh and Shifflett (1984) found that living alone had a negative effect on dietary quality. Similar findings have been reported for national studies (Davis, Murphy, & Neuhaus, 1988; Davis, Murphy, Neuhaus, & Lein, 1990; Ryan, Martinez, Wysong, & Davis, 1989), though the effect of living alone on diet appears to be more pronounced for men than for women.

Despite the importance of widowhood as an event likely to result in living and eating alone, there has been little research directed specifically at the effects of widowhood on diet and nutrition. Rosenbloom and Whittington's (1993) study of 50 married and 50 recently widowed older adults is an exception. The study found lower dietary quality scores among those widowed, as well as poorer eating behaviors. Grief resolution among widowed adults was related to more positive dietary quality, appetite, and eating behavior measures.

The nutritional self-management model suggests that widows may experience nutritional risk through a variety of pathways, and that there may be risks specific to living in rural communities. For example, obtaining food requires transportation. Widowed women must be able to drive, have access to public transportation, or have social support to provide transportation. Because many older women do not drive (Cape, 1987) and public transportation services are deficient in many rural areas (Krout, 1994, 1998), simply obtaining appropriate food may be a problem. Approximately 25% of adults 65 and older in the U.S. live in rural areas, thus the proportion of the population affected is large (McLaughlin & Jensen, 1998). There may also be gender-specific risks. Because meal planning and food preparation are traditionally women's domains (DeVault, 1991), one would not expect widowhood to deprive a household of these skills. Nevertheless, the motivation for engaging in these behaviors—"caring" (DeVault, 1991)—may well be lost when cooking for one.

In summary, while research on food consump-

tion points to the potentially negative effects of widowhood on food intake, there has been relatively little empirical study of this. Because of the distinctive nature of rural communities (Coward & Krout, 1998; Ralston & Cohen, 1994; Rowles, 1988), there may be specific challenges for rural widowed women in meeting their nutritional needs.

In this article we draw on qualitative data to understand how women's experience of widowhood affects their nutritional strategy and, by inference, their dietary intake and nutritional status. We use widowed women's descriptions of the impact of widowhood on their eating to analyze the effects first from an emic (experiential) perspective, and then from an etic perspective. The latter approach facilitates identifying issues for intervention, whereas the former approach facilitates an understanding of why widows may behave as they do with regard to food.

Methods

Data were collected as part of the Rural Nutrition and Health Study, a three-year ethnographic study of nutritional self-management in two rural counties in North Carolina. These counties were chosen because their populations include large proportions of African American and Native American elders (29%). Approximately 28% of persons age 65 and older in these counties have income levels below the poverty level. A sample of elders was recruited using a site-based sampling plan designed to produce a sample representative of the ethnic, socioeconomic, and health status diversity in the older population (Arcury & Quandt, 1999; Trost, 1988; Quandt, McDonald, Bell, & Arcury, 1999). A total of 145 persons ages 70 to 96 were recruited. Sixty-one percent were women (Table 1). The sample was divided approximately into thirds by ethnic group.

Each elder was interviewed up to five times over the course of a year. Interviews covered a wide range of diet- and health-related topics. For the purpose of this article, we concentrate on interview segments that elicited behavior and attitudes related to the ways women obtained food, used it (preparation, meal type and frequency), and maintained food security. Interviews were tape recorded and transcribed verbatim. A coding dictionary was developed for key terms. Each transcript was coded by one member of the

Table 1. Number and Percentage of Study Participants by Ethnicity and Gender

Gender	Ethnicity			Total
	African American	European American	Native American	
Females	32 [23]	32 [24]	24 [17]	88 (61%)
Males	16	22	19	57 (39%)
Total	48 (33%)	54 (37%)	43 (30%)	145 (100%)

Note: Number of widows shown in brackets.

research team. Codes were then checked and corrected (if necessary) by another. Codes were entered in the text analysis software program, *The Ethnograph v4.0* (Seidel, Friese, & Leonard, 1995). Analysis included variable-based and case-based analyses. A resident ethnographer team member who had conducted participant observation research in these rural areas contributed considerable insight to assist with data analysis.

For the study of widows, descriptive data are presented on the entire sample. Qualitative analysis to examine how elderly women view the impact of widowhood on diet and nutrition concentrates on women widowed 3 years or less first to extract themes and behavior patterns. Focusing on recent widows reduces some of the errors in memory and reformulation of distant events that may affect recall by those widowed a longer time (Bernard, Killworth, Kronenfeld, & Sailer, 1985). The themes and behavior patterns of recent widows are then checked against the accounts of women widowed longer for corroboration and elaboration.

Results

Description of the Widows Sample

In the total sample of 145, 64 were widowed women. They ranged in age at first interview from 70 to 93 years old. Several women had been married more than once. We defined their widowhood by the date

of death of the last husband. The term "widowhood" conceals considerable heterogeneity. The length of time widowed among women in this study ranges from less than 1 year to 48 years (Figure 1). This heterogeneity is also demonstrated by examining age at widowhood (Figure 2), which varies from 33 to 83 years of age. These ranges suggest that a cross-section of older widows of the same age will include women recently widowed as well as those whose experience of widowhood is much longer. Older women have experienced widowhood at a variety of times along the life course; some women became widows when their children were small whereas others experienced widowhood when they and their husbands were likely to have been retired. The majority of women became widows in their 60s or later. This indicates that these women had probably had some period of time in which they had lived together with their husbands without young children present.

Twelve women were widowed 3 years or less. We concentrate on these women to examine how elderly women view the impact of widowhood on diet and nutrition. Table 2 shows that the age of these women at interview was 70 to 84 years. Husbands' terminal illness ranged from a few days to 12 years. For 8 of the 12 women the illness lasted at least 1 year. In three cases, the husband was finally placed in a nursing home, although one of these men was discharged to spend his last days at home under hospice care.

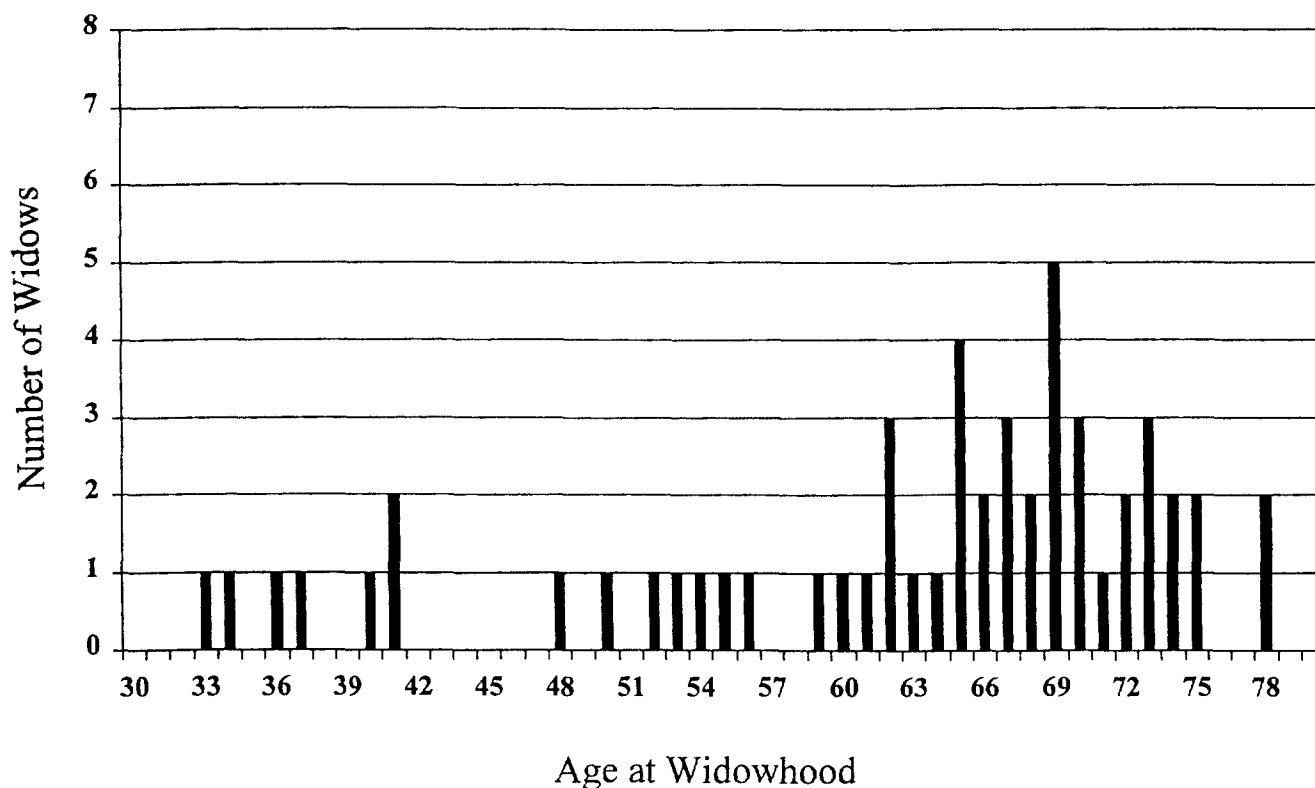


Figure 1. Distribution of number of widows by age at widowhood.

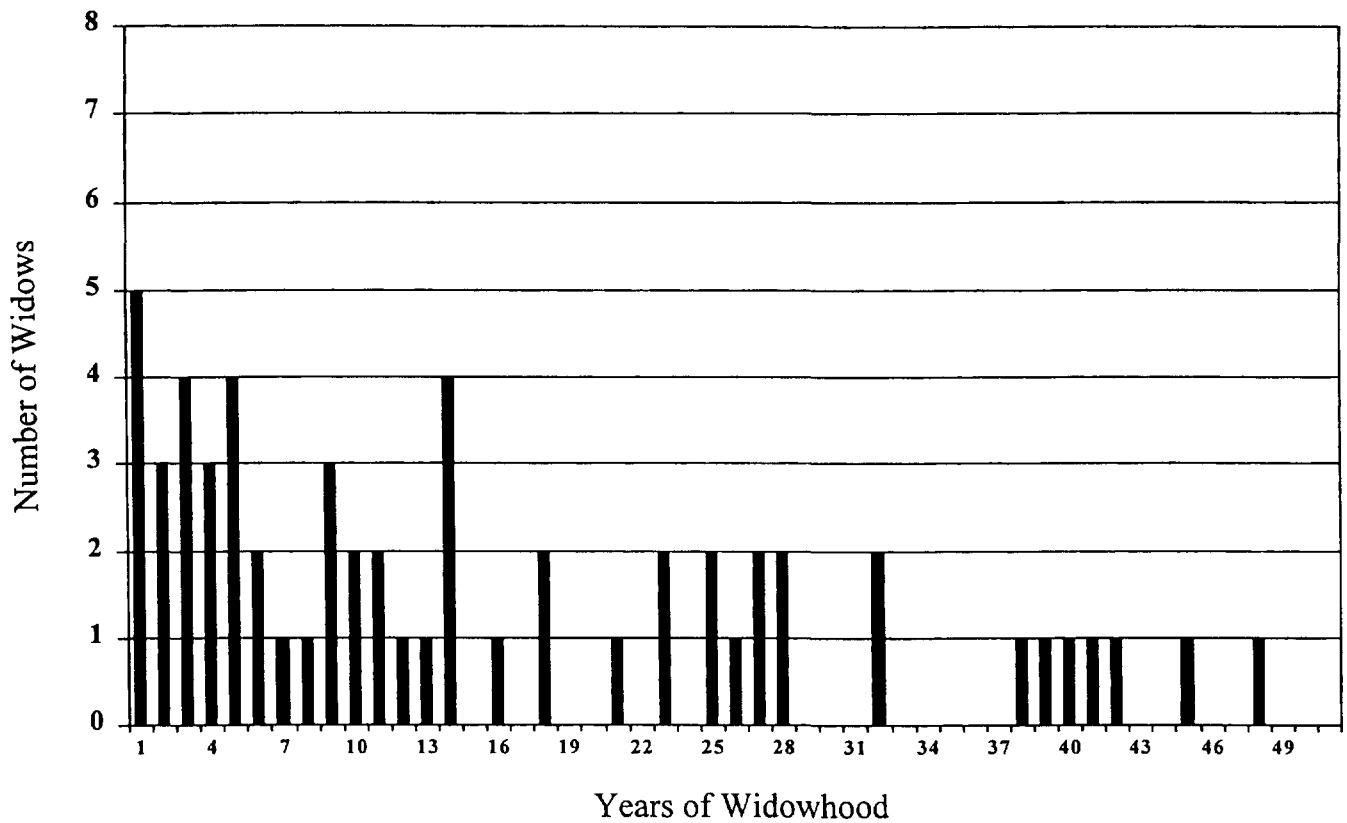


Figure 2. Distribution of number of widows by years of widowhood.

Themes of Change

Two major themes emerge from the interviews. The first is that *widowhood (the death of a husband) is only one event in a life-course transition*. For most of the women, this transition started with the husband's terminal illness, which usually lasted more than 1 year. In several cases the length of time was protracted, and involved caregiving by the wife and use of formal services such as home health, nursing homes, and hospice. One woman's husband, for example, was paralyzed by a stroke 12 years before

his death; another participant's husband was paralyzed 6 years. These women experienced radical and progressive changes in many of their activities as a result of caregiving responsibilities.

When [my husband] got sick, I had to give up all the things that I used to do. . . . I took care of him here 6 years. He had strokes. After the first one, he had another one and got to where he couldn't walk. He had to stay in a wheelchair. And then it got to later, where I'd put his food on a tray and let him eat in his chair. I'd get him up every morning and,

Table 2. Women Widowed Three Years or Less

ID #	Ethnicity	Age	Years Widowed	Propinquitous or Coresident Kin	Husband's Terminal Illness and Illness Duration	Nursing Home Placement of Husband
006	Eur-Am	80	2.0	Daughter & nephew next door, with their families	Liver cancer; 1 year	No
011	Nat-Am	75	.5	Son next door	Lung cancer; 1.5 years	No
027	Eur-Am	84	1.0	None	Stroke; 2 years	1 year
043	Eur-Am	75	1.0	None	Stroke; 12 years	No
065	Eur-Am	81	1.0	None	Stroke; 8 years	2 years
079	Nat-Am	74	.7	Granddaughter coresident	Cancer; 1.5 years	No
088	Af-Am	70	3.0	None	Heart attack; 2 weeks	No
109	Nat-Am	73	3.0	Daughter next door	Blood clot; sudden	No
111	Af-Am	81	2.0	None	Heart attack; 4 days	No
128	Nat-Am	72	3.0	Son & granddaughter coresident; Daughter next door	Multiple heart attacks and aneurysm; 13 years	No
135	Nat-Am	72	3.0	Son across street	Heart attack; sudden	No
143	Nat-Am	75	2.0	4 children close by	Stroke; 2 years	No

for the first few years, I done the bathing. Then as he got weaker and I guess I got tired, home health helped me for the last 2 years that he was here. Then when he got worse and went to the hospital, they found a home to put him in and he died almost 2 years after he was taken there. (R065)

Many of the terminal illnesses involved problems with eating; thus, food practices changed in the home. Some women adopted a healthier diet for both their husbands and themselves. For other women, eating out was a way to get their husband out of the house, so the couple made a transition to more restaurant meals. Some women had to begin "cooking for one" (for themselves) as their husbands could not eat a regular diet. Some of the women experienced living alone as their husbands were institutionalized for extended periods.

When that came out about eggs being bad, I took him completely off eggs. . . . [Later] we started eating eggs again, I'd have eggs maybe once a week or maybe once every two weeks, not very often. I guess I lost my taste for them. (R043)

We ate out when [my husband] was sick, because he liked getting out and it was a good excuse to go out. We'd go out and eat, and I didn't have to touch the kitchen. I stopped cooking then, really. (R043)

Last year, you see, I was at the hospital or rest home. I stayed with [my husband] in the rest home. He had mini-strokes, and in his throat was where the worst one came and he was on a feeding tube before he went to the hospital. I mean, before he stayed away from home. He was on Ensure. Along with that, all of it together, I just kind of. . . . You know, you just don't do the same things that you did before. (R027)

I [made changes in cooking] when he had the radiation [for lung cancer], because he couldn't swallow. It had to be something that was of such softness or more liquid, because of the irritation to the esophagus. A lot of time it would be soups, things of that nature. But I had a blender, so I even, vegetables, sometimes I would blend them and make them softer so he could eat them. (R011)

Several of the women reported receiving a large number of food gifts during the husband's illness from church, family and friends. These changed the existing nutritional strategy by adding an unpredictable, if welcome, nature to the household food supply.

Neighbors have shared. [A friend] was by here yesterday and we were talking about the garden, so I told him I had had people bring [produce] to me, pick them, help me shell them, until I was getting to the point I wanted to be independent. But I had quite a few [things] picked and brought to me last year. And my brother-in-law had a big garden and he shared with us. I have some turnip greens in the sink now that a friend sent me yesterday. (R027)

When [my husband] was sick, people would get us some vegetables all that spring and summer . . . squash, peas, and beans. . . . okra. I still get veg-

etables and things from them. I can't recall a weekend that somebody didn't bring pies and cakes. (R011)

Thus, even among women widowed just a short time, the preparation period for being alone was sometimes much longer. During this extended transition women began to change existing dietary patterns and the transition gave women a chance to start using the resources they had—and to recognize what they lacked. Particularly important resources were church, formal services, children and grandchildren (especially those living nearby), their own health, and the ability to drive. Material resources such as money were probably important in coping with new dietary patterns. However, they were not mentioned by most women. This indicates that they are not the most important resource in the early adaptation to widowhood.

The second major theme in the women's reaction to widowhood was that *widowhood resulted in lifting of the food-related obligations as a "wife."* Although these women covered a range of social classes, the gender roles of their marriages had charged all of them with responsibility for most of the cooking and much of the decision making related to eating. The women acknowledged that much of what they had done while married—the specific ways they prepared food or the way they set the table to serve it—reflected the preferences of their husbands. The reaction of women to the absence of the obligation to feed a husband was diverse. Some women recognized a chance to follow their own preferences. Others were disoriented and adrift, seeing no purpose to cooking and eating. Some seemed not to notice a lack of structure, but one can detect it in their statements. For others, the loss of a husband did not appreciably change their food-related obligations. The following interview excerpts demonstrate these different reactions.

Recognizing the Chance to Follow Own Preferences.—Women who seemed to respond positively to the lifting of obligations noted that they could fix the food they wanted, when they wanted it, how they wanted it, and eat where they wanted.

I used to drink coffee but I quit. My husband drank it . . . and I'd just drink it 'cause it was there. After he passed away, I don't fool with it any. (R128)

If you've got men around, you've got to put on the big pot three times a day. But when you just fixing for yourself, you do different. No need to tell nobody I do like I did when [my husband] was here. I don't. You still have to do the same things, but not when or how you did before. (R065)

Forty-five minutes [after I get up], I'm at Burger King! Now at night, every night is a restaurant meal. [My meals have changed] from home cooked to restaurant meals. (R109)

Disoriented by Lifting of Obligations.—For other women, this lack of structure was particularly up-

setting. They did not know how to eat alone, and reported a lack of appetite and apathy toward food. They were lonely. They ate smaller meals and less variety of foods. Some of them could no longer bear to sit at their usual dining table. Although no specific data on depression were collected in this study, the comments of the women indicate that some were probably depressed.

I just don't feel hungry. And I don't like to eat by myself. I usually eat twice a week with my sister. Then I don't have to eat every meal by myself. . . . I see her every day. I don't know how I could get along without her. . . . I guess you'd call it snacking, I eat when I am hungry. I sleep late and sometimes I don't eat anything but breakfast and dinner. I've never done that before. . . . I don't find any interest in even reading recipes, 'cause who am I gonna cook for? (R043)

I'd always have meat and eggs [for breakfast]. Now my dog and I share a piece of toast because he wants it more than I do. (R027)

I don't cook for myself as much. There is no incentive. I don't like to sit down . . . it's not that I don't want to cook, but I don't like to have to eat by myself. It's hard to eat by yourself. I enjoy [going out to eat]. The more people I can see, the better I can get through the day. Now I don't go out much at night, but usually I want somebody going with me to lunch every day. (R011)

I eat more in the den than I do in the kitchen or the dining area. Since I'm eating by myself, I be watching TV. [When my husband was alive,] we'd eat at the [dining room] table. (R111)

Experienced No Lack of Structure.—Some women experienced no lack of structure because they had other ongoing obligations. One woman, for example, had an adult son and an adult granddaughter living with her. Despite her husband's death, her responsibility for household food preparation and catering to the food preferences of others continued.

One of my sons lives here. He's 50. He ain't never married. And one of my granddaughters stays here with me. I raised her. She is 23. I do the cooking. I don't bake as much as I used to. [My son] is not as crazy about baking as my husband. He loved cakes

and pies and stuff like that. So I hardly ever cook a cake now. I stopped canning because my sons weren't too crazy about the food. I had plenty of pears and stuff, but they weren't too crazy about it. I cook later in the evening so I have dinner when he come in from work. (R128)

Some women substituted new structures that replaced the need to plan and prepare meals, as well as replaced the lost social dimension of eating—meal-time companionship.

At lunch time I have a pretty big [meal]. I don't always cook. A lot of people call me now to go some place and get a meal, and I do it anyway since I'm by myself. (R079)

I have a girl in my club, she'll eat at my house one day and the next day I'll eat at her house. I ate with her yesterday. And she ate with me the day before that. When you cook, you don't enjoy eating by yourself. I cooked today, and told her to come on and eat with me. And she'll cook and say come and eat with me. It's more enjoyable when you have somebody to eat with. (R111)

Behavioral Changes in Nutritional Strategies After Widowhood

A review of the widows' transcripts shows that changes occurred in all three domains of nutritional strategy. Table 3 summarizes the changes by domain.

There were changes in *food acquisition* practices for some women. Those who had relied on their husband's driving to the grocery store had to find other ways of getting groceries.

As long as [my husband] was well and able, he would go with me to the [grocery] store. [After he died,] I'd get some of [my daughters] to pick them up like they do now. (R006)

This widow has mobility limitations. Although having her daughters shop for her enabled her to continue getting groceries, she relinquished to her daughters the scheduling, some of the choice of foods, and the social interaction of shopping that she would have had if she continued to go to the store. Other more mobile widows reported riding with

Table 3. Summary of Change in Nutritional Strategy by Domain

Food Acquisition	Food Use	Food Security
Smaller garden, or none	Skipping meals, more snacking, smaller meals Eating in restaurants more frequently Eating take out or prepared foods instead of cooking Cooking large quantities and then eating the same thing at every meal Eating "simpler," less balanced meals Eating in front of television, rather than at dining table	Preserving less food
"Trading" meals with other widow		Not planning to refill freezer
Receiving food gifts		Giving away food canned previously
Must ask others for ride to grocery store		

others. One reported that going to various stores with her sister gave her a chance to shop and helped alleviate loneliness.

For some widows who had maintained large gardens or animals, the husband's death resulted in changes in food production.

[The garden was] almost an acre, I guess. Not counting the melon patch and the corn. At least an acre. I did a lot of freezing and canning, preserves, jellies, and things of that type. I have had a garden every year until last year, we didn't have a garden. My husband was sick. The year before, he tried to plant one, and last year we did not plant anything. (R027)

The tractor's been tore up and it's still tore up, so I couldn't disc or plant my garden. (R128)

We did have cows, and after my husband passed we got rid of them. (R135)

I had some tomatoes out there in a flower bed, but that's all. . . . And then I had a turnip bed. . . . But you see, you can't do much gardening if you don't have a man and a plow. (R065)

In a rural population in which home food production is a significant source of food, the cessation of gardening and animal husbandry can mark a decline in the availability of fresh food. Because sharing of garden produce is ubiquitous, not having a garden can change the social interaction patterns of widows. Although actual barter for services in rural areas is far less common than it once was, sharing excess garden produce has always afforded these women a fairly inexpensive way to "pay" for the assistance of others and reinforce social relations.

For one widow, gardening continued because children took over.

[My son] stayed here a while. He planted the garden and set out tomatoes and cabbage, all that kind of stuff, and worked it. And I would chop. Then after he left, [my other son] started taking over. (R006)

Such practices depend, of course, on having supportive children nearby. About half of the twelve recent widows had children nearby, though not all were able or willing to help with gardening and other outdoor work.

There were changes in *food use* practices as many of the women moved into new structures for eating. These practices included both the frequency and place of eating and the preparation techniques. Some women had taken on new obligations that substituted for those to the husband. Cooking for adult children, particularly sons, was a substitute. One woman's son came by to eat with her when his work brought him into the area. Another began eating with her sister. One woman began to fix meals and eat with others even during her husband's terminal illness. Many of the women noted that they were eating out at restaurants far more than they had before.

For a long time on Saturdays I have made Brunswick stew or casseroles and then frozen them in containers with enough for a meal. When my husband was living, I would spend some time in the kitchen every day, in addition to what I fixed on Saturday. I don't do that now. I don't really spend that much time cooking except on Saturday morning. I just eat what I fix on the weekend. I have pretty much stopped baking. There is just me, and I don't care enough about cakes and things to bake them. (R027)

[My son] is here a lot of time, and I'll cook because he works. I'll eat some of whatever it is. [When my husband was living] I'd cook three times a day. Now I don't cook three times a day. Most of the time now, I'll cook something, like today, and then tomorrow I may have some more of that same meal. (R006)

My sister and I eat together right much. [And my son who lives next door], I eat with him at least once a week. He's just got him and his wife. And most of the time, we just go out. But then I fix [food] for him quite a bit. When he's around the house, I always fix for him cause he likes vegetables as well as I do and that's the way he was raised and he enjoys it. These ladies now likes TV dinners and casseroles and things like that. So he enjoys vegetables. I'd say I fix for him at least three times a week, maybe even more. (R135)

I always like for anybody to eat with me and I cooked good stuff then [when my husband was an invalid]. . . . I'd say to [the home health aides], you want to eat? And they'd say we're not really supposed to eat. But that was something they enjoyed and I enjoyed. (R065)

[Since my husband's death] I find that I'm buying things that I can buy already cooked. I go up to the barbecue place and buy myself a pint of Brunswick stew. It will last me three meals. Sometimes I add a little extra corn or butterbeans. And there's a little sandwich shop that I found made delicious home-made soup and I'd buy myself a quart. . . . It would last me three days. (R043)

Some of these changes in food use might result in less adequate dietary intake. For example, reduced eating frequency and amount—eating smaller, fewer meals or eating the same foods day after day—could lead to insufficient intake of some nutrients. Changes from home cooked to purchased or restaurant foods could lead to higher intakes of fat and sodium. However, a few of the changes reported in food use were positive. For example, one woman noted:

I have cut down on fat. I use either skim or 2% milk. [My husband] would not use that milk, but I do now. I started buying it. (R011)

Although some women reported continuing practices such as low-salt cooking that their husbands had required, specific positive changes like the previously cited respondent (011) noted were rare.

A commonly reported change in *food security* practices was to reduce or stop food preservation such

as canning and freezing. Several of the women had lost their freezers full of food in the power outages following Hurricane Fran in 1996. This seemed to provide the excuse to stop using free-standing freezers and rely on the limited space in the refrigerator for store-bought frozen foods and preserving small amounts of leftovers.

[I'm not canning] like I did. It would be foolish for me to worry myself trying to do that. I lost all my stuff in the freezer when [Hurricane] Fran came. If I find a bargain in something, I'll fix it. (R027)

It would be foolish of me [to fill the freezer up again]. I just use it [now] to save, really. (R065)

One widow reported that not only had she stopped canning, but she was also clearing out her pantry.

I used to [can]. I got fruit packed up there on the shelves now that I've canned and don't never open it. I been giving it to the boy that cleans the yard. (R111)

Reductions in food preservation mean less work for the women: an important consideration in light of greater disability associated with old age and the heavy lifting and need for standing at the stove for long hours required for food preservation. However, their ability to maintain a reliable supply of food throughout the year is also compromised. Thus, rural widows who do not drive or have no propinquitous kin may be at risk for nutritional deficiencies if they stop preserving food.

Comparison with Women Widowed Longer than Three Years

To assess whether the emic themes and etic nutritional strategies found among recent widows characterize all rural widows, we reviewed transcripts for those widowed longer. Most had resolved issues of grief and depression that had affected their nutritional strategies, particularly appetite and meal skipping. Although many did not prepare meals in the "three squares" fashion they attributed to men, their situations appeared more stable. Two types of circumstances were exceptions: economic difficulty and disability. Some of those widowed longer had begun to experience greater economic difficulties, perhaps as the result of the husband having had a shorter income or pension-generating period or because savings had been depleted. Some reported having to cut back on food purchases at the end of the month. Those widowed longer included women with health problems that made food shopping and preparation difficult. Both economic problems and deteriorating health are likely to place many widows in this study at increasing risk over time.

The review of the experiences of those widowed longer showed how women had coped with widowhood. One Native American woman widowed 27 years earlier in her mid 50s had relied on her teenage sons for transportation to the grocery store. When

they left home, she took driving lessons and bought a car. Another woman, a European American with no local kin and widowed five years ago, recounted how she allowed herself to become isolated and depressed, eating a poor quality diet. Desperate for companionship, she finally went to the area senior center and congregate meal site. She now intentionally participates in every activity of the center, and uses meals as a way to maintain social relations, eating out with friends whenever she can.

Discussion

This study of widows highlights the heterogeneity of situations in this demographic category. Widows include women who have spent most of their lives as widows and others whose husbands have died very recently. Even among recently widowed women, there are diverse responses, some that might have a positive effect on nutritional status and others that could well produce a negative effect. To identify themes of change, we have concentrated on recent widows because the problem of recall bias should be less than with women widowed years ago; however, we note that the long-term widows recalled similar experiences. Some of them have made significant changes in their diets to accommodate a husband's dietary needs (e.g., a heart healthy diet) and continued this after his death. Others have found ways to resolve grief and depression, though limited incomes and declining health pose problems.

This study used qualitative data analyzed from both the experiential perspective of widows and the more etic perspective that might be used by service providers seeking to establish the nutritional impact of widowhood. Together they provide a means to understand both what changes women have made since the loss of their husbands and why. Beyond demonstrating the value of qualitative data (Arcury, Gaylord, & Cook, 1998) for capturing the nuances of meaning that certain behavior changes have for widows, this analysis also suggests that the discrepancies of previously published quantitative work on nutrition and marital status might be resolved by controlling for factors such as health status, informal support, and duration of widowhood.

Looking at the biological aspects of nutrition, women's health care providers should be aware of the possible impact of widowhood on women's diets. The lack of structure caused by widowhood may leave some women vulnerable. Undernutrition and unintentional weight loss in the elderly are increasingly noted as concerns, in contrast to overnutrition in much of the rest of the population (Posner, Jette, Smigelski, Miller, & Mitchell, 1994; Wallace, Schwartz, LaCroix, Uhlmann, & Pearlman, 1995). Smaller meals, meal skipping, and limited variety of foods consumed may result in undernutrition as these women do not meet nutritional needs. Because of the small body size and limited physical activity of many women, it is hard for them to consume a

nutritionally adequate diet and maintain body weight even without reducing their food consumption. Changes in taste, oral health, and appetite with aging are common and can lead to poor dietary intake (Marcus, Kaste, & Brown, 1994; Roberts et al., 1994; Rolls, 1992). Widowhood may exacerbate these problems. Consuming an inadequate diet is likely to lead to compromised immune function, muscle wasting, and lack of energy for health maintenance activities (Bell & High, 1997; Rosenberg & Miller, 1992).

From a social perspective, the reduction in regular meals may result in fewer social contacts and declining social integration. Depression, a common but underdiagnosed problem in older adults (Scheidt, 1998), may be caused or exacerbated by the reduced contact with other people. Depression is often associated with reduced dietary intake and unintended weight loss (Verdery, 1990). Both recent widows and those widowed longer gave accounts of their disinterest in eating that suggest depression.

On the other hand, widowhood may provide a teachable moment for getting women to begin to take care of their own nutritional needs, rather than catering exclusively to those of their husbands. As noted in the discussion of changes in food use, changes made by women at widowhood were not necessarily negative. Women recognized that their husband's food preferences had affected their own eating. For some, widowhood brought a chance to follow a healthier diet for themselves. In this case, it may be important to provide nutrition-related support for women *before* they are widowed and while they are caregivers, whether this be on the topic of shopping and cooking for one, or with an emphasis on taking care of themselves so they can better care for their husbands. The need for this will depend largely on the resources available to women. Women who have strong informal support networks may have fewer problems as children, grandchildren, sisters, and neighbors either need their assistance or replace the social interaction with the spouse. Not all women have such networks, however. Those without family or those unable to drive may be at considerable risk for poor nutrition.

The findings of this study reflect characteristics of rural residents. Home food production and preservation are significant sources of food and contribute to food security for residents of these and other rural communities (Quandt, Popyach, & DeWalt, 1994). To the extent that food production stops with widowhood, women may be vulnerable. Many of the rural elders in this study express reluctance to call on busy, working children for help (Bell, Arcury, Quandt, McDonald, & Vitolins, 1998); thus, widows without other assistance may be at risk for food insecurity. Home grown foods also provide opportunities for exchange, as those with gardens share surplus produce. Such garden surplus provides people a way to keep relationships in balance when accepting informal support.

Characteristic of many rural communities (McCulloch & Kivett, 1998), children, other kin, and churches

provide opportunities for women to continue their nutritional strategies or adopt new ones that ensure their nutritional well-being. Women who live surrounded by kin report they are "always coming through the door with a plate of food" (Bell et al., 1998). The opportunity to eat with or cook for these kin provides a social situation in which women may eat more than they might alone. However, some women are less socially integrated. They do not have extensive kin networks, and, as has been noted in other rural communities, people differ in their willingness to participate in nutrition-related services like congregate meals. There are also known differences in older adults in social resourcefulness, the ability to call on others for help and influence others to be effective help-givers (Rapp, Shumaker, Schmidt, Naughton, & Anderson, 1998). Widows without kin and with less social resourcefulness in rural communities may be particularly vulnerable to nutrition-related problems.

Driving, or at least access to someone who can drive, is a distinctly rural problem. Rural services and residences are usually spaced beyond walking distance. There is very limited public transportation in these communities: shopping and going out are dependent on private transportation (Arcury, Quandt, Bell, McDonald, & Vitolins, 1998; Quandt & Rao, 1999). Older women are more likely than men to stop driving at younger ages or to have never driven (Kington, Reuben, Rogowski, & Lillard, 1994; Marottoli et al., 1993). Minority women are even less likely to drive (Siegel, 1996). In rural areas, those without driver's licenses make considerably fewer trips per year than those with licenses (Rosenbloom, 1993).

In generalizing from these findings one needs to take into account the life course of the population studied. Widows in younger generations may face different problems. Whereas they may have fewer children and kin to provide informal support, more will probably know how to drive. The next generation of widows may be more willing to take advantage of formal programs because of their greater participation in the public sector through workforce participation. Although the functional status of the recent widows in this study was generally good, it must be noted that women unable to live alone or cope with the demands of widowhood may not be represented, as they may no longer be community- or rural-dwelling.

Care should also be taken in generalizing these findings to urban or suburban widows, as their life course experiences and the resources upon which they can draw may be substantially different from those of rural widows. Because of the greater number of formal services available to them, urban and suburban widows may be more likely to participate in such programs. On the other hand, as Ryan and Bower (1989) suggest in their study in rural South Carolina, there may be cultural differences that promote greater social networks that support adequate nutrition in this rural population than one would find in more urban populations. A thorough consideration

of physical, social, and cultural environment is needed to understand the impact of widowhood on nutritional well-being.

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