

V(A). Planned Program (Summary)

Program # 6

1. Name of the Planned Program

Human Health And Human Development

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
703	Nutrition Education and Behavior	20%		15%	
704	Nutrition and Hunger in the Population	5%		15%	
724	Healthy Lifestyle	10%		10%	
802	Human Development and Family Well-Being	25%		40%	
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	10%		10%	
805	Community Institutions, Health, and Social Services	25%		0%	
806	Youth Development	5%		10%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	17.0	0.0	7.0	0.0
Actual Paid Professional	0.2	0.0	5.5	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
982008	0	1170396	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
982008	0	1170396	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
9215800	0	4269829	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Research activities include the ongoing implementation of the **Child Development Laboratory [CDL] Research Database Project**, research to better understand the protective factors that maintain relationship quality during the transitions to marriage and parenthood, the development of findings focusing on marital and co-parenting relationships and their associations with well-functioning parent-child relationships, the development of briefing sheets developed for major projects developed at the **Family Resiliency Center** [importance of shared mealtimes, childhood hunger, delivery of weekend feeding programs, healthy eating in early childhood, and healthy eating and physical activity programming for Spanish Speaking families], a project designed to examine how young preschool children develop cognitive belief structures and expectations about different relationships through their daily interactions with caregivers and peers, a study that adds to our knowledge regarding the role of different types of violence in different post-divorce co-parenting experiences, and research results illustrating that children whose mothers work nonstandard hours are more at risk of developing behavioral problems and have lower math ability and fewer early literacy skills compared to similar children whose mothers work standard hours [these findings highlight the potential source of conflict and stress working nonstandard jobs may cause, particularly for single mothers with young children, and demonstrate the importance of examining how nonstandard work may negatively affect mothers ability to care for their children].

Additional activities include the continuation of the **Even More Fun With Sisters and Brothers** program [offering children a carefully designed set of learning experiences aimed at increasing the frequency of positive sibling interaction], an analysis of caregiver strategies to promote child physical activities, the development of findings that schoolyard vegetation is not merely an aesthetic amenity but rather a functional component of the school environment that contributes materially to the academic mission, a project that is enhancing our understanding of the mechanisms of healthy foods in chronic disease prevention and providing new knowledge for understanding how nutrition early in life shapes physiology and susceptibility to childhood obesity, development of an afterschool physical activity curriculum and template to effectively support healthy weight among Latino school children, efforts to improve our understanding of how individual genetic material interacts with the environment to promote or delay metabolic effects that result in excessive weight gain or related diseases, research into the role of polyunsaturated fatty acids in nutritional programming that may provide additional insight into hepatic inflammation and obesity, and the development of computer software that can calculate and display results based on a newly-developed nutrient profiling system and development of a nutrition education curriculum that employs the nutrient profiling system as the central delivery tool of nutrition knowledge.

Conference presentations included the International Conference on Infant Studies, Congressional

Briefing on Raising Healthy Children, American Sociological Association, International Food Conference, Indiana Association of Environmental Educators, National Head Start Research Conference, National Council on Family Relations, National Agri-Marketing Association, Experimental Biology 2012, International Society of Functional Foods, and the International Society for the Study of Fatty Acids and Lipids.

A number of programs related to brain fitness [including **Wits Fitness** and **Headstrong**] were developed and delivered by Extension educators with family life expertise to make participants aware of what good cognitive health encompasses and steps to take in 'exercising' their brains to improve memory, critical thinking skills, and spatial reasoning. **Headstrong** workshops were developed and delivered to 640 Illinois Municipal Retirement Fund retirees. Resources related to aging and retirement were also made available through **Long-Term Care: Talking, Deciding, Taking Action** [an educational series and website that includes both family life and financial management topics for helping individuals and families plan effectively for their needs as aging adults] and through **Plan Well, Retire Well** [consisting of a comprehensive website, blog, e-news, and monthly news articles]. **Share Your Life Story**, a multi-week life series, provided a therapeutic approach to life renewal. The **Intentional Harmony: Managing Work and Life** curriculum and web-based self-study focusing on nurturing adult relationships continued to be offered.

Parenting 24/7 is a one-stop source for research-based information on the web that includes articles, breaking news and commentary, links to other resources and video clips of real parents of children from birth through the teen years and focuses on challenges and solutions. **Just in Time Parenting** is an age-paced electronic newsletter that is the product of the national **eXtension** network of parenting and child development experts who provide online support to parents and professionals and is distributed every month from birth to 12 months, and then every two months until the child is five years old. Access was also provided to **Your Young Child** [a research-based curriculum with customized brochures that help parents of infants and toddlers to manage seven difficult stages and behaviors that are linked to child abuse and neglect] and to **Parenting Again** topic-based discussion guides for grandparents raising grandchildren.

Most Extension activities that address healthy food choices to prevent childhood obesity were delivered by **Expanded Food and Nutrition Education Program [EFNEP]** staff and **Supplemental Nutrition Assistance Program Education [SNAP-Ed]** staff who conducted hands-on activities with children and their parents from limited income families. Nearly 346,000 youth were taught healthy eating choices by **SNAP-Ed** Extension staff members and more than 7,500 youth were reached through **EFNEP**. The **SNAP-Ed** and **EFNEP** staff used the **CATCH** and **SPARK** curricula to educate elementary and preschool students in after-school and summer programs about healthy snacks, good nutrition, and the importance of physical activity. **OrganWise Guys** materials were used by **SNAP-Ed** staff with youth in K-2nd grade classrooms and by **EFNEP** staff in 3rd through 5th grade classrooms. Under the leadership of 4-H Youth Development staff members, the **Health Jam** program was conducted for 5th grade students and offers support related to exercise, wellness, nutrition, and health careers using an experiential learning approach. Additional information about the programs and their impact is included in the outcome section of this planned program.

Healthy Hopping, a website with more than 53,000 page views, focused on increasing the physical activity of youth as well as providing recipes for healthy snacks to increase the consumption of fruits and vegetables. Lesson plans for teachers and jump rope stunts and rhymes and games for youth are also available on this website

Extension programs also focused on chronic diseases including heart disease and diabetes. **I on Diabetes** was taught as a four-part [2 ½ to 3 hours per part] Extension program that combined lectures, food demonstrations, activities, and samples of healthy foods. **Diabetes Lifelines**, a bi-monthly web-

accessible newsletter providing information in both English and Spanish to clientele on a variety of diabetes-related topics, can be found at <http://www.urbanext.uiuc.edu/diabetes> [more than 64,000 English page views and nearly 87,000 Spanish page views were recorded for this past year]. Two additional websites, **Your Guide to Diet and Diabetes** and **Diabetes Recipes**, logged more than 298,000 English page views and more than 306,000 Spanish page views. **Meals for a Healthy Heart** is a two-part series focused on increasing participant awareness of the risk factors of coronary heart disease, hypertension, high blood cholesterol, and other warning signs. Activity levels and weight management information as well as food demonstrations, taste testing, and recipes were provided at each session. **Live Well, Be Well**, a chronic disease self-management six-week series, was conducted in several locations throughout the state [participants were encouraged to develop action plans as part of the program].

Additionally, all Extension educators [nutrition and wellness, family life, and consumer economics] reached out to all counties statewide by offering similar older adult-focused 'healthy living' programs. An interdisciplinary series of 52 programs titled **Learning is Timeless** was delivered at the Urban Leadership Center in Chicago to help participants develop skills in health, family life, consumer and money management, and horticulture skills to reduce stress and promote better mental and physical health.

2. Brief description of the target audience

Members of the target audience include low-income families with young children, child care providers, Spanish speaking families, university educators working across disciplines, federal funding agencies, policy makers, faculty from multiple disciplines including human nutrition, kinesiology, human development, economics, community health, public health, communication, advertising, and computer engineering, faculty graduate students, postdoctoral fellows, undergraduates interested in transdisciplinary approaches to obesity prevention and food insecurity in children, mothers who coparent after separation [including those who do and do not experience intimate partner violence], professionals working with mothers in the process of divorce, parent educators, health care providers, policy makers and service providers concerned with building strong communities and families, early care providers, food bank supervisors and agencies serving low income families, nutritionists, food scientists, companion animal feed specialists, segments of the U.S. population that would be at risk for mild-to-moderate deficiencies of specific micronutrients [in this case choline], and gestating women and those breastfeeding newborns. In addition, Extension targeted youth, teachers, parents, grandparents, caregivers of adults, retirees, and working couples.

3. How was eXtension used?

More than 30 University of Illinois faculty members and Extension staff are members of eXtension Communities of Practice that include Alliance for Better Child Care, Families, Food, and Fitness, Family Caregiving, Just in Time Parenting, and Military Families.

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	179004	26970	373380	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2012
Actual: 1

Patents listed

TF11051-PRO - System And Methods For Nutrient Profiling

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	1	38	39

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number Of Completed Hatch Projects

Year	Actual
2012	13

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number Of Research Projects Utilizing The Child Development Laboratory Research Database
2	Increased Knowledge Of Children's Behavior At A Given Stage Of Development And Parenting Practices To Foster That Behavior
3	Increased Parenting Practices That Promote Nurturing Relationships
4	Promoting Social And Emotional Health And Development Among Young Children
5	An Examination Of How Young Preschool Children Develop Cognitive Belief Structures
6	Addressing Gaps In Student Achievement
7	Identifying Chronic Stressors In The Lives Of Low-Income African American Families
8	Knowledge Of Food That Is Low In Fat And High In Fiber And/Or The Importance Of Increasing Physical Activity Levels
9	Increased Consumption Of Foods Low In Fat And High In Fiber And/Or Increased Physical Activity Levels
10	Utilizing A Family Resiliency Framework To Address Childhood Obesity
11	Increased Practices Related To Diabetes Management
12	Implementation Of Practices That Build Brain Fitness And Memory
13	Number Of Youth Planning To Adopt An Option For Responding To Bullying

Outcome #1

1. Outcome Measures

Number Of Research Projects Utilizing The Child Development Laboratory Research Database

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	19

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The purpose of this project is for the ongoing implementation of the Child Development Laboratory [CDL] Research Database Project. This project is designed to facilitate an interdisciplinary, longitudinal, and programmatic research agenda at the CDL.

What has been done

During the current reporting period the procedures developed during the previous year for conducting baseline assessments of children enrolled in the CDL program were continued. These procedures included using the BINS and DENVER II developmental screening tools for baseline data collection in combination with standardized data collection protocols, training procedures for classroom teachers and research teams gathering data at the CDL, mechanisms for the reciprocal exchange of data across projects being implemented at the CDL, and standardized data compilation procedures. Information from the research database was then made available to researchers collecting data with CDL children and staff for research projects.

Results

There are three beneficiaries of this project. First, the systematic procedures used to create this unique database of information on children's behavior across multiple developmental domains allows researchers to use this data for both historical and projective analyses that focus on child development and outcomes resulting from interactions in high-quality early childhood environments. Second, the continuation of the CDL Research Database Project facilitates long-term, interdepartmental and cross-departmental faculty and student collaborations that provide opportunities for creative investigations of children's development. Finally, children and families throughout Illinois and the U.S. have benefited from the knowledge being generated through research projects being conducted as part of this project. A total of 19 research projects were conducted at the CDL during the current reporting period. Fourteen of the 19 studies accessed information from the CDL Research Database project as part of their data collection. These 19

projects represent a diverse array of disciplines and all focused on various aspects of children's growth and development.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services
806	Youth Development

Outcome #2

1. Outcome Measures

Increased Knowledge Of Children's Behavior At A Given Stage Of Development And Parenting Practices To Foster That Behavior

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

Increased Parenting Practices That Promote Nurturing Relationships

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

Promoting Social And Emotional Health And Development Among Young Children

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

A notable transformation takes place in children's understanding of people during the preschool period. That is, children come to understand that individuals have minds and that behavior is a predictable function of mental states, such as intentions, beliefs, desires, and emotions. Having a 'theory of mind' is central to the successful navigation of social interactions and relationships. Notably, previous research has highlighted the familial antecedents or peer outcomes associated with individual differences in children's theory-of-mind understanding, yet few studies have brought together these two lines of research. This research is unique in several respects and makes the following contributions to the literature: [1] a longitudinal examination of theory-of-mind understanding across the critical preschool years; [2] a more diverse measurement of theory-of-mind understanding, beyond typically examined false-belief understanding; and [3] an emphasis on the mechanisms through which early mother-child relationships are associated with theory-of-mind understanding, and in turn, the extent to which such understanding fosters children's ability to initiate and maintain positive interactions with peers.

What has been done

This Hatch project involves data analyses from three separate projects: the Toddler Transitions Project [TTP], the Children's Social Development Project, Phase I [CSDP-I], and the Children's Social Development Project, Phase II [CSDP-II]. Activities for the TTP include: [1] coding of maternal and child interview data; [2] conducting multivariate analyses to test associations between mother-child observational data, maternal physiological reactivity to infant vocalizations, and mother-reported empathy; and [3] submission of a poster presentation to the Society for Research in Child Development in which TTP findings will be presented. Activities for the CSDP-I include preparation and submission of two manuscripts that examine from a dyadic perspective child attachment security and temperament as predictors of children's interaction with an unfamiliar same-sex peer over the course of three separate play sessions. Activities for CSDP-II include conducting analyses to test hypothesized associations among mother-child attachment security, theory of mind understanding, and child-friend relationship quality.

Results

Key findings include several findings that are relevant to promoting social and emotional health and development among young children. Two sets of findings focus on the marital and coparenting relationships and their association with well-functioning parent-child relationships. Research indicates that marital intimacy may act as a protective factor for fathers who are depressed, but may be problematic for depressed mothers [because perhaps intimacy fosters ruminative tendencies that are more common among depressed women versus men]. It has been shown that the quality of the marital relationship is related to mother-child and father-child relationship quality via parental feelings of trust in and support by the co-parent. Child gender also moderated associations, such that mother-son but not mother-daughter relationship quality showed a link with coparenting support and trust. For both studies, the findings have clear implications for clinicians working with parents who suffer from depression or are in distressed marital relationships. A set of findings from the TTP provide basic insights into sensitive parenting. Mothers' dispositional empathy predicted more sensitive behavior with toddler-aged children, but only for mothers who were less reactive to infant emotional cues as assessed via electrodermal response during an experimental cry-laugh paradigm. This finding underscores the importance of both mothers' general tendencies to empathize with others and mothers' tendencies to be unperturbed by child emotional signals.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services
806	Youth Development

Outcome #5

1. Outcome Measures

An Examination Of How Young Preschool Children Develop Cognitive Belief Structures

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

This project was designed to examine how young preschool children develop cognitive belief structures and expectations about different relationships through their daily interactions with caregivers and peers. In order to examine these relationships, we have used different methodological approaches to obtain the data. For example, we conducted classroom observations of children interacting with their peers, we interviewed parents and children, and we collected self-report data from parents and teachers. Additionally, we conducted laboratory observations of parent-child interactions during structured tasks and home observations to assess parent-child interaction quality. Data to date have been collected on 110 families and 500 preschool-age children.

What has been done

The participants in this research included three to four year old children who attend the University-affiliated Child Development Laboratory [CDL] and their primary caregivers. The children participated in a laboratory procedure in which they were interviewed regarding their attachment representations [using a standard doll-play procedure] as well as their understanding of different emotions. During this time, the children were also asked to complete a measure that assesses perceptual asymmetries in the processing of emotion which has been shown to be important in the development of emotional dispositions and emotional responding in stressful

situations. Naturalistic observational data were also obtained in the preschool setting. These data included how often children expressed positive and negative affect as well as the positive and negative initiations of social interactions among peers and documented the frequency of positive and negative emotions experienced by children while interacting with peers as well as the nature of those interactions. Teachers and parents provided information on the children's social behavior, cognitive abilities, and on children's temperament.

Results

Our data analysis has revealed important relationships between hemispheric processing of emotion and observations of children's affect in the classroom setting. In particular, we have shown that children who have a right posterior bias in perceptually processing emotions are significantly more likely to express negative affect while interacting with peers than children who don't have this processing bias. These specific findings have been used to leverage additional funds to examine neurobiological correlates of attachment relationships. They have also been used to leverage funds for an interdisciplinary research program that examines children's emotion regulation and food consumption. With respect to parent-child relationships, results from this project revealed that a secure parent-child attachment relationship predicted how elaborative mothers were in discussing past events with their children, a narrative style typically associated with higher event memory and autobiographical memory development. Analyses also indicated that there are considerable differences in the relations between parent involvement and parent-child interaction for mothers and fathers.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #6

1. Outcome Measures

Addressing Gaps In Student Achievement

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Despite decades of policies and programs aimed at reducing educational inequality, gaps in student achievement, school-related behaviors and attainment persist between students from different racial/ethnic and socioeconomic backgrounds. Research suggests that these gaps are present before kindergarten begins and endure throughout the elementary and secondary school years. The goal of this study is to analyze the complex relationships between family factors, early daycare and school settings and the cognitive and socioemotional development among children and adolescents.

What has been done

The study utilizes survey data from a national longitudinal sample of children collected by the U.S. Department of Education. During the past year, two studies were conducted for this project. The first study examined how maternal work schedules, and specifically nonstandard work hours, affected preschool children's socioemotional development and early literacy and math skills among a national sample of single mothers. The second study examined how the quality of the neighborhood environment coupled with family socioeconomic conditions impacted adolescent success in the transition to early adulthood among a national sample of second generation immigrant youth and their families.

Results

The results from the first study showed that children whose mothers work nonstandard hours are more at risk of developing behavioral problems and have lower math ability and lower early literacy skills compared to similar children whose mothers work standard hours. These effects persist even after controlling for a host of maternal characteristics, prior behavior and family and work conditions. These findings highlight the potential source of conflict and stress working nonstandard jobs may cause, particularly for single mothers with young children, and demonstrate the importance of examining how nonstandard work may negatively affect mothers ability to care for their children. The results from the second study show that the home environment experienced during early adolescence as well as the quality and safeness of the neighborhood impact the ability of second-generation immigrant youth to make a successful transition to adulthood defined by educational attainment and earnings as well as general health and life satisfaction. This study adds to the growing body of literature on immigrant youth by examining how multiple contextual factors including neighborhood poverty and family environments have persistent effects on adolescents as they move into early adulthood.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services
806	Youth Development

Outcome #7

1. Outcome Measures

Identifying Chronic Stressors In The Lives Of Low-Income African American Families

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The goal of the research was to identify chronic stressors in the lives of low-income, African American families living in inner-city neighborhoods and the coping strategies used to address these stressors. This research was a response to theoretical discussions that argued that organizational characteristics of impoverished inner-city communities undermine family functioning. According to theorists, families are unable to develop stable domestic routines or properly socialize their children in environments with large numbers of disadvantaged neighbors, few social or institutional supports, and unconventional value systems. In contrast, our research examined how families overcame the adversity of living in low-resource, high-risk neighborhoods. The research was informed by a family resilience framework. This approach focuses on family strengths and assets.

What has been done

Methodologically, an interpretive framework characterized the qualitative data collection: We sought to describe the daily lived experiences of participants and to understand the meanings that they gave to those experiences. Multiple data collection strategies were used: These included neighborhood observations, participant observation, open-ended, in-depth interviews, and photo elicitation interviews. The interview and observational data examined topics that illuminated coping strategies, such as family routines, social networks and social support, use of neighborhood resources, nutrition, health, and well-being, and parenting and childrearing. Additional insights on the larger neighborhood context focused on local organizations, including community gardening groups. To analyze the data we used an inductive approach that facilitated the discovery of meanings and social processes as they emerged from the data in addition to sensitizing concepts from extant literatures. We transcribed and coded the interview and observational data to identify key themes. To further facilitate the conceptualization processes and identify patterns among the families, we used data displays and analytic memos.

Results

Key insights emerged from our analysis of caregiver strategies to promote child physical activities. Low-income, African-American caregivers of preschool age children believed that it was important to promote child physical activity through their own efforts. Caregivers identified protective parenting strategies such as monitoring, boundary enforcement, chaperonage, and support from trusted family and non-family adults. We were also interested in generating insights from caregivers themselves to inform local policies and programs. In this regard, we used a collaborative framework with a key goal of empowerment. That is, we highlighted the importance of local residents providing first-hand insights based on their daily lived experience. Further, we sought to validate the importance of caregivers being key stakeholders in change processes. Caregivers had clear recommendations for policy makers to enhance physical activity options in the local neighborhood. They identified the need for safe spaces free from physical and moral dangers, including better formal and informal social control efforts. Caregivers also identified quality parks and programs that already existed in the neighborhood that could be used as the infrastructure for additional programming and activities.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services
806	Youth Development

Outcome #8

1. Outcome Measures

Knowledge Of Food That Is Low In Fat And High In Fiber And/Or The Importance Of Increasing Physical Activity Levels

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	415

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Obesity among children in the United States has become a national public health concern. According to the 2003-2004 Healthy Smiles, Healthy Growth data from the Illinois Department of Public Health 39% of Illinois' third grade students are at risk of being overweight [18%] or are already overweight or obese [21%]. Lack of proper nutrition and inadequate physical exercise are two of many interacting factors that lead to childhood obesity.

What has been done

University of Illinois Extension 4-H conducted the Health Jam program with more than 400 youth from five counties participating in two-day camps and an eight-week Walk Across Illinois experience that followed the camps. During the camps, the youth learned how to keep their bodies healthy and fit and explored health professions. Educational activities focused on healthy eating behaviors, physical activity, disease prevention, dealing with health emergencies, and body functions and their measures. ZUMBA was a popular part of the activities this past year. The Walk Across Illinois follow-up used a team format to collect steps tracked by each student.

Results

A pre- and post-test evaluation format consisting of 21-25 questions tailored to the health activity topics taught at each delivery site was used to identify knowledge increases. All but three of the 415 youth participants who completed the pre- and post-tests were able to correctly answer at least one question on the post-test that was incorrectly answered on the pre-test. For example, more than half of the youth [137 of 241] at two Health Jam sites recognized that one must walk half a mile to burn off the calories contained in one small coated chocolate candy piece. At another site 37 of 71 youth [52%] correctly identified that obesity was the factor that causes type 2 diabetes after participating in Health Jam. A paired-sample t-test analysis indicated a statistically significant increase in the correct answers to questions on the post-test as compared to the pre-test for the above examples. For the walk, youth supported each other to complete 30 minutes of daily physical activity and to track the number of miles they walked. By working together, 100 percent of the youth achieved their goal and walked the equivalent of the length of Illinois.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle
805	Community Institutions, Health, and Social Services
806	Youth Development

Outcome #9

1. Outcome Measures

Increased Consumption Of Foods Low In Fat And High In Fiber And/Or Increased Physical Activity Levels

Not Reporting on this Outcome Measure

Outcome #10

1. Outcome Measures

Utilizing A Family Resiliency Framework To Address Childhood Obesity

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

One of the grand challenges of today's society is to raise healthy children. Childhood obesity affects over 20 million American children between the ages of 2 and 19, with a disproportionate number residing in persistently poor rural counties. Further, children who have existing chronic health conditions such as asthma are at increased risk for becoming obese. Although the simple explanation for rising rates of childhood obesity is more calories taken in than expended, the root causes are more complex. The overall aim of this Hatch project is to create a multidisciplinary research team and infrastructure that will support efforts to address complex family health issues that result in real solutions. The framework that guides this work is that of family resiliency.

What has been done

We completed an observational study of 60 families during mealtimes and collected biobehavioral data on all members of each family, conducted in-depth interviews with 76 parents who experienced food insecurity sometime within the past year, conducted a longitudinal survey study of 200 families experiencing food insecurity over a period of one year, and completed mealtime home observations of ethnically-diverse families who participate in WIC [women, infants and children assistance]. For the weekend feeding program, food banks partner with local schools who help identify children at-risk for hunger who are provided with child-friendly, easy-to-prepare foods which are discreetly distributed to children on Friday afternoons.

Results

Evaluation of the weekend feeding program indicates: [1] school personnel adequately select children most likely to go hungry over the weekend; [2] weekend feeding programs may have a small but significant effect on school attendance on Fridays [day of food distribution]; [3] weekend feeding programs may have a small but significant food security impact at program initiation but most families remain food insecure throughout the year; [4] most families who participate in

weekend feeding programs also experience problems with transportation which would make a school-based pantry program inaccessible for many families; and [5] many families who are food insecure experience poor health and poor quality of life. Family mealtime social interactions did not vary significantly by ethnicity for communication patterns. However, African-American families tended to spend more time in 'activities' that took them away from the table such as talking on a cell phone and watching television.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population
724	Healthy Lifestyle
802	Human Development and Family Well-Being
806	Youth Development

Outcome #11

1. Outcome Measures

Increased Practices Related To Diabetes Management

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	107

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Diabetes ranks as the seventh leading cause of death in Illinois according to the Illinois Department of Public Health. In fact, more than 800,000 adults [8.4%] in the state have been diagnosed with diabetes according to the National Center for Disease Control.

What has been done

University of Illinois Extension's 'I on Diabetes' is a series of 2½-3 hour face-to face sessions designed for anyone interested in preventing or managing diabetes. During the series held in Illinois this year, 124 participants received information on diabetes treatment goals and self-monitoring, managing carbohydrates, sodium, cholesterol and fat portions, planning meals, and

reading food labels. Food demonstrations, taste testing, and recipes assisted participants in using artificial sweeteners, low-fat products, and herbs and spices. Participants also completed a program evaluation to determine the impact of the program. Participants were asked to provide answers to four series of questions prior to and at the end of the I on Diabetes sessions.

Results

All but seven of the participants who completed all or sections of the pre- and post-evaluations indicated increasing their confidence, skills, or practices in managing their diabetes. Specifically: [1] using a four-part scale ranging from 'strongly disagree' to 'strongly agree', 92 of 124 participants [74%] who completed the series of questions indicated that they improved their ability to manage diabetes in one or more areas; [2] using another four-part scale ranging from 'not confident' to 'very confident', 105 of 124 participants [84%] indicated that they improved their confidence in managing their diabetes in one or more areas; and [3] using a four-part scale ranging from 'never' to 'almost always', 107 of 124 participants [86%] reported increasing their frequency in taking at least one recommended action to manage their diabetes. Additional information regarding specific areas of changes in skills, confidence, and practices related to participants' management of diabetes are included in the evaluation section of this planned program.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

Outcome #12

1. Outcome Measures

Implementation Of Practices That Build Brain Fitness And Memory

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	43

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

According the Illinois Department of Public Health, more than 222,300 people 65 and older in

Illinois have Alzheimer's disease. Memory loss and the fear of developing dementia is a concern for all, especially as people age.

What has been done

The Extension family life educator team agreed that an educational program that focused on identifying normal memory changes and strategies for improving memory might help many older adults who experience normal forgetfulness like forgetting where they've parked the car or fretting over not remembering someone's name. Over the years, thousands of older adults have participated in Building a Better Memory and FIT WITS workshops, the latter incorporating aerobic exercise and improving cognitive function. In response to a request from many of these participants who indicated that ongoing memory classes would be beneficial, Wits Fitness [an ongoing bi-weekly series] was developed to allow participants to get together to work on intellectually-stimulating and challenging activities. Each session offered the 78 participants hands-on, intellectually-challenging activities that focused on memory enhancement strategies related to association, visualization, attention, recall, and critical thinking. Headstrong workshops were also developed this year and delivered to Illinois Municipal Retirement Fund retirees.

Results

A mid-year evaluation for the Wits Fitness series was conducted after the first twelve sessions were completed. An evaluation tool was distributed to 38 participants at the 12th session. Each participant was asked 'As a result of attending Wits Fitness sessions, have you transferred any learned skills into everyday life?' Thirty [30] participants returned evaluations and 96.6% indicated that they did transfer learned skills. Sixty-three percent [63%] of the participants had self-identified as attending at least 10 of the 12 sessions offered. Through an additional evaluation mailed to participants at one location, 50 responded. When asked if they changed anything they did because of attending brain fitness related programs, 23 indicated specific practices focused on: [1] remembering names using various strategies [referenced by 14 of the 23 respondents]; [2] engaging in games, including those on the internet, to keep their brain active [3 respondents]; and [3] remembering item locations [3 respondents]. With respect to changes in knowledge, attitudes, and skills, respondents mentioned having a better understanding of long- and short-term memory, recognizing that it is normal not to remember names, realizing the importance of keeping your mind active, and that working to improve memory is continuous. All of these findings support the program goals to encourage participants to remain socially active, challenge themselves intellectually, and focus on healthy habits for mind and body.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle
802	Human Development and Family Well-Being

Outcome #13

1. Outcome Measures

Number Of Youth Planning To Adopt An Option For Responding To Bullying

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	174

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Violence and bullying in schools is increasing among teens in the U.S. There is a scarcity of materials focused on bystanders and targeted for junior high and high school students.

What has been done

A team of current and now-retired educators developed a research-based prevention simulation and guided discussions for junior high and high school youth, supported by statistical research on bullying among teens in the U.S. The Breaking the Code [BTC] program focuses on helping youth to: [1] see the effects of bullying and understand the power of their decisions as bystanders in a bullying situation; [2] identify options for responding to bullying; and [3] be motivated to take a stand against bullying. BTC is a simulation that tells the story of youth observing everyday situations where bullying occurs. Eight 30-minute scenarios are played out in either narrator or skit form. Bystanders begin to realize that the choices they make have a big impact on the victim, the normalcy and acceptance of bullying, and the social climate of their school. Guided discussion assists students in processing the experience. At the end of 2012, Extension educators had completed presentations in seven counties and collected evaluations from 755 junior high youth.

Results

Data from 629 students who completed both pre- and post-program evaluations in 2012 have continued to show increases in the number of students who definitely would: [1] ask an adult for help -- 174 [28%] additional students checked this on the post-test [162 pre-test versus 336 post-test]; [2] understand that their decisions can strengthen or weaken the bully and/or the victim -- 159 [25%] additional students checked this on the post-test [339 pre-test vs. 498 on the post-test]; [3] help a victim -- 164 [26%] additional students checked this on the post-test [278 pre-test vs. 442 post-test]; and [4] confront a bully -- 140 [22%] additional students check this on the post-test [253 pre-test vs. 393 post-test]. Sample responses when asked how they will modify their behavior included 'include people', 'work on how I say things to certain people', 'treat others better', 'think before I speak', 'not tease people or treat them badly' and 'help people when they need it'.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and

806 Communities
Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Competing Public priorities
- Competing Programmatic Challenges

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

A total of 37 subjects [19 boys and 18 girls] participated in an evaluation of the **Healthy Outcomes for Teens [HOT]** project website. All subjects liked to use the website to learn about healthy eating and physical activity. The main reasons for liking the website were that it was better than learning in a classroom, more fun because of interactive features, the voiceover feature, and the ability to learn at their own pace. The preference of the interactive features for being helpful was in the following order: videos [68%], games [62%], pictures [41%] and voiceovers [20%]. The majority [70%] of the subjects thought nothing was distracting, but 16% found seeing ratings of friends as distracting and 22% found Google maps as distracting. Some subjects thought that seeing the ratings of friends [19%], Google maps [35%], and crosswords and review games [19%] added least to the overall objective of learning about healthy eating and physical activity. About 60% of the subjects said they would not spend more time reading the material if there were fewer interactive features. On the other hand, 68% of subjects would log in at home if given access to the intervention website. To design an ultimate website for learning, the participants suggested adding games [43%], videos [32%], pictures [19%], being the same as the HOT project [14%], not having too many difficult words [14%], and providing for social interaction like Facebook [11%].

Evaluation of a project focused on strengthening low-income rural Latino families to prevent childhood obesity determined that the intervention was effective in increasing healthy food consumption, decreasing sugar-sweetened beverage consumption, improving shared family meal quality, and increasing physical activity. Although not targeted, 65% of the Latino children and 82% of the parents were overweight or obese [illustrating a crucial need for intervention]. The support is allowing us to adapt and make the curriculum available broadly with an eventual goal of decreasing obesity among Latino families, especially in rural areas. The focus groups are helping shed more light on effective intervention strategies that will be rolled into the on-going adaptations of the materials.

In 2012, pre- and post-evaluations consisting of four sections of questions were collected from 124 participants at the beginning and again at the end of **I on Diabetes** programs conducted in seven counties in Illinois. **I on Diabetes** is a series of 2 ½-3 hour face-to face sessions designed for anyone interested in preventing or managing diabetes. Content of the program series addresses diabetes treatment goals and self-monitoring, managing carbohydrates, sodium, cholesterol and fat portions, planning meals, and reading food labels. Food demonstrations, taste testing, and recipes assisted participants in using artificial sweeteners, low-fat products, and herbs and spices. All but seven of the 124 participants who completed all or some of the sections of the evaluation indicated increasing their confidence, skills, or practices in managing their diabetes.

Improved Ability To Manage Diabetes

Ninety-two [92] of 124 participants [74%] who completed the series of questions indicated that they improved their ability to manage diabetes in one or more areas. Using a four-part scale ranging from 'strongly agree' to 'strongly disagree' we found that 54 of 124 participants [44%] who completed the evaluations indicated they improved their ability to select healthier choices when dining out; 52 [42%] indicated they could easily select foods that fit their meal plan; 52 [42%] reported they could now more easily prepare healthy foods; and 40 of 124 [32%] increased agreement that healthy foods taste good. Only 24 of 124 [19%] of the participants indicated feeling they had improved their ability to easily talk to the doctor about their diabetes.

Improved Confidence In Diabetes Self-Management

A second series of questions on the evaluation was designed to identify increases in the confidence of the participants to manage their diabetes using another four-part scale ranging from 'not confident' to 'very confident'. One hundred and five [105] of 124 participants [84%] indicated that they improved their confidence in managing their diabetes. More than half of the 124 who answered these questions indicated an increased confidence in: following a healthy diabetes meal plan [84 or 68%]; knowing which foods have carbohydrates [71 or 57%]; estimating the amount of food you should eat [70 or 56%]; preparing foods that fit into their meal plan [64 or 52%]; and selecting foods that will reduce the risk for heart disease [64 or 52%]. Only 36 [29%] felt they had increased confidence in talking with their doctor about their health.

Increased Frequency Of Recommended Actions To Manage Diabetes

A final series of questions explored increased frequency in using recommended practices by the participants. Using a four-part scale ranging from 'never' to 'almost always', 107 of 124 participants [86%] reported increasing their frequency in taking at least one recommended action. More than half of the participants revealed increasing the following practices: following a meal plan to help manage diabetes [71 or 57%]; setting goals to help manage their diabetes [69 or 56%]; and using food labels to plan their meals [64 or 52%]. From one-third to one-half indicated increasing their frequency in taking the following actions: keeping track of the amount of foods with carbohydrates they eat each day [59 or 48%]; trying to limit fat intake [45 or 36%]; reading food labels [44 or 35%]; and trying to be physically active [42 or 34%]. Thirty-two [26%] indicated trying to limit salt intake and 28 [23%] increased eating at least three regularly-spaced meals a day.

A pre- and post-test evaluation format consisting of 25 questions tailored to the health activity topics taught at each of six **Health Jam** delivery sites was used to identify knowledge increases. All but three of the 415 youth participants who completed the pre- and post-tests were able to correctly answer at least one question on the post-test that was incorrectly answered on the pre-test. For example, more than half of the youth [137 of 241] at two **Health Jam** sites recognized that one must walk half a mile to burn off the calories contained in one small coated chocolate candy piece. At another site 37 of 71 youth [52%] correctly identified that obesity was the factor that causes type 2 diabetes after participating in **Health Jam**. A paired-samples t-test analysis indicated a statistically significant increase in the correct answers to questions on the post-test as compared to the pre-test for the above examples, as well many of the other questions for each of the delivery sites.

For the walk, youth supported each other to complete 30 minutes of daily physical activity and to track the number of miles they walked. By working together, 100 percent of the youth achieved their goal and walked the equivalent of the length of Illinois.

Key Items of Evaluation

All but seven [94%] of the 124 **I on Diabetes** participants who completed all or some of the sections of the evaluation indicated increasing their confidence, skills, or practices in managing their diabetes [especially with respect to selecting healthy food choices and following a healthier meal plan to manage their diabetes]. Using a four-part scale ranging from 'strongly disagree' to 'strongly agree' 92 of 124 participants [74%] who completed the series of questions indicated that they improved their ability to manage diabetes in one or more areas. Using another four-part scale ranging from 'not confident' to 'very confident' 105 of 124 participants [84%] indicated that they improved their confidence in managing their diabetes in one or more areas. Using a four-part scale ranging from 'never' to 'almost always' 107 of 124 participants [86%] reported increasing their frequency in taking at least one recommended action to manage their diabetes.

The results of evaluations comparing responses to the same questions at the beginning and at the end of participation in **I on Diabetes** strongly suggest that the program was impacting participants' management of diabetes.

Health Jam is a mature program that through paired t-test significance tests continually evidences knowledge gained regarding healthy eating and exercise.