

Research News You Can Use



Spring 2007

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Department of Family, Youth and Community Sciences

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Table of Contents

Table of Contents	2
From Mothers to Daughters: Transgenerational Food and Diet Communication in an Underserved Group	3
Leadership Styles and Leadership Change in Human and Community Service Organizations	6
Exploring Rural Community Agency Differences.....	9
The Impact of 4-H Camp Experiences on Youth Development--Are You Maximizing This Experience for Youth Participants, Counselors and Volunteers?	11
Lead Poisoning and Children’s Health	13
What happens to the relationship when couples have a baby?	15
Putting Things in Perspective: Is It Necessary to Sterilize Sponges and Dishcloths in Your Kitchen? .	18
What Does “Organic” Mean?	21
A Look at Dairy Consumption Habits	23

From Mothers to Daughters: Transgenerational Food and Diet Communication in an Underserved Group

Submitted by: [Eboni J. Baugh](#), Ph.D., CFLE, Assistant Professor of Family Life

Wilson, Diane. "From mothers to daughters: Transgenerational food and diet communication in an underserved group." *Journal of Cultural Diversity*, 11, 1, (Spring, 2004), (accessed January 16, 2007).

Introduction

Research has highlighted the impact mothers have on the food choices, diet, and body image of their daughters. Through verbal messages and nonverbal modeling, mothers communicate expectations in relation to body size and subsequently influence the body satisfaction of their daughters. The influence found within this relationship is present within most American racial and ethnic groups, but often manifests itself in different ways.

There is extensive information available on a mother's contribution to her daughter's diet, excessive exercise, and body dissatisfaction leading to risk for eating disorders. Additionally, there is a generational link between this relationship and the risk for obesity. The risk for obesity tends to increase in low-income and minorities. Due to poor eating habits and limited information on proper nutrition, low-income Americans remain at an increased risk for obesity. African American women are at a greater risk for being overweight and obese.

Although, obesity rates in women have remained steady in recent years, 77.4% of African American women are overweight and/or obese in comparison to their White (57.3%) and Hispanic (71.9%) counterparts. For instance, mothers in low-income households tend to have a greater influence on food choices often due to lack of information on proper diet and nutrition.

This article addressed three key issues in the relationship between low-income African American mothers and daughters:

- Type of food information transmitted by mothers to daughters
- Mechanism through which food information is transmitted
- Influence of food information on diet and behavior

Methodology

The researchers conducted focus groups with African American women aged 25- 65. Subjects were identified through African Methodist Episcopal churches in low-income South Carolina communities. A total of 21 women were asked questions focused on mother-daughter communication patterns, memories of childhood eating, and mothers as role models. Interviews were audio taped and transcribed for data analysis. Themes, which emerged from the transcripts, were then re-reviewed by the researchers.

Main Ideas

Recollections about childhood eating patterns

Participants reported that their childhood diets were limited, consisting of few food choices, due to large family sizes and parents who earn a low-income. Although limited, these women also reported that their childhood diets were healthy and consisted mainly of vegetables grown in family gardens.

Food advice received from the mother

Most participants remembered receiving verbal messages about food choice. They reported issues that were stressed in African American households:

- Eat your vegetables
- Drink milk
- Breakfast is very important
- You must eat three meals a day
- Always, eat all that is served

Mothers as role models

The women in this article indicated that their mothers were primarily responsible for cooking and often acted as ‘food gatekeepers’ in the household. Mothers determined eating rituals and taught their daughters how to prepare food. Mothers were also role models in teaching their families to be thankful when little food was available.

Mother-Daughter communication about body size

The most interesting finding in this article related to age differences in communication about body size. Older African American women reported that body size and dieting to lose weight were not discussed in their households. Alternatively, younger African American women stated that they remember having mothers who were on diets to lose weight for appearance and health benefits. Interestingly, the mothers of these younger women did not want their daughters to lose weight, and even worried if daughters became too thin. Younger women also reported that they were less likely to continue to eating behaviors learned during childhood.

Implications for Extension Programs

This study offers great insight for Extension professionals. Educators can use the mother-daughter relationship to educate families about proper diet and nutrition, especially among minorities. With increases in childhood and adult obesity among minority groups, it is imperative that nutrition programs are tailored to fit this audience. Intervention and education programs should be culturally relevant, increasing interest and effectiveness within minority populations. Future extension programs should consider the following:

- Long lasting effects of limited childhood food choices
- Distinguishing between nutritious and non-nutritious foods
- The mothers' role in food selection and preparation
- African Americans acceptance of a larger body size for women
- Transmission of verbal and non-verbal messages among mothers and daughters

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Leadership Styles and Leadership Change in Human and Community Service Organizations

Submitted by: [Elizabeth B. Bolton](#), Ph.D.

Hillel, S. (2006). "Leadership Styles and Leadership Change in Human and Community Service Organizations" *Nonprofit Leadership and Management*. 17(2). 179-194.

Introduction

This article deals with leaders who must be able to adapt their style to the changing environment of the organization and understand the circumstances that are occurring in each phase of the organization's development. This is the main argument of the author who notes that if they fail to adapt the goals of the organization will not be attained. Further, if a leader is highly effective at one phase in the organization, he/she may not be able to transfer this effectiveness to another phase in the organization's development. From these perspectives, the author develops a tool to assist organizations in determining what type of leadership is needed based on the environment at each stage in the organization's life cycle. In order to use the tool, it is necessary to first analyze the current environment in both the external and internal dimensions.

Methodology

Using many studies on leadership, the author proposes a theoretical model, which classifies leadership types into four quadrants: Task versus people orientation and internal versus external orientation. Four types of leadership emerge: Task oriented internally focused, task oriented externally focused, people oriented externally focused, and people oriented internally focused. To use this methodology, an organization should first determine the current state of the organization and then decide which of these leadership types is the best fit for the time. The selection of an effective leader can be made based on this analysis. The author looks at four types of organizations and suggests which type of leadership would be the most effective.

Main Ideas

The major concepts are defined as follows. Task orientation "relates to the leader's emphasis ... on functions that are perceived as instrumental aspects of the leader's role and enable him to focus on goal achievement with minimal consideration of the human factor" (p. 185). These tasks include planning, organization and budgeting. People orientation, in contrast, relates to the leader's emphasis on functions such as motivating workers, training and development, listening and empathy, interpersonal communication..." (p. 185). People orientation includes "the expressive aspects of the leader's role, including the leader's body language and facial expressions, which convey the leader's expectations of their followers and reflect the relationships that develop between them" (p. 186). The second concept of the theory based model, internal versus external orientation, refers to "the importance of external environment in influencing the organization and structural behavior... versus the leader's orientation to the organization's internal affairs" (p. 186).

The task oriented internal leader

Places emphasis on achieving organization goals, taking the organizational structure and internal work procedures into account.

Gives emphasis to the roles of planning, coordination, administrative communication, budgeting and decision making.

The leadership style is authoritative, centralized; no delegation of authority and no involvement of organization members in decision making.

There is a tight control and supervision closely linked to processes and outcomes.

The leader does not tolerate deviations from the rules and processes that regulate the life of the organization. Very low tolerance for ambiguity.

The task oriented external leaders

Focus on achieving organizational goals and attaining legitimization and resources from the external environment.

Leadership style is authoritative, centralized, directive, and focused on attaining resources establishing and expanding the organizational domain, improving the organization's competitive ability in an attempt to accumulate an organizational and personal power advantage over other organizations.

Leader is task oriented, without considering the human factor which is a means to achieving his goals.

Decision-making and problem-solving processes are based on the leader's formal authority.

The people oriented internal leaders

The main focus is on people. He or she motivates, provides incentives, delegates authority, empower, consults, and involves others.

Efforts focus on selecting, developing, building, and guiding the staff and co-opting them to achieve the goals of the organization.

Emphasis on division of labor and roles, including enlargement and enrichment.

The leader motivates workers to seek self-fulfillment, sets challenging goals, and encourages self-development.

The leader develops tools, mechanisms, methods, and technologies for problem solving and conflict resolution.

People oriented external leaders

The emphasis is on managing the external environment, reducing the organization's dependence on agents in the environment, and increasing the dependence of others on the organization.

Considerable investment in developing human resources, training, and preparing staff to copy with constraints imposed on the organization by the external environment.

The leader and the administrative staff engage in political activity and form alliances and coalitions with various elements in the environment. The emphasis is on alleviating pressure from interest groups and

constituencies; screening the environment to identify opportunities, risks, and threats.

Emphasis on the importance and contribution of the human factor; invests in developing the functional maturity and professional competence of the staff in order to allow for development of relations with the external environment and management by exception.

Conclusion

The main conclusion from this article is that leader should be able to adapt his or her behavior as the organization transitions from one stage to another. Obviously this does not always happen and often the leader's style is at cross purposes with the organization's needs and life cycle. If the leader is not able to adapt his/her style to the organization's life cycle, then it is best to choose a new leader. This model can be useful for boards of directors to assess where the organization is and what it needs before choosing a leader. A congruence between the organization's life cycle and the leader's style can result in more effective leadership for the organization. The author proposes that "individuals have to make adaptations in their leadership pattern—whether they are autocratic, democratic-participatory, charismatic, task-oriented, or person oriented—if they which to be effective and achieve their goals" (P. 192).

Implications for Extension Programs

Extension county faculty deals with leaders in many environments, some of which are local and others regional and statewide leaders. It is not often that anyone has control of enough variables in the environment to change it substantially. The value of this research then is for county extension faculty to see themselves in one of the four leadership styles and determine if there is any congruence between their leadership style and the organizations they work with. When there is an uncomfortable fit, strive to change your style so that it is appropriate for the environment known as the workplace.

Exploring Rural Community Agency Differences

Submitted by: [Mark Brennan](#), Ph.D., Assistant Professor, Community Development

Brennan, M.A. and Luloff, A.E. 2007. "Exploring Rural Community Agency Differences in Ireland and Pennsylvania". *Journal of Rural Studies* 23: 52-61.

Overview

The role of community agency in the rural community and economic development processes needs to be better understood in America and other advanced, industrialized nations. Community agency is vital to protecting, retaining, and maintaining rural communities. A comparative study was designed to explore the role of community agency in contributing to local well-being in Ireland and America. This role was evaluated through the use of a multiple method framework based on extensive key informant interviews, focus groups, and analysis of household survey data. Overall, the findings indicate social interaction was the most important explanation of community agency, followed by community attachment, social ties/networks, and sociodemographics. Important differences were noted between Irish and Pennsylvania respondents. In both nations, regression models indicated social interaction was the most important factor associated with community agency. Applied policy implications of these findings are advanced.

Implications for Research and Extension

This study was based on the premise that local residents acting together have the capacity to improve local well-being. Overall, the attitudes, beliefs, and actions of residents in the two nations were surprisingly similar despite important historical, cultural, and social distinctions. Regardless of differences in some conceptual areas identified in the analysis, social interaction was found to be the central element in community action for both nations.

The significance of social interaction in this study supports previous research. In all of the communities studied, those residents who routinely interacted with others on a non-required basis were more likely to be active in their communities. Applied uses of these findings could take the form of linking community development efforts with social groups, clubs, and organizations in which residents freely participate. These organizations could be made aware of community needs and encouraged to have outreach programs that partner with community action groups. Through these groups, members could be encouraged to take part in or support additional community wide efforts. Further, local groups and clubs could nominate members to represent their particular group on broader community development programs/committees.

Equally important, enhancement and promotion of venues for social interaction should be seen as a priority. Such venues can take a variety of physical and social forms. Included are the establishment of community centers, town halls, parks, and other facilities open to all residents and which serve as a location for a variety of services, functions, and events. These venues could provide an environment where residents can meet, interact, and discuss general issues relevant to the entire community. Planned community wide social events can also serve as a useful venue for interaction.

The findings of this research suggest that social interaction is a vital part of community agency, and consequently, the development of community. However continued research in more diverse areas will be needed to better evaluate the factors that explain how and why rural residents come together through community agency. This understanding and advancement of theory is critical to the empowerment of

rural people and communities. It is this ability that allows rural residents to organize and enhance their capacity for locally based decision-making and development while contributing to the general needs of their community.

The Impact of 4-H Camp Experiences on Youth Development--Are You Maximizing This Experience for Youth Participants, Counselors and Volunteers?

Submitted by: [Joy Jordan](#), Ed.D., Associate Professor, Youth Development

During the last three years, several states have been investigating the benefits and impacts of the 4-H camp experience on youth (Forsythe et al. 2004, Garst and Bruce, 2005; McNeeley, 2004) and most recently a dissertation study of counselors with the LSU 4-H program by Carter (2006). This dissertation uses a well-developed 70 item Youth Experiences Survey (Y.E.S.) created by Hanson and Larson in 2002 and modified in 2005 with stronger psychometric properties and scale reliability and validity. During 2005 and again in 2006, Florida 4-H has conducted surveys gathering youth-reported outcomes from their 4-H experiences. This article provides a few implications for practice, as county faculty prepare youth, volunteers and counselors for the upcoming summer camping season based on these studies' results.

Does Camping Make a Difference?

In a closer look at the Florida data collected from over 800 4-H club members in 2005 and 2006, on average, about 45% of club members participated in residential camping. Youth assessments of life skills did reveal slightly higher mean scores for those camping compared to those not. Club members going to camp are also very active in other 4-H opportunities as well, with approximately 85% participating in county events, 65% in district and 47% in other state/national events. Therefore consistent with previous research, the "layering" of these multiple opportunities for youth tends to produce a higher level of reported skill development among youth.

Who is going to camp?

Again from the results of the 2005 and 2006 Florida 4-H club member survey, camp participation is similar to our overall participation in 4-H. Approximately 63% of the campers attended public schools, 10% private and 27% were home-schooled youth in 2005. Ethnically, three out of every four camper are Caucasian with the fourth of other ethnic origins, usually African American or Hispanic.

Who participates as 4-H Camp Counselors?

Consistently, 4-H camp counselors are long-term members of 4-H. Based on the sited research studies, youth participants' average about 7 years of 4-H members. Camp Counselors, from Florida data in 2005, reveal staff may be primarily marketing this experience to youth who have four or more years of experience in 4-H.

What do they gain from being a Counselor?

Carter's (2006) study reports the following findings for youth development resulting from the camp counselor experience. Carter measured findings, using the YES instrument on seven scales that breaks down into 20 subscales. The outcomes that youth reported the highest level of experiences at camp were:

- Team work and Social Skills
- Positive Relationships

Two subscales that reported significant outcomes were in areas of:

- Diverse Peer Relationships
- Leadership and Responsibility

One scale and one subscale reported low means reflecting youth had limited experiences in these areas:

- Negative Experiences (i.e. stress, conflicts as counselor)
- Social Exclusion

Carter's study supported similar findings of previous studies, when outcomes are analyzed by ethnicity and gender. Gender does explain variance in scores in the Teamwork and Social skills outcomes and Positive Relationships, meaning girls tend to rate their acquisition of these skills higher than boys. Ethnicity was an explanatory variable in all of seven outcomes scales measured by Carter's study. Thus, minority youth do show a slightly higher gain in skills as a result of their 4-H Camp Counselor experience.

What does this mean as you plan, market and implement summer camp programs for youth?

- Camp does benefit youth and provide increased levels of skill development –what percentage of your county 4-H youth membership attend camp?
- Camp Counselor experiences provide youth increased social development, relationships and leadership/responsibility.

Are you targeting the minority 4-H member population to participate in camp or young leaders to become counselors? Florida has very limited participation yet the benefits seem to be most beneficial to this audience.

For a more complete study of the scales and subscales that you might use to evaluate your camp counselors this summer, review the instrument used by Carter listed below.

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Carter, David N. (2006) *[Factors Relating to Developmental Experiences of Youth Serving as Louisiana Camp Counselors](#)*, Louisiana State University.

Lead Poisoning and Children's Health

Submitted by: [Hyun-Jeong Lee](#), Ph.D., Assistant Professor/Housing Specialist

Heneman, K., and Zidenberg-Cherr, S. October – December 2006. "Is Lead Toxicity Still a Risk to U.S. Children?" *California Agriculture* 60 (4): 180-184.

Introduction

Lead is highly toxic and can be found in products we may contact in and around our homes on a daily basis (U.S. Environmental Protection Agency [EPA] 2007). According to the Centers for Disease Control and Prevention [CDC] surveillance data (CDC 2007), the rate of children who were found to have significant amount of lead in their blood (at or above 10 microgram per one deciliter, 10 μ g/dL) was declined from 1997 to 2005. However, EPA (2004) estimates that the United States still have 430,000 children age between 1 and 5 with blood-lead level (BLL) above 10 μ g/dL. Furthermore, the U.S. children are still exposed to the lead poisoning risks through many sources. The researchers of this study summarize current issues on U.S. children lead poisoning problems.

Main Ideas

Where We Find Lead

In the past, lead was used to make paint for easier application and lead-based paint (more than 0.06% lead by weight), remains in old houses, furniture, and even on children's toys. In 1978, the Consumer Product Safety Commission prohibited to use lead-based paint on interior and exterior residential surfaces, toys, and furniture (CDC 1991). This means residents living in houses built after 1978 have less chance of exposure to lead hazards than pre-1978 house residents do. It does not mean that post-1978 houses are free from lead poisoning risk. Some older house plumbing contains lead and you may absorb it by drinking water directly from the old plumbing. We also can absorb lead from dust in the air we breathe. Lead can also come into your home if any of your household members works with lead and does not clean his/her body and clothes before coming home. Surprisingly, lead is still found on pottery, ceramic cookware, toys and even candies that are imported from certain foreign countries.

Lead Poisoning and Health Impact

Lead poisoning was referred as "one of the most common and preventable pediatric health problems." the U.S. Department of Health and Human Services (CDC 1991). Lead poisoning influences children much more seriously than adults. There are many reasons that young children have higher risk of lead poisoning and lead poisoning more seriously affects their health. In comparison to adults, in regards to body size, children drink more water, eat more food, and breathe more air. Their bodies are growing and absorb more lead. Lead damages their brain and nervous system are more easily. Most of all, they usually chew and suck almost everything (EPA 2007).

High levels of lead in children body may damage their brains, nervous system, and kidney, reduce IQ, slow down growth, and cause hearing problems. In addition, lead can cause behavior and learning problems and can result in coma, convulsions, and even death (EPA 2007; CDC 1991).

Suggestions to Prevent Lead Poisoning in Children

Consult your doctor for a blood lead level screening test if your children are age 72 months or younger, especially if you are living in a house built before 1978. Wash yourself and your babies often to reduce absorbance of lead. If you see any paint chips, clean them immediately. Regularly clean dust from your floors, window frames, windowsills, and other surface weekly. If you think your home has a lead problem contact professionals for inspection and necessary abatement. Children who eat nutritious foods with high iron and calcium (e.g., spinach and dairy products) tend to absorb less lead to their body. Make sure your children eat good foods to prevent lead poisoning (EPA, 2007).

Implications for Extension Programs

Outreach education activities of childhood lead poisoning prevention need to reach underserved populations, including low-income families reside in poor quality old houses and minorities speaking foreign languages, to emphasize the dangers of lead and teach families to reduce the harmful effects of lead in their child's environment.

Further Information

Please visit EPA and CDC websites below for up-to-date information on children lead poisoning prevention:

EPA <http://www.epa.gov/lead/index.html>

CDC <http://www.cdc.gov/nceh/lead/default.htm>

Also, you can visit Florida Department of Health Lead Childhood Lead Poisoning Prevention Program for information (<http://www.doh.state.fl.us/Environment/community/lead/index.html>).

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What happens to the relationship when couples have a baby?

Submitted by: Heidi Liss Radunovich, PhD, Assistant Professor of Human Development

Salmela-Aro, K., Aunola, K., Saisto, T., Halmesmäki, E., & Nurmi, J. (2006). Couples share similar changes in depressive symptoms and marital satisfaction anticipating the birth of a child [Electronic version]. *Journal of Social and Personal Relationships*, 23, 781-803.

Introduction

Although it is evident that the birth of a child has a large impact on the relationship of a couple, the exact mechanisms of how it affects the relationship are less clear. Previous studies have not looked at this issue longitudinally (following a couple over time), compared those having their first child with those having a later child, or looked at both members of the couple as well as their interaction. This study, which took place in Finland, takes a more thorough look at the adjustment of both members of the couple over time. They sought to examine both depressive symptoms and marital satisfaction in both members of a couple over time: as they were preparing for and after the birth of their first child; whether the two issues impacted one another; whether there were differences between it being a first or later child; and did likelihood of divorce increase with the birth of a child, and with changes in depressive symptoms and marital satisfaction.

Methodology

Although 407 women who attended prenatal care were originally contacted to participate in the study, 320 women agreed to participate (32 refused, 20 miscarried, and 28 were single so not eligible for the study). There were 260 male partners of these women who also participated in the study. Over the course of the study both members of the couple were surveyed 4 times: early in the pregnancy (around 12 weeks), one month before the birth (around 36 weeks), 3 months after the birth, and around 2 years after the birth. At the end of the study, 187 females and 127 males had completed all measures. Interestingly, those who dropped out of the study had lower marital satisfaction at the start of the study.

Depression was examined at all 4 points by using the Beck Depression Inventory; the couple's marital satisfaction was examined at all 4 points by using the Dyadic Adjustment Scale; and whether or not a couple had divorced was assessed at point 4 (2 years after birth) by using the Life Changes Questionnaire. Additionally, age, education, employment, marital status, and number of children were recorded at the start of the study. Multilevel modeling was used to examine the relationships among the variables for each individual and for the couple as a unit.

Main Ideas

Depression and relationship satisfaction seemed consistent within a couple, such that higher depressive symptoms in one spouse meant that the other spouse was likely to have depressive symptoms, and level of relationship satisfaction was similar for each member in a couple. Also, depression and relationship satisfaction seemed to go together, such that higher depressive symptoms were associated with lower relationship satisfaction, and lower depressive symptoms with higher relationship satisfaction. However, it is unclear why they go together: do depressive symptoms lead to lower relationship satisfaction, or does

lower relationship satisfaction lead to more depressive symptoms (or both)?

Another interesting finding was that those who had more depressive symptoms before the birth of the baby showed a reduction in symptoms after the birth of the baby, but those with lower levels of symptoms at the start showed an increase in depressive symptoms after the birth of the baby. There was a similar finding for relationship satisfaction: low relationship satisfaction at the start of the pregnancy was associated with higher satisfaction after the birth, and higher relationship satisfaction before the birth was associated with lower relationship satisfaction after the birth. There were also gender differences: women were more likely to have depressive symptoms than men, but women were more satisfied with the relationship before the birth of the baby, and showed less of a decrease in satisfaction after the birth of the baby than did men. Interestingly, those couples that already had children showed more depressive symptoms and lower relationship satisfaction during this pregnancy, but there was improvement after birth.

Some of these findings differ from the results of other studies. The research literature has shown that how satisfied you are in your relationship decreased for most couples after the birth of a child, but couples who were happier in their relationship before the baby had less of a decrease in satisfaction (e.g., Shapiro, Gottman, & Carrere, 2000). It is unclear why this study found different results, but perhaps some of it could be related to cultural differences (previous studies were conducted in the US or similar countries), or societal policy differences (in Finland there is state supported medical care, paid time off from work, and supplemental money provided to parents until the child is age 3) that could lead to different results. It could also be the way that researchers look at the issues (how marital satisfaction is measured and when).

Implications for Extension Programs

For Extension agents who work with parents expecting a child (particularly their first child), it may be good to inform them that symptoms of depression are common after the birth of the child, especially for women. It may also be good to prepare expectant parents for some of the changes that could occur in their relationship with their partner, and help them to strengthen their relationship in anticipation of the demands of a new baby. However, it is important to remember that not all couples are the same, and culture or circumstances may play a part in the changes that occur with the birth of a child.

Conclusion

Although previous research suggests that couples' satisfaction with their relationship reduces with the birth of a child, and that happiness with the relationship prior to the birth of a child predicts happiness after the birth of the child, this study suggests that this mechanism may not work the same way in all couples or in all cultures. In this study couples whose relationships were unhappy prior to the birth of the child showed improvement, while those who were happy prior to the birth of the child showed reductions in happiness. There were consistent reports from both partners in a couple: if one person was happy in the relationship, the other would report a similar level of happiness. Finally, it was found that depressive symptoms and relationship satisfaction had an inverse relationship, so those with high levels of depressive symptoms had lower levels of relationship satisfaction, while those with fewer depressive symptoms reported higher levels of relationship satisfaction. Although these states (depressive symptoms and relationship satisfaction) vary together, it is unclear whether one causes the other.

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Putting Things in Perspective: Is It Necessary to Sterilize Sponges and Dishcloths in Your Kitchen?

Submitted by: [Amarat Simonne](#), Ph.D., Associate Professor, Food Safety and Quality

A recent research publication in the December 2006 issue of Journal of Environmental Health regarding the use of microwave to sterilize cellulose sponges contaminated with raw sewage had brought up a lot of attention to consumers (<http://www.ees.ufl.edu/>). However, it is imperative that consumers acquire additional interpretation and understanding of the experiment before applying the study to a real life situation in their own kitchen.

Researchers (1, 2, 3, 4, 5, 6, 7, 8) have definitely shown that kitchen cloths, sponges and other kitchen food contact surfaces are important factors contributing to cross-contamination of potentially harmful microbes to foods in the home kitchen and restaurants. Many methods (chemical, physical [e.g. heat]) can be used for disinfecting or sanitizing the harmful microbes from those surfaces, but in relation to the use of microwave one study was already conducted by Park and Cliver in 1997 (3)

Park and Cliver (3) clearly demonstrated that household microwave can be use for sanitizing cellulose sponges and cotton cloths. The researchers contaminated sponge and disk cloths with two strains of *Escherichia coli* and *Staphylococcus aureus*, two of the typical foodborne bacteria at levels between five hundred thousand to ten million cells and then heated the materials with microwave oven at highest setting (800W at 2450MHz). They found that after 30 seconds, no living bacterial cells were found in full size sponges and dishcloths, however, after wetting additional time required for both were 60 and 180 seconds, respectively. The result suggested that microwave heating is affective for decontamination of cellulose sponge and cotton dishcloths.

In comparison of this study (<http://www.ees.ufl.edu/>) and the previous work by Park and Cliver (3) in 1997 the conclusions are remarkably similar. Most bacteria are killed within two minutes of microwave heating.

What is the catch? Most scientific studies were conducted under specific conditions, and thus the results may not be necessary applicable to every situation. In both studies, cellulose sponge was the only sponge tested, and thus the effects on other type of sponges many not be the same. Furthermore, because the killing effects on the microbes in both studies come from heat generated by the vibration of water molecules by the microwave, rather than the microwave energy itself (9), changes in the mass of the material and the amount of water may affect the heating rate.

Let's look at the definitions

Sterilization is a process to eliminate all form of microbial agents such as bacteria, fungi, viruses from a surface, food or biological culture medium. Sterilization process needs some special tools or equipments (autoclave, high dose irradiation, or some form of chemical treatment). Once sterilized, the objects can be re-contaminated again if not protected.

Disinfecting or sanitizing is to reduce the number of microorganism or to partially remove some microbes from a clean surface or clean object to a safe level.

Cleaning is a process of removing food and other type of soil from a surface or objects.

Take home message

Is it necessary to sterilize sponges and dishcloths in your kitchen?

No, per definitions, it is not necessary to sterilize sponges or dishcloths in the home kitchen, but regular cleaning (after each use) and sanitizing (every other day) is definitely necessary. Cleaning remove source of nutrient for microbial growth, and sanitizing reduce the number of bacteria and other germs so that they remain at a low number.

Steps to sanitizing or disinfecting household sponges (cellulose sponges) or cotton dishcloths

In order for sanitizing process to be effective, the sponges or cotton dishcloths must be **cleaned** first.

Sanitizing process can be done with household chemicals or with heat. For chemical sanitizers to work properly they must be used in a proper manner; this means that a proper combination of concentration and time must be observed. Using chemical sanitizing in home setting can be difficult for many consumers. Further, if the chemicals are not properly used it may cause some harm to the users. Therefore, using heat especially with the microwave can present a simple solution at household level.

In order to meet a minimum requirement for killing live bacterial cells, a temperature of 171°F or 77 °C for at least 30 seconds is necessary. This could be done by either heating cellulose sponges in hot water at 171°F or 77 °C for at least 30 seconds or using the microwave heating as an alternative. Things to remember: for microwave heating, cellulose sponges must be wet with water.

In the case of microwave heating, both studies (UF study and Park and Cliver) had recommended 2-3 minutes respectively; this allow enough time for the materials to reach a minimum sanitizing temperature.

Use caution when heating sponges or dishcloths in hot water or microwave! Some newer dishwashers may also have sanitizing options for operations.

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What Does “Organic” Mean?

Submitted by: [Mickie Swisher](#), Ph.D., Associate Professor, Sustainable Agriculture

Consumers purchase organic foods for many reasons. Some believe that organic foods are “safer” than conventionally produced foods. Others believe that organic foods are “better for you” than conventional products. Others want to support food production systems that are environmentally sound. Others have yet different reasons for buying organic products. Consumers need to understand the rules so that they can decide whether buying organic foods can help them achieve their goals, whatever they may be.

The United States Department of Agriculture (USDA) developed legal rules about organic foods that went into effect about three years ago. These rules are very detailed. They cover how the food was produced, how it was processed, and even how it is transported. The rules are complex. Here we will just discuss a few items that may be of special interest to some consumers.

Are organic foods produced without the use of pesticides?

The short answer is “no.” However, it’s a good deal more complicated than this simple answer implies. The National Organic Standards require that farmers must use three levels of pest management. Pests include insects, pathogens, and even weeds. To be able to sell a product as organic, a farmer *must* use levels one and two before resorting to level three. The first level is designed to prevent a problem from ever occurring. A producer might, for example, select cultivars (varieties) of a crop that are disease-resistant. The second level is to use cultural practices to help prevent and control any problem that does arise. This could include things like releasing beneficial insects to help control insects that are pests. The third level is to apply some sort of active agent to control the pest. This is allowed if the first two levels of protection and control fail. Most of these agents are natural substances that act as pesticides. One example is to use *Bacillus thuringiensis* or “BT.” This is a naturally occurring bacterium that controls some pests. Both conventional and organic farmers use it.

However, there are also some synthetic or “chemical” pesticides that can also be used. These are probably not what most of us consider as “chemical pesticides” in the traditional use of the word. Plastic mulch – a plastic sheet applied in the field to prevent weeds from growing – is allowed for example. So are hydrogen peroxide, copper sulfate and insecticidal soaps. On the other hand, some “natural” pesticides – such as nicotine – are prohibited. So, it is incorrect to say that organic foods are produced without the use of pesticides, or even without the use of synthetic pesticides. However, these substances are applied basically as a “last resort” measure when level one and two measures for protection and control have not worked, and the list of permitted synthetic substances is not extensive. Clearly, the intent of the law is to greatly reduce the need for application of active agents in general, and to rely primarily on natural cycles and systems, like naturally occurring beneficial insects, to manage pests.

What about growth hormones, vaccines, antibiotics and such?

Genetically modified organisms (GMOs), growth hormones and ionizing radiation are all prohibited under the National Organic Standards. Vaccines are permitted and are used to protect the health of animals. Antibiotics are prohibited, **but** farmers are **not** allowed to withhold treatment from animals that are ill. This would constitute cruelty to the animal. The rules governing the use of antibiotics when an animal does become ill are very explicit. For example, if an animal becomes ill and is treated with an antibiotic, the animal must be clearly identified and cannot be sold as “organic.”

Are organic foods “better for you”?

The USDA makes no claims whatsoever that organically produced foods are safer or more nutritional than conventionally produced foods. The National Organic Standards cover how food products are grown, handled, processed and transported, not about the nature of the food product itself. Consumers should beware of claims that organic foods are more nutritious; have “disease-fighting” qualities and the like. The research to support such claims, by and large, has not been completed and the National Organic Program was not set up to encourage people to buy organic products, or to “protect” consumers from any known or perceived risk associated with conventionally produced foods. Rather, the intent is to make sure, when you do choose to buy an organic food product, that you know exactly what standards were applied in its production and processing and that the label on the product guarantees that the National Standards were met.

Are organic food production systems environmentally sound?

Certainly, the intent of the National Organic Standards is to encourage the use of environmentally sound agricultural production practices. USDA says that:

“Organic food is produced by farmers who emphasize the use of renewable resources and the conservation of soil and water to enhance environmental quality for future generations. Organic meat, poultry, eggs, and dairy products come from animals that are given no antibiotics or growth hormones. Organic food is produced without using most conventional pesticides; fertilizers made with synthetic ingredients or sewage sludge; bioengineering, or ionizing radiation. “

The regulations require that farmers have detailed plans for protecting soil and water quality and natural ecosystems. For example, the rules state that farmers must use a system of crop rotation and cover crops, both of which are designed to help ensure the long-term productivity of the land.

However, many conventional farmers use these same practices. Soil conservation, for example, is not a concern just for organic farmers, but for most farmers who want to protect this critical resource for the future. Similarly, virtually every farmer is concerned about water quality and many farms, not just organic farms, are subject to regulatory and inspection programs to ensure that water quality is not compromised through farming practices. Protecting the resource base for food production is a key concept that underlies the National Organic Standards. Nonetheless, many farmers today are deeply concerned about the sustainability of our food production systems as well as natural ecosystems and use every practice possible to ensure their protection.

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A Look at Dairy Consumption Habits

Submitted by: [Glenda Warren](#), MS, RD, CFCS

Fulgoni III, Victor, et al. 2007/2. Dairy Consumption and Related Nutrient Intake in African-American Adults and Children in the United States: Continuing Survey of Food Intakes by Individuals 1994-1996, 1998, and the National Health and Nutrition Examination Survey 1999-2000. *Journal of the American Dietetic Association* 107, no. 2:256-264.

Introduction

This study sought to establish baseline data of the dairy consumption and the intake of dairy related nutrients by African American adults and children. Researchers compared the data with dairy consumption data of non-African Americans of all ages.

Methodology

Data in the study came from analyzing the [Continuing Survey of Food Intakes by Individuals 1994-1996, 1998](#) and the [NHANES 1999-2000](#).

Main Ideas

Investigators found that all age groups of African Americans consumed fewer mean servings daily of dairy, and that they have lower mean intakes of calcium, magnesium, and phosphorous. The comparisons were made of the differences related to age, gender and race.

In the discussion, these researchers noted the probable relationship of lactose maldigestion as partial blame for the low dairy consumption and provided some dietary management strategies that have been effective in addressing lactose intolerance.

Emphasis was also placed on the “total nutrient package found in dairy foods” and the advantage of dairy foods over other foods as a primary source of dietary calcium. Low-fat dairy foods not only provide an excellent source of calcium but also provide significant amounts of other nutrients necessary for good health. These include Vitamins A, D, B-12, riboflavin and potassium among others. The nutrients in dairy foods act together to increase the overall nutrition gained from intake.

Implications for Extension

- Culturally sensitive approaches are needed to promote consumption of dairy products and other calcium rich sources in the diet.
- Lactose intolerance should be addressed with effective management strategies. Examples:
 - Consuming the daily recommended amount of dairy in several small portions throughout the day
 - Try lactose-reduced dairy products. Look for lactose-reduced or lactose-free on the labels.
 - Dairy products consumed as part of meals may ease digestion.

- Choose yogurt or natural cheeses as a source of dairy nutrients.
- Use delivery systems that have been effective in reaching African Americans. These include:
 - Schools
 - Churches
 - Community Health Centers
 - Other community centers and organizations