
Using a Concurrent Events Approach to Understand Social Support and Food Insecurity Among Elders

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This study tested a concurrent events approach to understand better the relationships between social support and food insecurity of a sample (n=9) of low-income elders that had participated in an earlier study (n=53) in Upstate New York. This approach involved the use of time-intensive telephone interviews over a span of 4 months. Results indicated that the concurrent events approach provided a fuller understanding of food insecurity, social support, other events, and experiences among these elderly participants. The researchers found that the telephone interviews helped with obtaining a better understanding of the elders' "monthly cycle" of food insecurity and the importance of food exchange as a source of social and food support among elders, a finding that had not been captured in the two in-depth retrospective interviews of the earlier study.

Many elders experience hunger and food insecurity because of low incomes, limited mobility, or poor health (Cook & Brown, 1992; Cohen, Burt, & Schulte, 1993; Lee & Frongillo, 2001a; Nord et al., 2002). Food insecurity among elders contributes to poor diet and malnutrition, which exacerbates disease, increases disability, decreases resistance to infection, and extends hospital stays (Administration on Aging, 1994; Torres-Gil, 1996; Lee & Frongillo, 2001b). Food insecurity is defined as "the inability to acquire or consume an adequate quality or sufficient quantity of food in socially acceptable ways, or the uncertainty that one will be able to do so" (Radimer, Olson, Greene, Campbell, & Habicht, 1992).

Food insecurity among the elderly also includes the inability to obtain and use food in the household (e.g., to gain access to, prepare, and eat available food) because of functional impair-

ments, health problems, or lack of social support (Lee & Frongillo, 2001a). Social support affects whether an elderly person with financial or physical limitations or both experiences food insecurity. This support can result from informal social networks, such as family and friends, or more formal programs, such as food programs (Wolfe, Olson, Kendall, & Frongillo, 1996). Functional impairments, health problems, and lack of social support have significant relations with food insecurity (Burt, 1993; Frongillo, Rauschenbach, Roe, & Williamson, 1992; New York State Department of Health and Office for the Aging, 1996; Quandt & Rao, 1999; Roe, 1990; Wolfe et al., 1996). Social support and food insecurity interact in complex ways. At least partly due to methodological limitations, these interactions are neither well understood nor easy to study (Lee & Frongillo, 2001c). For example, equivocal evidence has revealed the buffering effect of social

support among elders (Newsom & Schulz, 1996; Lee & Frongillo, 2001a).

For some elders, family or friends—even if needed routinely—cannot always help as planned, resulting sometimes in hunger or food insecurity. Although it is important to understand these types of situations, it is difficult to obtain adequate details about these experiences from one or even two in-depth interviews (Wolfe et al., 1996). When experiences such as these occur, participants tend to talk in general terms about what they did and suggest that they are okay. However, they often do not mention exactly what they consumed or mention the anxiety they experienced. In addition, they tend to talk more about one or two problematic times that resulted in greater anxiety or more severe food insecurity rather than including other less severe examples of lack of support or of the variability or precariousness of their support. Thus, it has been difficult to obtain the details that are needed to understand more fully the relation of social support to food insecurity in this population.

Many low-income elders also experience a monthly financial cycle that results in a food insecurity cycle—having less food insecurity and anxiety at the beginning of the month when they receive their monthly checks and experiencing greater food insecurity and anxiety at the end of the month when their money has been spent (Wolfe et al., 1996). Some low-income elders are so accustomed to this monthly cycle that they do not talk about these difficulties (even when asked) unless they happen to be interviewed during that time. It is unclear, however, how various management strategies relate to this monthly cycle.

Thus, the ways that both formal and informal social support serve to improve the food security of elders are not well understood, partly because of

methodological limitations in research designs. In general, understanding the biological, psychological, and social dynamics of events, needs, practices, and help-seeking and other behaviors of elders is important to assessing and interpreting their experiences. It is, as well, important to understanding how food assistance programs and other formal actions might contribute to improving food security. For example, 1 of the 10 recommendations about health outcomes developed by an Institute of Medicine (1996) committee was to determine “the impact on health outcomes when older individuals make transitions between types of care, treatment settings, and health plans.” Acquiring such understanding requires new research approaches that allow for describing and sorting out complex, dynamic patterns of each elder’s experience across an appropriate time-frame (Lee & Frongillo, 2001c). For similar reasons, and in the absence of randomized intervention trials, new research approaches are also needed for assessing the effect of programs, such as home-delivered meals and home-care services.

Time-intensive, event-focused approaches may be particularly valuable for understanding complex, dynamic patterns (Tuma & Hannan, 1984; Blossfeld & Rohwer, 1995), because they are used to study transitions across a set of discrete states, including the length of time intervals between entry into and exit from specific states (e.g., well vs. ill). The transitions are studied in relation to other discrete events and changes in continual states. These event-focused approaches hold advantages for causal inference over both cross-sectional and traditional longitudinal approaches because of the detailed knowledge of the occurrence and timing of events. These approaches are particularly suited for research with elders because of the highly dynamic nature of factors

that affect their nutrition and health (Lee & Frongillo, 2001c).

This study tested an innovative, events-focused, qualitative research approach to understand better the relationships between social support and food insecurity of low-income elders. This new concurrent events approach involved studying a small group of food-insecure elders intensively for a prolonged period to help understand the intricacies of the variability and uncertainty of social support as well as other events experienced in relation to food insecurity. The approach is referred to as “concurrent” because the researchers monitored study participants frequently over time (Gordis, 2000).

Methods

We previously conducted a study of 53 food-insecure low-income elderly men and women who lived in their own homes in three large cities in Upstate New York. In this earlier study, we completed two in-depth interviews with each elder. The purpose of the earlier study was to understand better the experience of elderly food insecurity and thus contribute to previous research of food insecurity among elders (Wolfe et al., 1996, 1998). For the study reported here, we selected a subset of nine of these elders.

When we conducted the earlier study, six of the nine elders in the study reported here were food insecure and three, relying heavily on social support strategies for food, were marginally food secure. The sample consisted of seven Caucasian women, one Caucasian man, and one African-American man whose ages ranged from 59 to 76 (an average of 68 years). Four had impaired mobility (two in wheelchairs) and one had occasional dizzy spells. Six lived alone; one with

her daughter and husband, who died during the study; one, with her elderly boyfriend; and one, with her teenaged grandson. Two received both food stamps and home-delivered meals. Three of the elders received home-delivered meals only—one, not because she needed them, but because she helped deliver these meals. Of the nine elders, only two participated in congregate meals and received food from food pantries; two did not participate in any food programs. Monthly incomes of the elderly participants ranged from \$400 to \$900, averaging \$738 each month. Six lived in subsidized housing; all had been employed most of their lives; two had not completed high school, five were high school graduates, and two attended some college.

Each participant was interviewed weekly by telephone for 4 months (December 2000 to March 2001) by one of the authors who performed all of the interviews by using an interview guide and a tape recorder. Participants were asked about the past week: their food situation (i.e., how they obtain their groceries, whether they had any help with meals, whether they attended any food programs, or whether they had problems accessing food), their use of social networks, frequency of family contacts, changes in their health or social support, and events of the past week. Rapport was established quickly during the telephone conversations, because the same interviewer had interviewed each participant twice in his or her home during the previous year. The weekly contact helped to increase rapport further, which is important for gathering this type of sensitive information. Informed consent (to participate and to tape record the telephone interviews) was obtained in the first interview.

Analysis was ongoing: Each week prior to the next telephone interview, the

interviewer listened to, took detailed notes from, and analyzed the interview of the previous week. From this analysis, the interviewer developed follow-up questions to probe more fully for emerging issues. Following the final interviews, these records were further analyzed, summarized, reviewed, and discussed by all three authors.

Results and Discussion

Usefulness of the Concurrent Events Approach for Understanding Social Support and Food Insecurity

As expected, the time-intensive telephone interviews produced a fuller understanding of some issues that arose in our earlier research with this population. One finding was the surprising extent and importance of food exchange as a source of social and food support among elders, a finding that had not been captured in the in-depth interviews. For example, one woman took home-delivered meals to others in her building and sold Avon products, both of which placed her in situations where people gave her food they had received from the home-delivered meal program, food pantries, or restaurants. These food gifts, plus the free home-delivered meals she received for working for them, were important to her food security.

Another woman, with very low mobility, lived alone and relied on her family for support. Because this was not always reliable, this participant became a member of a food network in her apartment building for seniors. This network included elaborate food-trade and food-access strategies. For example, in addition to receiving half-pint cartons of milk from a neighbor's home-delivered meals, this study participant received food from a woman who did not use all the food that her

The weekly telephone calls provided good rapport between the elderly food-insecure participants and the interviewer and a fuller understanding of food insecurity, social support, other events, and experiences among these elderly participants.

children brought to her. In return, our participant made homemade soup and brought portions to others.

Another person received food from the “bread fairy,” an elderly neighbor who went regularly to the food pantry to get and then distribute loaves of day-old bread to various needy residents. A fourth elderly woman was diabetic and had recently begun sharing the food she prepared with others. The foods included items such as diabetic desserts that she shared with a diabetic neighbor whom she also took food shopping. Extensive food-sharing among elders has been elucidated by others (e.g., Quandt, Arcury, Bell, McDonald, & Vitolins, 2001).

The study was intended to produce a better understanding of the variability and uncertainty of social support in relation to food insecurity, since the findings from the earlier in-depth interviews suggested that social support was important for food security but often was not consistent or reliable in many cases. What we found, however, was that at least in this group, the social support of most participants did not change over the 4 months of the study (e.g., elders maintained routine patterns regarding who took them shopping).

In fact, having non-changing situations was important to these elders. The only exception was the elderly participant who reported both in the in-depth and telephone interviews that her daughter took her shopping once a month. However, this supposed routine help did not occur during the first 2 months of our weekly telephone interviews. As a result, this participant had to borrow food from her neighbors and had to order canned food from a drug store that delivered—although she preferred fresh food. This situation also made her home-delivered meals more vital than ever. Another participant who

experienced a major life event during the study—the loss of her husband—did not lose her social support or food insecurity as might have been expected because she also lived with her daughter.

Results such as these suggest that a longer follow-up period may be needed to understand the effects of variability in social support for most elders. Perhaps, when changes in social support occur for most elders, the changes are over a longer period, such as those associated with climatic seasons.

Usefulness of the Concurrent Events Approach for Understanding Other Events and Experiences Related to Food Insecurity

The weekly telephone interviews were valuable for gaining a fuller understanding of the daily lives of these food-insecure elders. By talking with the participants weekly, the researchers found that the interviews also helped with obtaining a better understanding of the elders’ “monthly cycle” of food insecurity and also allowed good rapport and confidence to be established. The telephone interviews also allowed the researcher to ask more direct questions and the elderly participants to share additional personal information. Some examples follow.

(1) One elderly woman was not classified as food insecure based on the earlier study, but the weekly contacts helped to elucidate how much she actually relied on food stamps—particularly at the end of the month. Her food money began to be depleted during the third week of the month; during the end of the month, her food situation actually changed. For example, she had to substitute foods like french toast for dinner rather than eating meals

that included meat. Because of the rapport established between the interviewer and another participant, the elderly woman making these substitutions was comfortable enough to describe one of her food-access strategies: smuggling food from the congregating lunches to be eaten for her dinner. Although this was not allowed (because of concerns for food safety), she regularly brought containers for extra food.

(2) The weekly interviews helped researchers understand the support system of one African-American man who had very little family support, but he seemed to have a number of friends that took him shopping. Later in the study, however, he revealed that he often paid these friends for rides and therefore was reluctant to call them as much as he needed.

(3) The concurrent events approach was intended to allow us to understand and describe what and how events occurred on a week-to-week basis, as well as how these events affect elders’ food insecurity. We previously found that major sicknesses and other stressful events affected the food situation of the elders and, thus, their food insecurity (Wolfe et al., 1996). Although few participants endured very stressful events during the 4 months of study, Christmas turned out to be one such event. The weekly interviews provided an understanding of the importance of Christmas and the stress it may cause because of the need to have extra money to buy special food, presents for grandchildren, and other items. Christmas, therefore, sometimes resulted in greater food insecurity. For example, one woman who wanted to bake for her family and friends bought extra staple foods and saved some money during the fall so that she could purchase extra baking supplies. Unfortunately, she was forced to use this stocked food when her

money started to become depleted because of extra Christmas expenses. The interviews also highlighted the importance of charitable food baskets at Christmas for some participants.

(4) Another event occurred when the Caucasian male participant—on the recommendation of others in his building—decided to try food shopping rather than eating out at a snack bar each evening. By following this recommendation, he spent more money than he would have spent otherwise. The result: Before the end of the month, this elderly participant needed to borrow money and use credit to eat. Perhaps this was because he was not used to shopping for groceries.

(5) One elderly woman's health, social support, and food situation changed dramatically during the 4-month study. This participant was on a diet described as lowfat, low-cholesterol, low-sugar, low-sodium, and limited-greens. (The latter was due to a history of blood clots and medication for it. Based on her interpretations, she believed she was not allowed to eat anything "green.") The weekly telephone contact produced a greater understanding of how complicated it was for this participant to follow her diet—especially given her low income. In addition, during the time that the telephone interviews were conducted, this elderly participant experienced several major life changes. After having heart surgery, she moved in with her elderly boyfriend so that he could take care of her. At the same time, she continued to pay for her own house, which caused financial difficulties. (She did not feel secure enough with her new situation to sell her house.) Living with her boyfriend who had no diet limitation made it even more difficult for her to follow her fairly strict diet. Our previous work showed that the ability to eat the "right foods for health" was an important aspect of food

security among the elderly, and her new social situation seemed to make this woman even more food insecure. Then, just before our study ended, she was diagnosed with breast cancer. This new life-altering event—plus the negative effect of living with someone with very different food habits—caused her to conclude that her diet really did not matter anyway. As a result, she stopped following her diet. It's likely that her food situation changed further after her cancer surgery, which was scheduled after the end of our study.

Thus, using the new concurrent events approach, compared with the two in-depth interviews alone, produced a fuller understanding of changes as they occurred. This fuller understanding probably would not have been achieved with retrospective in-depth interviews or event histories (Tuma & Hannan, 1984; Blossfeld & Rohwer, 1995). During the 4-month timeframe, however, there were not many substantial changes. The approach was relatively easy and inexpensive to implement, requiring only about 10 minutes to interview each participant each week.

Conclusions

The weekly telephone calls provided good rapport between the elderly food-insecure participants and the interviewer and provided a fuller understanding of food insecurity, social support, other events, and experiences among these elderly participants. These calls added to what was achieved in the two prior in-depth interviews. The concurrent events approach was not efficient for understanding the variability of social support or the effect of stressful events on food insecurity, however, because these events did not occur very often. The approach might be more efficient (for the same amount of interviewer time input) by first

The concurrent events approach is likely to be useful for investigation following an event or transition such as participating in the home-delivered meals program, moving into senior housing, loss of a spouse, moves by family members, or a change in health condition.

interviewing a new person in his or her home once or twice, followed by weekly telephone calls for a month, and then monthly telephone calls for at least several months or up to a year. When an important event or change is identified, weekly telephone calls can be made for several weeks to investigate that event or change.

The concurrent events approach is likely to be useful for investigation following an event or a transition such as participating in the home-delivered meals program, moving into senior housing, losing a spouse, moves by family members, or a change in health condition. The concurrent events approach could identify the early effects of programs and provide much-needed evidence about whether and how being a program participant (e.g., Meals on Wheels recipient) is helpful. For example, one could investigate whether elders receiving home-delivered meals eat the meals, establish a relationship with the delivery person, or have changes in their mental state. Participants could be recruited by using either a formal or an informal surveillance system (such as through contacts in housing offices or through home-delivered meals programs) that provides prompt notification when someone is making a transition. Soon after this notification, the participant could be interviewed, as frequently as once a week or once a month, to obtain a more detailed and accurate assessment of any changes in food status and social support.

This study has demonstrated the usefulness of an innovative, feasible, and inexpensive concurrent events research approach for investigating nutrition issues in the elderly. The two key elements of the approach are the initial establishment of rapport by using one or two in-depth, in-person, qualitative interviews and then frequent follow-up qualitative interviews via

telephone. Variants of this approach might involve brief in-person follow-up interviews or incorporation of some quantitative questions.

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