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Note from Nayda

Welcome to the Summer 2005 issue of the Department of Family, Youth and Community Sciences research newsletter: Research News You Can Use. This helpful series shares up-to-date, reliable research in Family, Youth and Community Sciences with you for use in your programs.

Your input and suggestions make this newsletter better. Please let us know what you think.

Thank you to all faculty members who contributed this issue:

Elizabeth Bolton Kate Fogarty Lisa Guion & Linda Bobroff Amy Simonne	Jo Turner Glenda Warren Carolyn Wilken

Nayda Torres, **Professor and Chair,**
Department of Family, Youth and Community Sciences

Additional Resources

Building Coalitions EDIS Series

Grassroots Associations versus Larger Nonprofits: New Evidence from a Community Case Study in Arts and Culture

Grassroots Associations versus Larger Nonprofits: New Evidence From a Community Case Study in Arts and Culture. Author: Stefan Toepler. Publication: Nonprofit and Voluntary Sector Quarterly, vol 32, no. 2, June 2003, 236-251.

Very small organizations (VSOs) that have not registered with the state to incorporate or with the Internal Revenue Service for tax exempt status may be omitted or overlooked. This leads to a portrayal of the nonprofit sector that may be inaccurate and even misleading. This may be true if one examines the nonprofit sector primarily in economic terms. Using this theoretical framework, VSOs are not very important because they do not generate enough economic activity to merit filing a 990 with the IRS. However if the focus is on non-economic activity, a very different picture of the significance of small nonprofit organizations emerges. The contributions of these groups to a community's social capital are not reflected in the data captured from large scale nonprofits. The work of these VSOs, or self-help groups, focuses on altruism as the prime purpose of their activity. These are volunteer driven grassroots groups that have many diverse purposes. Examples given by the author of these types of groups include neighborhood associations, choral societies, epilepsy associations, quilt-making clubs and more.

New thinking is emerging about the importance of nonprofit groups and their effect on social capital and civil society. These were prominent themes during the mid to late 1990s. The author cites research by Putnam (1995) and Van Til (2000) that suggests the growing prominence of nonprofits does not have much influence on either social capital or civic society. In contrast the influence of the faith-based and community initiatives since 2000 indicates that recognition is being given to smaller and less formal community and grassroots associations and their potential for social change in small but directed ways. The new argument is that small nonprofits contribute more to social capital and civic society through voluntary action than the larger nonprofits.

The case study reported by Toepler examines the influence of arts based nonprofits in one community with the purpose of determining: (a) If the small associations do outnumber the large ones, (b) to what degree both large and small organizations are captured in the data bases derived from IRS filings, (c) whether small organization volunteering approaches that of the large organizations, (d) if the revenues and expenditures overall picture would be

very different if small organizations were included.

The results reported show: (a) The VSOs do significantly outnumber the larger organizations. In this study that was a ratio of 2:1. (b) Although not all VSOs were registered with the IRS, about half were even if they had less that $25,000 per year in revenue which exempts them from having to file. Thus they were included in the IRS data files. (c) The number of volunteers and hours volunteered were equal for small and large organizations. (d) The expenditures and revenues of the small organizations would not greatly alter the financial and economic picture of the area. Not surprising was the fact that there were many more small organizations but the large organizations generated more income and had greater expenditures.

The case study methodology reported in this article deals essentially with the economic contributions of the arts nonprofits of the community. It does not deal with any other impact these VSOs might have on the individuals, families and the community. However, this was not stated as a purpose of the study but the reader might be lead to believe this would be forthcoming given the emphasis given to it at the beginning of the article.

Implications for Extension

As a reviewer, the implications for county extension faculty appear to be as follows:

(a) Very small organizations are overlooked in terms of potential for programming impact given their emphasis on altruism and its many forms. These groups may be formal or informal without any corporate structure, but their connectedness to a specific purpose, cause or mission may be a vital link for program outreach as well as networking for future goals.

(b) There are many more of these VSOs than larger nonprofits. Not all will have been formed with goals and purposes that match directly to an extension program. However their work represents great opportunity for building social capital and civic society (according to the author citing secondary sources).

(c) While the economic picture may not change much by focusing on VSOs, their significance may lie in forming networks that are needed when policies are made (or changed) at the local, state or national level.

This is a topic that will be dealt with in the in-service for Goal 5.5 Working with Nonprofit Organizations in Your Community.

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Additional Resources

[Helping Children After Disaster]

[Helping Families in Distress]

[After The Storm Children Play Out Fears]

[Children, Stress and Natural Disasters Resource Guide]

[Helping Children After Natural Disaster]

[Knowing When To Seek Help for Your Child]

Children & Adolescents: Dealing with Natural Disasters

When natural disasters hit, such as tsunamis, hurricanes, earthquakes, mudslides, floods, and fires, they harm families and their children. Many natural disaster victims lose their homes, means of support, and become separated from family members, either temporarily or permanently.

Surviving families and individuals face uncertainties such as:

- Threat of physical injury or death
- Health problems or disabilities caused by or made worse by the disaster
- Difficulty meeting one's basic needs such as finding food and shelter
- Dealing with the death of a loved one
- Temporary or permanent separation of parents from their children.
- All these stresses families experience add to a child's traumatic experience during a natural disaster.

Once basic needs are regained such as food, clothing, and shelter, help is needed for the emotional and psychological well-being of survivors. Children and adolescents are likely to suffer with post traumatic stress based on the severe conditions produced by natural disasters. Post traumatic stress disorder (PTSD) is the development of psychological symptoms after a catastrophic life event – one that is beyond average human experience (Yule & Canterbury, 1994).

Post traumatic stress disorder (PTSD) takes the following forms and must last over a month after the disaster in order to be diagnosed (Schonfeld, 2002):

- Persistent flashbacks of the event in thoughts and dreams and feelings of alarm at the presence of event-related stimuli (for example, feeling intensely anxious at the sight of dark clouds)
- Actively avoiding anything that reminds them of the event (for example, swimming in a lake after a flood or going to a place where the trauma occurred), including thoughts and feelings.
- Becoming numb to one's feelings is one way in which thoughts and

feelings about an event can be blocked out.

- Being easily startled, overly anxious, irritable, angry, and having difficulty sleeping or concentrating.

More severe forms of PTSD persist longer than three months (Vernberg & Vogel, 1993) and, in some cases, last a year or longer.

In natural disasters with devastating effects for example, earthquakes, anywhere from 3% to 33% of adults show symptoms of PTSD, whereas nearly 30% to 70% of children experience PTSD (Hsu, Chong, Yang, & Yen, 2002).

Likelihood of having PTSD symptoms is based on:

- Psychological functioning before the event.
    - If someone has been through trauma before the event, he or she becomes more vulnerable to PTSD.

- The type of trauma
    - Was the event an 'act of God' or caused by people?

- Severity of effects from the traumatic event:

    - Were deaths witnessed?
    - Was there loss of close friends and/or family members?
    - Were homes and/or livelihood destroyed?
    - Did the person think at any point during the event that he or she was about to die?

Not only do people vary in their response to natural disasters by the amount, type, and severity of trauma, but by age, culture, and gender (Scott, Knoth, Beltran-Quiones, & Gomez, 2003). Of particular concern are the experiences of children, adolescents, and ethnic minorities as well as severity of consequences of a natural disaster on youth and families.

Children and Adolescents' Responses to Natural Disasters

Early Childhood

In response to trauma, young children are likely to regress to earlier stages of development, for example, a four-year-old stops using speech to communicate. Young children may also become antisocial and act more aggressively. They are likely to repetitively act out the events they witnessed through play and artwork. Children under 5 years are strongly influenced by how they see significant adults react to a disastrous event and are extremely

fearful of being separated from a parent (National Institutes of Mental Health, 2001). On the positive side, children can provide detailed accounts of an event and talk about their feelings of upset associated with the event (Yule & Canterbury, 1994). Research supports that children as young as two years old were able to describe a traumatic experience they viewed and those three years and older could convey their feelings about what they witnessed (Misch, Philips, Evans & Berelowitz, 1993).

Middle Childhood

Elementary school aged children (aged 6-11) may withdraw, become disruptive or inattentive, act aggressively, and show regressive behaviors (for example, an eight year-old sucking her thumb). In some cases they are less likely to demonstrate PTSD and are more likely to be depressed than adolescents (McDermott & Palmer, 2002). School work is likely to decline. School-age children may also have some of the same reactions as adults such as nightmares and sleep problems as well as somatization (feeling physical pains or symptoms with no medical basis). Other symptoms that school age children experience that are similar to adults are depression, anxiety, numbness and guilty feelings.

Adolescence

Adolescents 12-17 years of age may react similarly to adults in their trauma. They may also, like children, regress socially and act more selfish, be demanding, and have difficulty getting along with others (Schonfeld, 2002). Teens may feel anger toward authority figures that should have protected them, such as the government and parents. They may be likely to seek support and meaning from their peers as well as parents. At this time, adults need to be understanding of their teen's behavior and not accuse them of selfishness, argumentativeness or their insistence on discussing the event alone with their peers. However, it has been found that teens with higher levels of stress in response to a hurricane are likely to engage in deviant behavior (Scott et al., 2003).

In light of adolescents' emerging abilities for higher level thinking; they may try to rationalize in order to gain a sense of control over an uncontrollable event. For example, a teen might recall a trivial happening before the disaster and consider it an omen or sign of what was to happen. Based on the fact that they 'ignored' this sign, they failed to prevent the disaster - or consequences of the disaster from affecting their friends, family, and self (Schonfeld, 2002). In such a case, helping a teen to understand the distortion of his or her own thinking will alleviate feelings of guilt, which are common among adolescents in this time (NIMH, 2001).

How Do Children Compare to Adolescents in their Reactions to

Natural Disasters? Developmental Concerns

Research findings, comparing children and adolescents' reactions to natural disasters, vary. Studies of wildfire disasters found that high schoolers experience lower levels of distress than elementary school children (McDermott, Lee, Judd, & Gibbon, 2005) and that posttraumatic symptoms were the strongest in early adolescence, peaking in 8th grade (McDermott & Palmer, 2002). Another study of 9th grade adolescents found that witnessing a disaster increased their expectations of susceptibility to death (Halpern-Felsher & Millstein, 2002). However, regardless of the age of a youth, those who are most vulnerable to the effects of post traumatic stress are ones who have prior experience with trauma such as abuse or exposure to violence or who have mental health problems before the traumatic event happens.

PTSD and Diversity: Ethnic Minorities and Cultural Beliefs

Research evidence overwhelmingly supports the increased vulnerability of ethnic minorities to long-term distress after a natural disaster. For example, in a 6-month follow-up of the effects of Hurricane Andrew that decimated much of southern Florida in 1992, it was found that PTSD rates were the highest among African-Americans and Hispanics, as compared to Caucasians (Scott, et al., 2003). In fact, race, namely being African-American, is a close second to severity of the natural disaster experience in increasing the likelihood of post traumatic stress (March et al., 1997). It was found that African-American youth were more likely than their Caucasian peers and among, Caucasians, females were more likely than males to show PTSD symptoms (March et al., 1997; Scott, et al., 2003; Yule & Canterbury, 1994). These findings may perhaps be explained by a greater number of prior traumas experienced by minority youth (e.g., higher incidence of child abuse, see Schuck, 2005) before the natural disaster and that males are less likely than female youth to perceive themselves or close friends and family as likely to die in such situations (McDermott, Lee, & Gibbon, 2005).

However, ethnic minorities also demonstrate resilience in comparison to Caucasians. The presence of social support networks among Latin American communities helped to reduce stress symptoms among its members after a natural disaster and tend to normalize, rather than stigmatize, stress (Scott et al., 2003). Moreover, Latin American youth who demonstrate resilience tend to have stronger confidence in their cognitive abilities than their less resilient peers. Overall, with respect to multicultural differences in responses to natural disasters it is perhaps best to focus on the dimensions of socioeconomic status and social support as they vary across cultures (Rabalais, Ruggiero, & Scotti, 2002), rather than race or ethnicity per se.

Cultural beliefs also contribute to the ways in which individuals and families respond to a natural disaster. In a study of an industrialized, recently capitalist

country, it was found that those who demonstrate an avoidant coping style in the face of a traumatic event (in other words who are likely to be in denial or socially withdraw from a threat) are more likely to experience distress after a natural disaster than individuals who use active coping strategies such as problem solving and seeking support (Bokszczanin, 2003). In Eastern cultures where suppression of strong emotions is emphasized, victims of natural disasters may be more likely to have somatic complaints in response to their distress (Hsu et al., 2002). Individuals from some cultures are likely to reject psychological help, which needs to be appropriately dealt with by mental health providers. For example, Red Cross mental health providers are called "disaster stress relief workers", to reduce the stigma associated with receiving psychological help (Vernberg & Vogel, 1993). Research finds that cultures in which members experience psychological recovery or resilience from a natural disaster are those that encourage (Scott et al., 2003):

- Open dialogue about the traumatic event
- Celebration of survival
- Refusal to blame the victims
- Posttraumatic symptoms viewed as normative
- Making meaning of the experience

Circumstances and Severity of Post-Traumatic Stress

Research shows that families (mothers and children) who are displaced from their homes due to destruction by a natural disaster show the highest amount of PTSD symptoms, as compared to those indirectly affected or those who did not lose their homes by natural disaster (Najarian, Goenjian, Pelcovitz, Mandel, & Najarian, 2001). The more exposure children and adolescents have to a natural disaster (for example, witnessing the deaths of others) the more at risk they are for PTSD (March, Amaya-Jackson, Terry, & Costanzo, 1997). Research shows that children with most severe exposure to an event have moderate to severe levels of PTSD even a year after the event (Yule & Canterbury, 1994). The more a natural disaster poses a threat to someone's life and those close to him or her, the higher the risk for PTSD (Najarian, et al., 2001).

Conclusions and Suggestions from the Research

Unfortunately, when physical needs are at the forefront in a family's recovery, few are likely to have the resources to seek psychological help for post traumatic stress that children and adolescents in families may be dealing with. Although psychological intervention is most necessary after a natural disaster, mental health services are not a top priority, nor do providers have the resources to work with many children and adolescents at one given time (McDermott, Lee, Judd, & Gibbon, 2005). Moreover, mental health providers' motivation to help disaster victims may be dismissed by emergency planners and downplayed as less important than meeting basic physical needs

(Vernberg & Vogel, 1993).

In conclusion, the following suggestions are made to deal with reducing the risk of long-term post-traumatic stress among children, adolescents, ethnic minorities, and their families:

- Consider a youth's cultural and familial background when it comes to suggesting treatment and mental health services, age and stage of development, degree of trauma in the experience.

- Be aware of local cultural norms for how grief and loss are handled (Vernberg & Vogel, 1993)

- Encourage adults in families to discuss their emotional reactions to an event in order to help their children do the same. When families fail to process the event, children are increasingly likely to display PTSD (Yule & Canterbury, 1994).

- Decrease the amount of time that children watch televised or other media forms of reporting on a natural disaster they have experienced directly (or indirectly). And, when children are exposed to media coverage, make sure referential adults are present. (Schonfeld, 2002).

- Develop primary prevention programs (e.g., disaster preparation) that bolster the coping skills of youth and their families in the event of a natural disaster (Vernberg & Vogel, 1993).

- Rather than rush back into a regular school routine, develop intervention programs in the schools that allow children and adolescents to process the event (NIMH, 2001). Teachers or child care professionals can lead sessions for lower risk children and mental health professionals should work with youth at higher risk for post traumatic stress (Vernberg & Vogel, 1993).

- Youth should be grouped by age and severity of event exposure during intervention programs (Vernberg & Vogel, 1993).

- Help provide ongoing information to victims as to rescue efforts and whereabouts of family members (Vernberg & Vogel, 1993).

- Rather than shelter a child from learning about the death of a parent or family member, allow a significant adult to be available for comfort and to deliver the news (Vernberg & Vogel, 1993).

- Encourage family togetherness and reassure children through

maintaining emotional support and regular routines (NIMH, 2001).

- Hold community meetings for families where parents can talk about the event and how their children are coping with it. Whenever possible, involve professional counselors as facilitators of these meetings (NIMH, 2001).

References:

Bokszczanin, A. (2003). The role of coping strategies and social support in adolescent's well-being after a flood. *Polish Psychological Bulletin, 34*, 67-72.

Halpern-Felsher, B.L., & Millstein, S.G. (2002). The effects of terrorism on teens' perceptions of dying: The new world is riskier than ever. *Journal of Adolescent Health, 30*, 308-311.

Hsu, C.C., Chong, M.Y., Yang, P., & Yen, C.F. (2002). Posttraumatic stress disorder among adolescent earthquake victims in Taiwan. *Journal of the American Academy of Child and Adolescent Psychiatry, 41*, 875-881.

March, J.S., Amaya-Jackson, L., Terry, R., & Costanzo, P. (1997). Posttraumatic symptomatology in children and adolescents after an industrial fire. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*, 1080-1088.

McDermott, B.M., Lee, E.M., Judd, M., & Gibbon, P. (2005). Posttraumatic stress disorder and general psychopathology in children and adolescents following a wildfire disaster. *Canadian Journal of Psychiatry, 50*, 137-143.

McDermott, B.M., & Palmer, L.J. (2002). Postdisaster emotional distress, depression and event-related variables: findings across child and adolescent developmental stages. *Australian and New Zealand Journal of Psychiatry, 36*, 754-761.

National Institute of Mental Health. (2001). Helping children and adolescents cope with violence and disasters. NIH Publication No. 01-3518. Department of Health and Human Services.

Najarian, L.M., Goenjian, A.K., Pelcovitz, D., Mandel, F., & Najarian, B. (2001). The effect of relocation after a natural disaster. *Journal of Traumatic Stress, 14*, 511-526.

Rabalias, A.E., Ruggiero, K.J., & Scotti, J.R. (2002). Multicultural issues in the response of children to disasters. In A.M. La Greca and W.K. Silverman (Eds.), *Helping children cope with disasters and terrorism*. Pp. 73-99. Washington, DC:

American Psychological Association.

Schonfeld, D.J. (2002). Supporting adolescents in times of national crisis: Potential roles for adolescent health care providers. *Journal of Adolescent Health, 30*, 302-307.

Schuck, A.M. (2005). Explaining black-white disparity in maltreatment: Poverty, female-headed families, and urbanization. *Journal of Marriage and the Family, 67*, 543-551.

Scott, R.L., Knoth, R.L., Beltran-Quiones, M., & Gomez, N. (2003). Assessment of psychological functioning in adolescent earthquake victims in Colombia using the MMPIA-A. *Journal of Traumatic Stress, 16*, 49-57.

Vernberg, E.M., & Vogel, J.M. (1993). Interventions with children after disasters. *Journal of Clinical Child Psychology, 22*, 485-498.

Yule, W., & Canterbury, R. (1994). The treatment of post traumatic stress disorder in children and adolescents. *International Review of Psychiatry, 6*, 12 p.
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Effects of a Nutrition Education Program on the Dietary Behavior and Nutrition Knowledge of Second-Grade and Third-Grade Students

Effects of a Nutrition Education Program on the Dietary Behavior and Nutrition Knowledge of Second-Grade and Third-Grade Students, Alicia Raby Powers, Barbara J. Struempler, Anthony Guarino, Sondra M. Parmer Journal of School Health, April 2005 • Vol. 75, No. 4 • 129

Nutrition-related problems in elementary school-aged children include dental caries and overweight. Poor nutrition and overweight increases the risk of long-term health problems such as heart disease, cancer, and diabetes. By increasing consumption of low-fat dairy products, fruits, and vegetables; decreasing consumption of soft drinks; and increasing participation in regular physical activities within the elementary school–aged population, prevalence of these nutrition-related problems may be reduced.

The purpose of this study by Powers et. al was to evaluate the effects of a six-session nutrition education program on dietary behavior and nutrition knowledge among second-grade and third-grade students. This article will share a general overview of the evaluation methods and findings of this study.

Methods

Subjects

The researchers used a convenience sample of 1100 (550 girls and 550 boys) second-grade and third-grade students from 64 schools in two-thirds of the counties of Alabama. Schools selected for the study were those wherein at least 51% of students received free or reduced-price meal plans. There were 398 children who received the program (treatment group) and 702 children completed the preassessment and post assessment only (control group).

Intervention

Children in the treatment group participated in six weekly nutrition classes that covered concepts assessed in the questionnaire. Nutrition educators were provided a curriculum guide with specific curricula and materials in order to increase consistency across the classes. Children in the control group did not receive nutrition classes.

Evaluation Methods:

Pizza Please Game. The Pizza Please game component included an interactive game board and 12 mealtime game questions. The game board consisted of a life-size pizza with detachable toppings and four place mats depicting a table setting with an outline of a pizza slice on the plate. The object of the game was to correctly answer the most nutrition-related questions. A pizza topping was awarded and placed on the pizza slice on the team's place mat for a correct response. This game served to assess and reinforce learning among children in the treatment group.

Pizza Please Questionnaire. The questionnaire included 24 dietary behavior and 16 nutrition knowledge questions primarily based on nutrition-related problems often associated with elementary school-age children. This questionnaire served as a preassessment and postassessment for both the treatment and control groups. The dietary behavior questions used "yes/no" response categories to determine whether a particular food was consumed at a particular meal or snack. For example, "On most school days do you drink milk at breakfast?" This frequency question was used for breakfast, lunch, dinner, and snack as well as individually for consumption of milk, cheese, yogurt, juice, fruit, and vegetable. Food consumption questions only detected frequency; amounts were not assessed. Nutrition knowledge (pre/post) was assessed using an actual test, which provides a more precise measurement of knowledge gain. For example, there were questions whereby children had to eliminate food that were incorrectly placed in a Food Guide Pyramid food group. Children were asked matching questions as well. For example, children had to match a certain food to the nutrient it provides, or a particular nutrient to the correct benefit that the nutrient provides.

Readability was assessed by the researchers and it was determined that the reading level for the questionnaire was second grade (Flesch-Kincaid Readability score = 2.3). In addition, the educators read aloud each question

and answer choice to help children who read below this level.

Overall Results

Dietary Behavior Changes

The researchers reported that children who received the program experienced significantly greater improvements in overall dietary behavior than children in the control group. In fact, children who did not receive the six nutrition classes experienced a decline in overall dietary behavior.

More specifically, those children receiving the program: increased consumption of juice at breakfast, increased consumption of vegetables and cheese at lunch, increased consumption of fruit at supper, and increased consumption of fruit at snack.

Nutrition Knowledge Changes

The researchers reported that children in the treatment group exhibited significantly greater improvements in overall nutrition knowledge than children in the control group. To determine specific nutrition knowledge changes, researchers analyzed the sixteen nutrition knowledge questions individually by comparing each question's preassessment and postassessment answers. They reported that students in the treatment group had significant positive changes for all sixteen nutrition knowledge questions, whereas those in the control group demonstrated a significant increase in correctly answering only one question.

Discussion and Implications for Extension

The School Health Education Evaluation, a hallmark study that guides practice in the school health field, found that a minimum of 50 hours were needed to impact behavior and ten to fifteen hours of education were needed to expect "large" effects in program-specific knowledge. However, students in this study only participated in six hours of nutrition education with significant changes in both behavior and knowledge observed by the researchers. Ideally, more instruction hours might yield an even greater impact on behavior. But, this study supports and lends credibility to Florida Extension's stance that it takes as little as six hours of education on a topic delivered to the same participants to be deemed a program. After all, the purpose of a program is to effect positive changes in the lives of its participants, and this study demonstrated improvements in dietary behavior among young people using a six-hour intervention.

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Additional Resources

Listeria monocytogenes in ready-to-eat foods

Listeria monocytogenes Fact Sheets

Listeria monocytogenes Risk Assessment

Understanding Your Risk for Listeriosis

This article is prepared based on "*Achieving Continuous Improvement in Reductions in Foodborne Listeriosis- A Risk-Based Approach*" a comprehensive risk based approach for the reduction of foodborne Listeriosis document by the International Life Science Institute (ILSI) Risk Science Institute Expert Panel. The comprehensive review contains 310 referred publications and was published in the Journal of Food Protection, Supplement, 2005, 68(9):1932-1994.

Listeriosis is a foodborne illness caused by a bacterium called *Listeria monocytogenes*. According to the CDC **FoodNet**, the current listeriosis disease rate in the US is 3.3 cases per 1,000,000 individuals per year, and the consumption of contaminated foods is the primary means of human infection. The estimated incidence of listeriosis cases is highly variable from year to year. Although the number of cases, 1900-2500 cases/year, of this illness is low compared to other foodborne bacterial illnesses, the fatality rate is very high, especially for the population's susceptible groups.

For the susceptible individuals, *L. monocytogenes* is invasive; these individuals already have one or more underlying conditions that predispose them to the illness. *Listeria monocytogenes* can cause a severe disease with symptoms including septicemia (blood infection), meningitis (inflammation of brain or spinal cord), and spontaneous abortion. *Listeria monocytogenes* is widespread in the environment. It is also presents at low levels in many ready-to-eat food products. Furthermore, it can grow at refrigerated temperatures.

Who is at risk?

The susceptible populations for this illness include: patients with cancer or undergoing treatment with steroids or cytotoxic drugs, pregnant women, newborn infants, transplant recipients, patients with AIDS, diabetics, and the elderly. Most cases of listeriosis occur among the elderly, pregnant women, and people who have impaired immunity. Within these groups of the population, the relative susceptibilities are different. Pregnant Latina women are at higher risk of listeriosis than pregnant women from other ethnic groups. This may be due to the possible consumption of contaminated soft cheeses, such as queso fresco, made from noncommercial facilities. Based on current knowledge and outbreak data, Tables 1 and 2 provide relative susceptibility within different subpopulations.

Table 1. Relative susceptibilities for **non-pregnant subpopulations**

Condition	Relative susceptibility
Transplant	2,584
Cancer, blood	1,364

AIDS	865
Dialysis	476
Cancer, pulmonary (lung)	229
Cancer, gastrointestinal and liver	211
Noncancer liver disease	143
Cancer, bladder and prostate	112
Cancer, gynecological	66
Diabetes, insulin dependent	30
Diabetes, non-insulin dependent	25
Alcoholism	19
Older than 65 years old	7.5
Younger than 65, no other condition	1

Source: JFP, 2005, 68(9):1932-1994

Note: Based on the incidences of Listeriosis cases in these groups in 1992. This table is an excerpt from the article with slight modification to simplify the subject:

Table 2. Relative susceptibility for different subpopulations based on the incidences of Listeriosis cases in these groups.

Condition	**Relative susceptibility**
Perinatal (five months before birth or one month after birth)	14
Elderly (60 years and older)	2.6
General population (all of those who are not perinatal or elderly and therefore includes immunocompromised individuals)	1

Source: JFP, 2005, 68(9):1932-1994
Note: This table is an excerpt from the article with slight modification to simplify the subject

What are high risk foods?

Certain foods may have an increased risk of being associated with listeriosis. Foods that are considered high risk for listeriosis are foods that have the potential for contamination with *L. monocytogenes,* foods that can support growth of *L. monocytogenes* to a high number, foods that are ready-to-eat without further cooking, foods that require refrigeration, and foods that are stored for an extended period of time.

Table 3. Examples of high and low risk foods

Examples of foods with increased risk	**Examples of lower risk foods**
Pâté and meat spreads	Canned product until opened (e.g.,

	deviled ham) once opened and refrigerated the risk become high)
Smoked seafood (in the refrigerated section)	Retorted, shelf-stable product, frozen smoked products
Precut melon	Whole melon, whole fruits (e.g., citrus, apple, pear)
Cooked ready-to-eat shrimp (shellfish)	Cook-in-bag imitation shrimp that is frozen until open
Seafood salad (shrimp, crab, imitation crab)	Freshly prepared tuna salad prepared from canned tuna
Unpasteurized milk and milk products	Pasteurized milk and milk products or fermented milk, yogurt, ice cream
Queso fresco, brie, and Camembert cheese	Aged hard cheese, processed cheese blue-veined cheese
Uncured poultry, ham, bologna	Summer sausage, dry fermented sausage
Franks (not reheated)	Franks stored frozen, franks consumed after through reheating
Refrigerated leftovers	Frozen leftovers

Source: This table adapted from the article: JFP, 2005, 68(9):1932-1994)

Key recommendations for consumers and educators for reducing the incidence of listeriosis:

1) There are two risk factors for listeriosis: (a) being in a high-risk consumer group and (b) consuming a high-risk food. It is important for consumers to be aware of these risk factors.

2) Consumers in high-risk groups should consume medically restricted foods that have been treated to destroy *L. monocytogenes*

3) High-risk individuals should be provided with guidance on healthy eating, including specific information on high-risk foods and strategies for reducing their risk by avoiding high-risk foods, avoiding cross-contamination, using proper methods of cooking, cleaning, and methods for storing of perishable foods

4) Certain foods pose a higher risk of contributing to listeriosis and understanding the common properties of these foods is important. High-risk foods have all of the following properties: (1) have potential to be contaminated with *L. monocytogenes*; (2) support the growth of *L. monocytogenes*; (3) are ready-to-eat; (4) require refrigeration; and (5) are stored for an extended period of time.

5) Resource materials should focus on reducing the risk associated with the high-risk foods rather than treating all foods as equally risky.

Additional Resources

Retirement Planning Series

6) Effective educational strategies should focus on high-risk ready-to-eat foods known to be sources of *L. monocytogenes*, cleaning and sanitizing, storage and shelf life, and practical information to aid the end user in selection, purchase, and preparation of foods for home use or to be eaten away from home.

7) Increased educational efforts are needed to ensure that refrigerators are held at the appropriate temperature and used correctly in the home. Refrigerated products that support growth of pathogen should be maintained at 4.4ºC (40ºF) or less. Encourage consumers to use thermometers to verify home refrigerator temperature.

8) Food handlers serving at-risk individuals should have sufficient knowledge and understanding as well as the appropriate facilities to ensure the safety of the food they prepare and serve.

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Household Debt and IRAs: Evidence from the Survey of Consumer Finances

Bernstein, D. (2004). Household debt and IRAs: Evidence from the survey of consumer finances. *Financial Counseling and Planning, 15*(1), 63-72.

Recently I talked with a woman who had been retired for 45 years. Funding so many years of retirement is a personal as well as a societal problem. Pension funds have gone broke; companies have declared bankruptcy and employees have lost a part of their retirement fund. Employers have phased out the defined benefit plan for new employees and in its place promoted a defined contribution plan [401(k), 403(b)] where employees assume the risk of investing their retirement funds. The 401(k) plans have been successful because most employers have matched a portion of the employee contribution to the plan and once an employee is enrolled in such a plan they tend to remain in the plan.

Individual Retirement Accounts (IRAs) were first set up to help the employee who had no retirement plan. Then it was extended to all employees who met the criteria.

- *IRAs were created in 1974.*
- *In 1981 IRAs were available to all workers.*
- *In 1997 ROTH IRAs were created. Purchase price is not tax deferred but interest accrues tax-free.*

By 2008 contributions to IRAs are scheduled to rise to $5,000 per year and the catch up provision for workers 50 and over will rise from $500 to $1000 in 2006.

Numerous research studies show that only about half of U.S. households are adequately preparing for retirement. This study confirms that result. Thaler, 1994, suggests the problem is that families have trouble exercising self-control over consumption and they lack opportunity to learn from mistakes.

Households who have a substantial propensity to consume as measured in part by consumer debt and credit card debt are less likely to own an IRA. Also low income and divorce reduces the likelihood that the household will own an IRA even though low-income households are eligible for a retirement savings contribution credit on their income tax returns. Home ownership and median to high income are positively related to owning an IRA.

Implications for Extension Programming

Given the critical nature of retirement planning, conducting programs that will help clients determine how much money should be saved for retirement and where that money should be invested would be a starting place. Examining the tax benefits of an IRA and the matching benefits of a 401(k) will enhance the likelihood of families increasing their retirement fund.

There are a number of publications and computer programs that can help. Homeownership, a pension plan including IRAs and 401(k) s, and Social Security are important as a base of retirement planning.

References

Bernstein, D. (2004). Household debt and IRA's: Evidence from the survey of consumer finances. *Financial Counseling and Planning, 15*(1), 63-72.

Thaler, R. (1994). Psychology and savings policies. American Economic Review Papers and Proceedings. 84, 186-192.

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Additional Resources

EFNEP

MyPyramid.Gov-Kids

Parents Roles Are Emphasized For Dealing With Competitive Foods In Schools

Probart, Claudia, Elaine McDonnell, J. Elaine Weirich, Terryl Hartman, Lisa Bailey-Davis, and Vaheedha Prabhakher. "Competitive foods available in Pennsylvania public high schools.(Current Research)." Journal of the American Dietetic Association 105.8 (August 2005): 1243(7).

Probart and colleagues collected data from school food service directors from a random sample of 271 Pennsylvania public high schools. They wanted to examine the availability of competitive foods, which includes foods offered outside of the school meals programs.

They determined that this would include those foods available in schools through a la carte sales, vending machine sales, school stores and club fundraisers. They cited studies that suggest that the availability of competitive foods may have negative influence on the quality of the students' diets.

In the discussion Probart and colleagues pointed out that the media and others have tended to suggest that the school meals have a potential role in the problem of "the alarming increases in the rates of childhood overweight and obesity."

On the positive side, one study was cited that "suggested an association between participation in school meals and lower rates of overweight."

Foods that are offered in the school meals programs must meet federal standards as regulated by the USDA. In addition, schools are encouraged to maintain a "healthy school environment" as described in the USDA Healthy School Nutrition Environments Initiative.

School food service programs must be financially self-supportive and part of being able to do this means they must provide foods that the students will accept. At the same time, these meal programs must also meet nutrient standards and follow the Dietary Guidelines as established at the Federal level. The Dietary Guidelines focus on health promotion and risk reduction and form the basis of Federal food, nutrition education, and information programs. Competitive foods are only minimally regulated. The authors stated that: "Competitive food sales appear to be providing needed funding for schools and school foodservice programs, as other funding sources are decreasing."

Parents can become involved by providing a healthy nutrition environment in the home and helping children learn healthy eating patterns.

Implications for Extension: County Extension faculty can form partnerships with local dietetics professionals, county school food service programs, parent-teacher organizations and other parent groups to help parents "learn about the food choices their children are making." The authors presented information that can serve as action items for parents and many others. These action items also serve as implications for how Extension can work with the parents.

Parents may need to:

- Become involved in their children's schools.
- Inquire about foods available in the school environment.
- Learn about the food choices their children are making,
- Become involved in the decision-making process to determine the foods that will be offered in their children's schools

The authors further stated in the conclusions that "Parents can ensure their children will be provided a nourishing meal by supporting the school meals programs and encouraging their children to purchase the reimbursable school lunch."

Extension faculty members are also encouraged to peruse in its entirety the report of this study that was conducted by Probart and colleagues.

References:

Dietary Guidelines Advisory Committee. 2005. Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 2005. U.S. Department of Agriculture, Agricultural Research Service.

Probart C, McDonnell E, Weirich JE, Hartman T, Bailey-Davis L, Prabhakher V. Competitive Foods available in Pennsylvania public high schools. J Am Diet Assoc. 2005; 105:1243-1249.

US Department of Agriculture, Food and Nutrition Service. Changing the scene: Improving the school nutrition environment—A guide to local action, 2000. Available at: http://www.fns.usda.gov/tn/Resources/guide.pdf. Accessed September 22, 2005.

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Disaster Preparedness Programs For the Elderly and Members of Their Families

Hernandez, L. S., Byard, D., Lin, C., Benson, S. & Barbera, J. (2002). Frail elderly as disaster victims: Emergency management strategies. *Prehospital and Disaster Medicine*, *17*(2), 67-74.

The ability of anyone to prepare, respond to and recover from a disaster depends on a number of issues that are beyond their immediate control. Although age in and of itself is not related to the ability to respond to a disaster, the concomitant factors of frailty and disability influence an older adult's ability to respond to disaster. Furthermore, the severity of the event, the efficiency of early warning systems and the person's health status impact the ability to cope with disaster. Older adults who are house bound, isolated socially or have impaired mobility may have additional difficulty responding to disaster issues.

The authors recommend a responsibility paradigm for individuals and their families and service providers of Personal—Agency/Service Provider—Community that mirrors the emergency management progression of responsibility for disaster assistance defined as City—State—Federal.

The personal level represents the elderly individual and their family. At this level professionals can promote self–reliance, self–preparation, and the expectation of family (and/or legal guardian) responsibility.

Recommendations help families prepare include:

- Information about how to prepare for a disaster (i.e. checklists)
- Media based public service information targeting the elderly before, during and after the disaster
- Individual information to assist elderly persons in obtaining resources throughout the recovery phase
- Target information to the elderly person and the family members

For those who can not manage independently, even with the assistance of family, the next level of assistance is expected to come at the agency or service provider. Because many services are provided within the home by myriad home care professionals, the authors suggest that it is the responsibility of those agencies and service providers to have a plan of warning, protection, and recovery for their most vulnerable patients/consumers.

Recommendations at the agency level include:

- Incorporate disaster issues and planning into the general operations
- Strengthen the ability to continue providing service during and especially as soon as possible following a disaster
- Provide pre-disaster services to clients (i.e. extra meals, medications, batteries, etc.).
- Educate staff regarding professional responsibilities to patients, customers, etc.
- Assist community leaders in identifying vulnerable older adults

The authors suggest that the community bears responsibility for items such as transportation, healthcare access, aid distribution and warning system.

Additionally, the community must bear responsibility for:

- Coordinating service agencies in preparation for disaster response
- Clarify the roles and responsibilities of agencies and organizations within the community
- Develop memoranda of understanding which insure that agencies, service providers and other organizations (both for profit and not for profit)
- Provide transportation for the delivery of services to the elderly at home as well as transportation for evacuating the elderly
- Protect the elderly at distribution stations when obtaining supplies (i.e. food and water) can become a physical competition
- Recognize and address the unique recovery needs of older adults who routinely do not apply for assistance yet are known to be most economically impacted by disaster

Implications for County Extension Faculty

This article points out a variety of intervention points for county faculty at each level of the model.

At the personal level, Extension can be critical in the development and delivery of educational programs related to disaster preparedness for individuals and their families. Extension programs are also critical during the recovery phase, whether the topic is stress, depression, insurance, mold, food safety, or resource management.

At the agency level Extension has an important place at the table as a provider of information with a wide-spread and loyal following, particularly among the elderly.

At the community level Extension, as employees of the county bear a responsibility to contribute to the planning, implementation and evaluation of community/county programs. Extension faculty provide expertise in collaboration, education and outreach. While service providers reach specific populations (i.e. those with health and daily living needs), Extension reaches across the elderly population in providing information and guidance to older adults from all economic and cultural backgrounds.

Additional Resources:

Wilken, C. *After the Hurricanes Have Gone: Stress and Decision Making When Living Alone.* http://edis.ifas.ufl.edu/FY774

Wilken, C. *Disaster Planning Tips for Senior Adults.* http://edis.ifas.ufl.edu/FY620

Wilken, C. *Preparing for a Disaster: Planning Strategies for Older Adults.* http://edis.ifas.ufl.edu/FY750

Wilken, C. *Disaster Planning for Caregivers of the Elderly and People with Disabilities*. http://edis.ifas.ufl.edu/FY751

State of Florida. *Disaster Planning and Response for Persons with Disabilities.* http://apd.myflorida.com/hurricane/disaster_preparation.htm

ReadyAmerica.gov . *Get a Kit: Items for Special Needs.* http://www.ready.gov/special_needs_items.html

Federal Emergency Management Agency. *Disaster Preparedness for People with Disabilities.* (http://www.fema.gov/library/disprepf.shtm

American Red Cross. http://www.redcross.org

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