

**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%		20%	
704	Nutrition and Hunger in the Population	20%		10%	
724	Healthy Lifestyle	10%		20%	
802	Human Development and Family Well-Being	20%		15%	
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	0%		10%	
805	Community Institutions and Social Services	10%		5%	
806	Youth Development	20%		20%	
	<b>Total</b>	100%		100%	

**V(C). Planned Program (Inputs)**

**1. Actual amount of FTE/SYs expended this Program**

Year: 2014	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	0.0	0.0	6.0	0.0
<b>Actual Paid</b>	0.2	0.0	14.4	0.0
<b>Actual Volunteer</b>	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
802048	0	1644398	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
802048	0	1644398	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
6439704	0	3851206	0

## V(D). Planned Program (Activity)

### 1. Brief description of the Activity

Activities in 2014 included a research program aimed at preventing the burden of adult obesity among women [rather than waiting until overweight or obesity has developed, this study is intended to identify the determinants of weight gain prevention and to apply principles of weight gain prevention strategies to food-based dietary guidance], the generation of information on how immigrant Latino parents raising adolescents in the U.S. navigate discontinuities between their culture of origin and the family's new environment [given the growth of the Latino population, particularly in rural settings, this project has the potential to inform research, policy and practice], the development of a choline-sensitive behavioral paradigm of learning and memory that provides clear evidence that sensitive periods exist during cognitive development, the creation of a measurement tool that identifies stay-at-home father families and their type [choice and non-choice] and measures the reasons leading these families to such paid-work and care arrangements, the characteristics of these families, and the well-being at the individual [each spouse and the children], couple, and family levels in both urban and rural areas, studies that contribute to the understanding of how dietary isoflavones impact metastatic progression in an experimental model of breast cancer metastasis, continued development of the Fun with Sisters and Brothers suite of programs that are aimed at enhancing children's sibling relationship quality, a project with the goal of developing evaluation methods and criteria that support the identification of the highest quality nutrition education apps, work to complete Phase I and execute Phase II of the Multidimensional Cultural Identity Study [focusing on the presence of daily variations in and well-being implications of multiple cultural identities among non-metropolitan youth], and a study to determine the barriers and benefits as perceived by teachers in implementing an online nutrition and physical activity program for middle school students.

Activities also included laboratory studies to identify physiological and biological factors related to healthy family interactions during mealtimes and healthy outcomes in children, the development of education and training programs to promote in-home cooking and positive times during shared family mealtimes, the dissemination of materials through new social media [podcasts, twitter, Facebook] identifying positive and health-promoting aspects of shared family mealtimes, the development of new knowledge of the basic processes involved in harmonious parent-child relationships and how positive relationships with parents may provide children with building blocks for developing positive relationships with peers, work to illustrate the potential epigenetic mechanism from the exposure to soy genistein which contributes greatly to the regulation of a critical signaling pathway during colon carcinogenesis [the Wnt pathway], research to establish a human infant microbiome associated [HIMA] piglet model at the University of Illinois [a HIMA piglet model will enable hypothesis-driven research on host-microbe

interactions and mechanisms of action by probiotics and other dietary components that will be more directly translatable to the human infant], work to strengthen interdisciplinary research initiatives dedicated to child and family health and wellbeing [through expanded interdisciplinary collaborations in the bio-behavioral, nutrition, and physical activity research sciences the University of Illinois Family Resiliency Center will be able to extend its current research portfolio into more complex research designs], and an effort to improve our understanding of the role of maternal protein deficiency that may provide additional insight into the long-term health of mothers [new knowledge of the effects induced by maternal protein intake may enable the development of a nutritional intervention to ensure that nutrition during and after gestation is beneficial to adult health].

Conference presentations included the National Council on Family Relations, International Association for Relationship Research, Society for Research in Child Development, American Educational Research Association, La Coordinación para la Innovación y Aplicación de la Ciencia y la Tecnología [CIACYT] at the Universidad Autónoma de San Luis Potosí, International Leadership Association, Association of Leadership Educators, 6th International Congress on Food Science, Biotechnology, and Safety, Society for Research in Child Development Special Topic Meeting: New Conceptualizations in the Study of Parenting-At-Risk Children, Phytochemical Society of North America, Society for Research on Human Milk and Lactation, Experimental Biology 2014, Universidad Nacional Autonoma De Mexico [UNAM], Society for Research on Adolescence, Cambio de Colores Conference, Association for Asian American Studies, and the Institute of Food Technologists.

This past year saw increased delivery of an Extension program series on brain health that was offered to provide information on strategies and techniques for building a better memory, learning about how brain health is directly related to body health and how to maintain that health, and exploring and practicing several exercise strategies to challenge the brain. Each segment of the series [**Building a Better Memory for Everyday Life**, **FIT WITS**, and **Head Strong**] were also offered to meet the needs of various audiences.

**Building Bridges Across Generation Gaps** workshops were developed and delivered at 16 locations in the state to Illinois Municipal Retirement Fund retirees as well as to other local audiences. **Coming of Age: Explore Your Future**, another new four-part series, was developed for those who are considering retirement soon or are newly retired to help participants examine the social aspects of retirement to identify their strengths and interests and plan for the post retirement activities. Resources related to aging and retirement were also available through **Long-Term Care: Talking, Deciding, and 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**, a comprehensive website that includes blogs, e-news, and monthly news articles. **Share Your Life Story**, a multi-week life series, provided a therapeutic approach to life renewal. Additionally, Extension educators [nutrition & wellness, family life, and consumer economics] reached out to all counties statewide by offering similar 'healthy living' programs focused on older adults. For example, an interdisciplinary series of 79 programs titled **Learning is Timeless** continued to be delivered at the Urban Leadership Center in Chicago to help 1,120 participants develop skills in health [9 programs with 109 participants], family life [37 programs with 109 participant contacts], consumer and money management [7 programs with 100 participant contacts], and horticulture [12 programs with 198 participant contacts] to reduce stress and promote better mental and physical health. In addition, **Making a Meaningful Nursing Home Visit** was developed and delivered to multiple groups throughout Illinois. **Simplify Your Life: Clear the Clutter & Your Stress** workshops continue to be delivered.

This year a first-time webinar series attended by 117 participants was conducted based on **Your Young Child**, a research-based curriculum and set of customized brochures that help parents of infants

and toddlers manage seven difficult stages and behaviors that are linked to child abuse and neglect. Early in 2014, Family Life Extension Educators engaged in a new partnership with Pennsylvania State University and the University of Nebraska at Lincoln through a U.S. Department of Defense grant to deliver the **Childcare and Youth Training and Technical Assistance Project [CYTTAP]** which reached 384 childcare providers. Extension Family Life educators also conducted multi-session programming on parenting and adult caregiving. **Parenting 24/7** is a one-stop source of 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 aged-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. **Parenting Again** topic-based discussion guides were available for grandparents raising grandchildren. The **Intentional Harmony: Managing Work and Life** curriculum and web-based self-study focusing on nurturing adult relationships continued to be offered.

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. **SNAP-Ed** Extension staff members reached 444,620 youth who were taught healthy eating choices and 31,240 youth who were reached through **EFNEP** in 2014. 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-2<sup>nd</sup> grade classrooms and by **EFNEP** staff in 3<sup>rd</sup> through 5<sup>th</sup> grade classrooms. Under the leadership of 4-H Youth Development staff members, the **Health Jam** program was conducted for 5<sup>th</sup> graders and offered support related to exercise, wellness, nutrition, and health careers information using an experiential learning approach. New interdisciplinary programming involving **4-H** in conjunction with **Supplemental Nutrition Assistance Program Education [SNAP-Ed]** engaged teens to teach primarily fifth-grade youth to make healthy food choices through a new program titled **4-H Food Smart Families** that was conducted in after school programs and summer camps.

Extension programs also focused on chronic diseases including heart disease and diabetes. **I on Diabetes** was taught as a four-part Extension program that combined lectures, food demonstrations, activities, and samples of healthy foods. **Diabetes Lifelines**, a bi-monthly web accessible newsletter provided information in both English and Spanish to clientele on a variety of diabetes-related topics [located at <http://www.urbanext.uiuc.edu/diabetes>; more than 56,000 English page views and more than 109,000 Spanish page views recorded for this past year along with 12,500 app connections]. Two additional websites, **Your Guide to Diet and Diabetes** and **Diabetes Recipes**, logged more than 341,000 English page views and more than 336,000 Spanish page views. The **Meals for a Healthy Heart** program is a two-part series focused on increasing participant awareness of the risk factor 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. As a means to target overweight and obesity, the new **Putting Wellness to Work** worksite series was delivered in a lunch-and-learn format to help businesses and organizations meet employee wellness goals.

Additional programming related to youth health and development included **Breaking the Code**, a research-based prevention simulation and guided discussion for junior high and senior high youth supported by statistical research on bullying among teens. Newly added **4-H Health Rocks!** programming, a national healthy living program aimed at 8-16 year olds with the goal of bringing youth,

families, and communities together to reduce tobacco, alcohol, and drug use, was conducted for 795 Cook County youth.

**2. Brief description of the target audience**

Members of the target audience included young adult and midlife women, nutrition and dietetics professionals, breast cancer survivors, health care professionals, families with more than two children in the 4- to 12-year old age range, product developers who are interested in improving health benefits using microencapsulation technology, research scientists interested in early childhood obesity prevention, early childhood educators, parents of young children, Extension educators, nutrition Extension specialists, postdoctoral fellows in human development, family science, psychology and related social and behavioral sciences, research scientists in childhood obesity prevention and food insecurity, parents and educators of children between birth and eight years of age, eXtension educators in nutrition and family life, policy makers interested in child health and wellbeing, university students and the administrators and educators responsible for their growth and development as emerging leaders, professionals in food science and human nutrition, commodity groups, clinicians and practitioners who serve children and families, and scientists and practitioners interested in the regulation of intestinal digestive and absorptive function. Extension targeted youth, teachers, parents, grandparents, caregivers of adults, retirees, childcare providers for children of off-installation military families, individuals with chronic diseases, and working couples.

**3. How was eXtension used?**

Sixteen Extension faculty members or staff are members of eXtension Communities of practice that include Alliance for Better Child Care; Families, Food, and Fitness; Families and Child Wellbeing Learning Network; Family Caregiving; Healthy Food Choices in School; Just in Time Parenting; and Military Families.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	29815	73927	26096	0

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

**Patent Applications Submitted**

Year: 2014  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

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2014	Extension	Research	Total
Actual	0	53	53

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Number Of Completed Hatch Projects

Year	Actual
2014	11

**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	Numbers Of Individuals Taking Recommended Actions To Manage Heart Disease And Diabetes Through Planning Menus/Choosing Foods Using The Food Guidance System
4	Number Of Children/Youth That Gained Knowledge About Eating Healthier Foods [Those Low In Fat And High In Fiber]
5	Number Of Children/Youth That Increased Physical Activity
6	Promoting Social And Emotional Health Among Young Children
7	Addressing Gaps In Student Achievement
8	Identifying Chronic Stressors In The Lives Of Low-Income African-American Families
9	Utilizing A Family Resiliency Framework To Address Childhood Obesity
10	Development And Evaluation Of New Therapies For ER-Negative Breast Cancer
11	Number Of Youth That Increased Knowledge Of Bullying And Actions To Take In Dealing With A Bullying Situation
12	Number Of Families/Caregivers That Gained Knowledge About Eating Healthier Foods [Those Low in Fat and High in Fiber]
13	Number Of Individuals Improving Financial Capability And/Or Adopting Consumer Behavior Skills
14	Number Of Adults That Apply Skills As They Age In Maintaining Brain Fitness And Cognitive Health
15	Improved Understanding Of How Dietary Isoflavones Impact Metastatic Progression
16	Continued Development Of The Fun With Sisters And Brothers Suite Of Programs
17	Encapsulation Of Bioactive Compounds Into Food Products

18	Toward An Improved Understanding Of The Health Benefits Of Peptides
19	Improving Our Understanding Of Social-Emotional Development Among Young Children From Rural And Suburban Communities
20	Increased Knowledge Of Healthy Lifestyle Choices And Consequences Of Actions With Respect To Healthy Lifestyle Choices
21	Knowledge Gained Regarding Strategies And Skills Needed By Childcare Providers To Enhance Child Development
22	Improved Emotional Health And Well-Being Through Actions Taken To Reduce Household Clutter And Accompanying Stress

**Outcome #1**

**1. Outcome Measures**

Number Of Research Projects Utilizing The Child Development Laboratory Research Database

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	22

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

The purpose of this project is for the continuation of the Child Development Laboratory [CDL] Research Database at the University of Illinois at Urbana/Champaign [UIUC]. This project has been designed to facilitate an interdisciplinary, longitudinal, and programmatic research agenda at the Child Development Laboratory in the areas of child development and family studies. The following objectives will be addressed by the project: [1] To refine and further develop a longitudinal database on enrolled children and their families for the purpose of enhancing research projects being implemented at the CDL; [2] To promote long-term, interdisciplinary collaborations among faculty within the Department of Human and Community Development [HCD] and from across campus via reciprocal exchanges of data through the database project; and [3] To support systematic student involvement in interdisciplinary research.

### **What has been done**

In addressing the three objectives outlined above, the project focuses on four overarching developmental themes related to the teaching, research, and outreach functions of faculty within HCD and from across campus. These themes are: [1] Examination of the impact of high-quality early childhood programming on child outcomes; [2] Examination of emerging social relationships within early childhood contexts for children with and without disabilities and/or developmental delays; [3] Examination of the developmental trajectories of language and cognitive development during the early childhood years; and [4] Examination of the child care context as a risk factor for early childhood obesity and inappropriate weight gain.

### **Results**

A total of 22 research projects were conducted at the CDL during the current reporting period. Eighteen of the 22 studies accessed information from the CDL Research Database project as part of their data collection. These 22 projects represent a diverse array of disciplines [including Human Development and Family Studies, Advertising, Anthropology, Landscape Architecture, Art and Design, Nutritional Sciences, Communications, Community Health, and Music Education], and all focused on various aspects of children's growth and development [such as social/emotional development, cognitive functioning, and physical growth and health]. Ten of the projects were investigations conducted by graduate students working under the direction of a faculty advisor, while 12 of the projects were faculty-led investigations.

## **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population
724	Healthy Lifestyle
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions 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**

Numbers Of Individuals Taking Recommended Actions To Manage Heart Disease And Diabetes Through Planning Menus/Choosing Foods Using The Food Guidance System

#### **2. Associated Institution Types**

- 1862 Extension

#### **3a. Outcome Type:**

Change in Action Outcome Measure

#### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	67

#### **3c. Qualitative Outcome or Impact Statement**

##### **Issue (Who cares and Why)**

Heart disease ranks as the number one cause of death, and diabetes ranks as the seventh leading cause of death in Illinois according to the Illinois Department of Public Health. In fact, more than 920,000 adults [8.9%] in the state have been diagnosed with diabetes according to 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, 60 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. Meals for a Healthy Heart is a two-part face-to face series that focuses on increasing participant awareness of the major risk factors of coronary heart disease using methods that are similar to the diabetes programs. Evaluations are distributed at the end of the program, and one and three months after the program has ended.

##### **Results**

All but two 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:

Using a four-part scale ranging from 'Strongly disagree' to 'Strongly agree', 46 of 60 participants

[77%] 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', 48 of 60 participants [80%] 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', 48 of 60 participants [80%] 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 this planned program Evaluation of Results section.

All of the 19 who completed all or sections of the Meals for a Healthy Heart one-month follow up evaluation indicated taking at least one, and as many as six actions including 18 [95%] who read more food labels to help plan their meals, 15 [79%] who used less sodium to season food [a recommended practice to reduce the risk of heart disease], and 13 [68%] who took action to make a weekly meal plan.

Additional information regarding specific areas of changes in skills, confidence, and practices related to participants' management of diabetes are included in this planned program Evaluation of Results section.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

#### Outcome #4

##### 1. Outcome Measures

Number Of Children/Youth That Gained Knowledge About Eating Healthier Foods [Those Low In Fat And High In Fiber]

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
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2014

1232

### 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. Lack of proper nutrition and inadequate physical exercise are two of many interactive factors that lead to childhood obesity.

#### What has been done

University of Illinois Extension 4-H in conjunction with Supplemental Nutrition Assistance Program - Education [SNAP-Ed] Extension Educators engaged teens to teach primarily fifth-grade youth to make healthy food choices through a new program titled 4-H Food Smart Families that was conducted in after school programs and summer camps. Additionally, the program was designed to encourage youth to share what they learned with their families. Both the teen teachers and the participants were asked to complete a post-program questionnaire that included questions related to food choice knowledge and actions taken by the youth and their families. The teen evaluation also included items related to positive youth development.

#### Results

The 4-H Food Smart Families questionnaires were completed after the experience by 1,441 youth and 84 teen teachers. With respect to frequency of healthy food actions taken, youth were asked to check 'Almost never', 'Some days', 'Most days', or 'Every day'. Results indicated that 87.3% of the youth eat breakfast, 84.2% engage in physical activity, 82.7% eat fruit, 62.6% choose healthy snacks, and 57.4% eat vegetables every day or most days. Three-fourths also indicated that they usually often wash their hands. The youth used a 4-part scale that revealed that as a result of their program participation, 70.4% 'Agreed' or 'Strongly agreed' that they learned skills for buying food on a budget with one-half having taught their family those skills. Nearly all [94.5%] learned cooking skills that were used by 83.3% to prepare food at home. Using this same agreement scale four-fifths of the youth 'Agreed' or 'Strongly agreed' that they encouraged their families to eat meals together, and that their families have purchased healthier foods, prepared healthier foods, and prepared meals together. The teen teachers' level of agreement with respect to these statements was slightly higher than for the youth. As a result of their participation, three-fourths of the teen teachers drink less soda and eat more whole grains, and more than 90% drink more water and eat more fruits and vegetables.

### 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
805	Community Institutions and Social Services
806	Youth Development

**Outcome #5**

**1. Outcome Measures**

Number Of Children/Youth That Increased Physical Activity

Not Reporting on this Outcome Measure

**Outcome #6**

**1. Outcome Measures**

Promoting Social And Emotional Health Among Young Children

Not Reporting on this Outcome Measure

**Outcome #7**

**1. Outcome Measures**

Addressing Gaps In Student Achievement

Not Reporting on this Outcome Measure

**Outcome #8**

**1. Outcome Measures**

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

Not Reporting on this Outcome Measure

**Outcome #9**

**1. Outcome Measures**

Utilizing A Family Resiliency Framework To Address Childhood Obesity

Not Reporting on this Outcome Measure

### **Outcome #10**

#### **1. Outcome Measures**

Development And Evaluation Of New Therapies For ER-Negative Breast Cancer

Not Reporting on this Outcome Measure

### **Outcome #11**

#### **1. Outcome Measures**

Number Of Youth That Increased Knowledge Of Bullying And Actions To Take In Dealing With A Bullying Situation

#### **2. Associated Institution Types**

- 1862 Extension

#### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

#### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	46

#### **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 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 goals of the Breaking the Code [BTC] program are that youth will: [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 to process the experience.

##### **Results**

Data from a subset of 137 students who completed both pre- and post-program evaluations in 2014 have continued to show increases in the number of students who definitely would: [1] Ask an adult for help +46 [34% additional students checked this on the post-test [38 pre-test versus 84 post-test]; [2] Confront a bully +34 [25%] additional students checked this on the post-test [50 pre-test vs. 84 post-test]; [3] Help someone who is being bullied +30 [22%] additional students checked this on the post-test [57 pre-test vs. 87 post-test]; and [4] Want to help change a bullying situation +30 [22%] additional students checked this on the post-test [61 pre-test vs. 91 post-test]. Sample responses when asked what they will do differently follow: 'Thank you, you showed me that bystanders are the most powerful', 'I think that bullying should stop from what I've heard in Breaking the Code and at school', and 'It helps me stop bullying'.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
806	Youth Development

#### Outcome #12

##### 1. Outcome Measures

Number Of Families/Caregivers That Gained Knowledge About Eating Healthier Foods [Those Low in Fat and High in Fiber]

Not Reporting on this Outcome Measure

#### Outcome #13

##### 1. Outcome Measures

Number Of Individuals Improving Financial Capability And/Or Adopting Consumer Behavior Skills

Not Reporting on this Outcome Measure

#### Outcome #14

##### 1. Outcome Measures

Number Of Adults That Apply Skills As They Age In Maintaining Brain Fitness And Cognitive Health

##### 2. Associated Institution Types

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	84

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

With growth in this country's aging population, concerns about maintaining one's memory as well as recognizing and managing brain disease are issues of great interest to the aging and their families in maintaining their quality of life.

**What has been done**

Drawing on research being done at the University of Illinois and other research institutions, a total of six three-part program series on brain health were conducted by the four Extension Educators, Family Life in both rural and metropolitan areas in Illinois this past year. The first session of the series addressed strategies and techniques for Building a Better Memory. In the second session [Fit Wits] participants learned about how brain health is directly related to body health and how to maintain that health. In the third session [Head Strong: Exercise Strategies to Enhance Memory and Thinking], participants explored and practiced several exercise strategies to challenge the brain. In addition, sessions were delivered as a stand-alone program that reached 492 individuals throughout the state. At the end of each session, participants provided written feedback on changes in knowledge, plans for using the knowledge they gained, and activities they tried at home.

**Results**

The following results were collected from the 84 participants in three of the series that were taught. Distribution and analysis of evaluations after the first three sessions of Brain Health revealed that all of the 84 participants learned something. Evaluation responses from those surveyed indicated that 100% of participants reported trying 'brain health' activities between each of the three sessions offered. Some of their activities included purposely recalling information from their long term memories like childhood friends' names, states, and sports teams. Seventy-two percent [72%] of the respondents reported specific strategies or activities they will continue on their own, some of which included practice focus and attention activities, make lists, try Sudoku, word games, creating things with their hands, and activities that help them pay attention.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
724	Healthy Lifestyle

802 Human Development and Family Well-Being

### **Outcome #15**

#### **1. Outcome Measures**

Improved Understanding Of How Dietary Isoflavones Impact Metastatic Progression

#### **2. Associated Institution Types**

- 1862 Research

#### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

#### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

#### **3c. Qualitative Outcome or Impact Statement**

##### **Issue (Who cares and Why)**

Breast cancer [BC] is the most common cancer affecting women in the United States. Metastatic BC [Stage IV] is the leading cause of death in BC patients. Cancer metastasis is a multi-step process in which cancer cells first proliferate at a primary site, invade the basement membrane and stroma of the primary organ, followed by injection into the circulatory system. Bone is one of the most common sites for metastasis in BC and micrometastasis in bone marrow was detected in 30% of patients with stage I, II, or III BC at the time of primary surgery and is a strong indicator of poor prognosis. The role dietary soy isoflavones play in BC with bone micrometastasis is unclear.

##### **What has been done**

In this study, we examined the effect of genistein, daidzein, [-]-equol or a mixture of soy isoflavones on BC with bone micrometastasis using a preclinical model of murine mammary cancer 4T1 cells engineered with luciferase. A small number [1,000] of 4T1 cells were injected into the tibia of female Balb/c mice to establish microtumors in bone. Soy isoflavones were supplemented in the diet at 750 mg/kg and provided to mice from 3 weeks before to 3 weeks after cell injection. Dietary soy isoflavones enhanced the growth of bone microtumors on day 8 after cell injection and stimulated metastatic tumor formation in lungs. This increase was due, in part, to the increase in Ki-67 protein expression in the metastatic tumor cells in lungs. In addition, we showed that soy isoflavones had limited influence on growth, motility or invasion of 4T1 cells in vitro at concentrations lower than 10 mM.

##### **Results**

We monitored the progression of 4T1 tumors by injecting 1,000 4T1 cells into the marrow cavity of

the tibial bone. The cells were engineered with luciferase; therefore, the growth of micro-tumors in bone could be monitored using bioluminescent imaging [BLI] in real time. No bioluminescent signals were detected on day 2 [D2] after cell injection. Bioluminescent signals from tumors in bone were detectable on D6. The signals in the control group and the mixed isoflavone group continued to increase until the end of the study, while the signals in the genistein, daidzein and equol groups peaked on D16, and then reduced on D20. To examine the effect of soy isoflavones on metastatic tumor formation on the surface of lungs in mice, we counted the white tumor nodules formed by 4T1 cells on the lung surface. Mice in the control group had an average of 2 tumor nodules on their lungs, while mice in the dietary soy isoflavone-treated groups had a significant increase in tumor nodule count with an average of 6 tumor nodules on their lungs [P<0.001]. To examine microscopic metastasis inside lungs, sectioned lung tissues were stained with H&E. Tumor colonies in the sectioned lung tissue were counted and tumor area was measured. Mice in the control group had an average of 2 tumor colonies per lung section, while mice in the dietary soy isoflavone-treated groups had a significant increase in tumor colony count with an average of 7 [genistein], 6 [daidzein], 9 [-]-equol] or 11 [mixed isoflavones] tumor colonies [P<0.001]. Tumor colonies in the mixed isoflavone and [-]-equol groups had a large average size when compared to the control group, while the genistein and daidzein groups did not. Although not all treatment groups showed a larger tumor colony size, the two variables, tumor count and tumor area, showed a significant correlation [Pearson's r= 0.86, P<0.001], indicating similar patterns when representing lung metastasis inside lung tissues.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle

#### Outcome #16

##### 1. Outcome Measures

Continued Development Of The Fun With Sisters And Brothers Suite Of Programs

##### 2. Associated Institution Types

- 1862 Extension
- 1862 Research

##### 3a. Outcome Type:

Change in Condition Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2014	0

##### 3c. Qualitative Outcome or Impact Statement

### **Issue (Who cares and Why)**

Evidence is mounting that children who experience more positive relationships with a sibling are also more likely to enjoy better developmental outcomes. Conflicts among siblings are a prime source of dissatisfaction for most parents and children. Although a certain amount of conflict appears to be 'normal' for siblings, these disputes can be disruptive to family life due to both their frequency and qualitative characteristics. In addition to being the most common type of family strife, sibling conflicts may be quite aggressive and even violent. Intractable conflictual relations among young siblings have been shown to be predictive of later difficulties, such as antisocial and disturbed behaviors in adolescence. These factors have led some investigators to refer to sibling relationships as potential 'training-grounds' for violence and for establishing chronic coercive interactions with others. Longitudinal research has revealed that without intervention, the quality of sibling interactions tends to be relatively consistent over the course of childhood and adolescence, thereby leaving siblings with poor quality relationships at a disadvantage.

Thus, a key challenge is to help siblings develop positive relationships so that they can more fully reap the advantages of sibling support. Meeting such a challenge requires a clear understanding of the factors that promote supportive sibling relationships as well as knowledge of evidence-based strategies that have strong potential for enhancing sibling relationships during middle childhood.

### **What has been done**

Few techniques are currently available to help children achieve these goals. Siblings in middle childhood may be particularly disadvantaged if they have not had the opportunity to develop the social and emotional competencies that set the stage for prosocial and supportive relationships. Therefore, the current investigation will extend a successful, evidence-based approach for strengthening prosocial sibling relationships by developing and testing a developmentally-appropriate curriculum for children in middle childhood, the Even More Fun with Sisters and Brothers program. This research will contribute to our understanding of the qualities of sibling relationships in middle childhood while providing a tool that is expected to help families.

### **Results**

Curricular developments and evaluation informed the continued development of the Fun with Sisters and Brothers suite of programs that are aimed at enhancing children's sibling relationship quality. Theoretical understanding of the factors that promote prosocial sibling interactions was enhanced. An unexpected positive finding was that children's improvements in sibling relationship quality were also associated with gains in parents' abilities to manage the negative emotions that are often elicited when their children are engaged in conflict. Results indicated that parents gained in emotion regulation competencies, which enabled them to use more effective parenting strategies when responding to their children's conflicts.

## **4. Associated Knowledge Areas**

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

## **Outcome #17**

### **1. Outcome Measures**

Encapsulation Of Bioactive Compounds Into Food Products

### **2. Associated Institution Types**

- 1862 Research

### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

As part of the development of encapsulation technology, encapsulation of bioactive compounds is a very promising area [as well as the encapsulation of probiotics]. Bioactive compounds, such as resveratrol, can help to prevent and alleviate certain disease states. The incorporation of these compounds into food products can provide a convenient means to disseminate functional food health benefits to consumers. Microencapsulation can help to stabilize the compounds during processing, storage, and digestion, and minimize negative sensory properties.

Resveratrol was used as a target bioactive compound encapsulation. The incorporation of resveratrol in general food products is limited by the instability of resveratrol under environmental conditions and within the digestive system due to the isomerization of trans-resveratrol [bioactive form] to cis-resveratrol [bio-inactive form]. The overall goal of this research is to stabilize the bioactive form of resveratrol through microencapsulation.

#### **What has been done**

The resveratrol was encapsulated in protein-based microcapsules using dairy proteins [whey protein concentrate and sodium caseinate]. 4.8% resveratrol was added to the protein solution with and without anhydrous milk fat [AMF] and homogenized. The homogenized solutions were spray dried to produce encapsulated resveratrol powders.

The resveratrol recovery from the capsules was ranged from 37% [whey protein concentrate based microcapsules] to 66% [sodium caseinate + AMF based microcapsules]. The limited recovery of resveratrol from the microcapsules was attributed to the binding between the protein and resveratrol, which was supported by fluorescence measurements.

The stabilities of the resveratrol encapsulated in the protein matrices were evaluated by UVA

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[ultraviolet A] light testing and a 3-stage in vitro digestion model. The 3-stage in vitro digestion model included oral phase [mouth], gastric phase [stomach], and intestinal phase [small intestine]. Sodium caseinate as the wall material for encapsulation enhanced UVA light stability of resveratrol and the stability through the simulated digestive system by increasing both digestive stability and bioaccessibility of resveratrol. The digestive stability of the resveratrol encapsulated in the sodium caseinate + AMF based microcapsule was 88% while the digestive stability of the unencapsulated resveratrol was only 47%. The addition of anhydrous milk fat in the formulation did not have a significant effect on the stability of resveratrol within the microcapsule.

### **Results**

Stabilization of resveratrol was achieved through microencapsulation within a protein matrix using spray drying. In the food industry, spray drying is a common technique and the equipment is readily available to make the scale-up and production of execution of producing resveratrol microcapsules feasible. In addition, the relatively low cost of protein helps to minimize the cost of the encapsulation, thereby minimizing the additional cost of providing a stabilized form of resveratrol to the consumer.

The developed encapsulation system can be applied to other bioactive phenolic compounds such as quercetin for protection and controlled release. Future research can also compare the ability of other types of proteins, such as soy protein and pea protein, to stabilize resveratrol through encapsulation. It would also be interesting to add the resveratrol microcapsules to food products, such as chocolate and protein shakes, and evaluate consumer acceptance of these products. Consumer testing could also be completed on food products with added resveratrol, with and without the information regarding health benefits. In this way, the effect of the information about the resveratrol health claim on consumer acceptance of the product could be determined.

## **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population
724	Healthy Lifestyle

## **Outcome #18**

### **1. Outcome Measures**

Toward An Improved Understanding Of The Health Benefits Of Peptides

### **2. Associated Institution Types**

- 1862 Research

### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

### 3b. Quantitative Outcome

Year	Actual
2014	0

### 3c. Qualitative Outcome or Impact Statement

#### Issue (Who cares and Why)

Bioactive properties and peptide profiles were evaluated in protein hydrolysates of raw and commercially precooked common beans. Five varieties [Black, Pinto, Red, Navy, and Great Northern] were selected for protein extraction, protein and peptide molecular mass profiles, and peptide sequences.

#### What has been done

Potential bioactivities of hydrolysates, including antioxidant capacity and inhibition of alpha-amylase, alpha-glucosidase, dipeptidyl peptidase-IV [DPP-IV], and angiotensin converting enzyme I [ACE] were analyzed after digestion with pepsin/pancreatin. Hydrolysates from Navy beans were the most potent inhibitors of DPP-IV with between precooked and raw [IC50 = 0.093 and 0.095 mg protein/mL, respectively] not being statistically significant. Alpha-Amylase inhibition was higher for raw Red, Navy, and Great Northern beans [36, 31, 27% relative to acarbose [ac]/mg protein, respectively]. Alpha-Glucosidase inhibition among all bean hydrolysates did not show significant differences; however, inhibition values were above 40% rel ac/mg protein. IC50 values for ACE were not significantly different among all bean hydrolysates [range 0.20-0.34 mg protein/mL], except for Red bean that presented higher IC50 values. Peptide molecular mass profile ranged from 500 to 3,000 Da.

#### Results

Eleven and seventeen peptide sequences were identified in raw and precooked beans, respectively. Peptide sequences YAGGS and YAAGS from raw Great northern and precooked Pinto showed similar amino acid sequences and the same potential ACE inhibition activity. Processing did not affect the bioactive properties of released peptides from precooked beans. Commercially precooked beans could contribute to the intake of bioactive peptides and promote health.

### 4. Associated Knowledge Areas

KA Code	Knowledge Area
704	Nutrition and Hunger in the Population
724	Healthy Lifestyle

## **Outcome #19**

### **1. Outcome Measures**

Improving Our Understanding Of Social-Emotional Development Among Young Children From Rural And Suburban Communities

### **2. Associated Institution Types**

- 1862 Research

### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	0

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

The objectives of this research are: [1] To assess the extent to which early child-mother attachment security predicts theory-of-mind understanding; [2] To examine young children's theory-of-mind understanding as a predictor of children's subsequent peer competence; and [3] To test whether theory-of-mind understanding mediates associations between early child-mother attachment and later peer outcomes. In addressing these objectives, we will utilize data from three longitudinal studies of social-emotional development among young children from rural and suburban communities. The three studies were conducted at the University of Illinois and include: [1] The Children's Social Development Project-Phase 1 [supported by the PI's prior Hatch Grant]; [2] The Children's Social Development Project-Phase 2 [supported by an NSF grant to the PI]; and [3] The Toddler Transitions Project [supported by a seed grant from the Family Resiliency Center at the University of Illinois].

#### **What has been done**

Major accomplishments over the past funding year include: [1] Dissemination of findings via four publications in peer-reviewed top-tier scientific journals, with two additional manuscripts under review or revision for resubmission to top-tier journals; [2] Broad dissemination of findings via newsletters and press releases; and [3] Training opportunities for both undergraduate and graduate students in observational research methodologies, advanced statistical techniques [multilevel modeling] and preparation of conference presentations and manuscripts for publication.

#### **Results**

The main findings disseminated over the past year address key study objectives to increase our knowledge of basic processes involved in harmonious parent-child relationships and how positive

relationships with parents may provide children with building blocks for developing positive relationships with peers. In one set of papers utilizing data from the Toddler Transitions Project [TTP], our findings highlight key components of mothers' psychological adjustment, including their empathy for other people and physiological levels of stress when exposed to infant emotion vocalizations [crying], that promote mothers' availability and responsiveness to their toddler-aged children. In a second set of papers utilizing data from the Children's Social Development Project [CSDP], we have made novel contributions to our understanding of the beginnings of friendship formation very early in the life course at age three. The unique CSDP study design, in which newly-acquainted same-sex peers were observed over several play sessions across one month, permitted an assessment of how both children's characteristics [such as quality of the mother-child relationship and the child's temperament] predicted children's behavior toward each other and the quality of the children's interaction over time.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

#### Outcome #20

##### 1. Outcome Measures

Increased Knowledge Of Healthy Lifestyle Choices And Consequences Of Actions With Respect To Healthy Lifestyle Choices

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Knowledge Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2014	368

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

Recent statistics confirm what parents, teachers and other concerned adults have suspected: that children and teens continue to use tobacco, alcohol, and drugs in significant numbers.

###### **What has been done**

University of Illinois Extension Youth Development staff implemented delivery of 4-H Health Rocks!, a national healthy living program aimed at 8-16 year olds, with the goal of bringing youth, families, and communities together to reduce tobacco, alcohol, and drug use. The inauguration of

this program in Illinois was conducted at 13 sites in Chicago and the greater Cook County area. Trained teens and staff provided ten or more hours of educational hands-on activities in school classrooms, summer youth programs, and after school programs. In addition to learning the facts about drugs and the consequences of taking them, the youth engaged in educational activities that encompassed building life skills such as showing concern for others, making healthy lifestyle choices, managing stress, and developing refusal skills. A total of 628 of the 795 youth participants completed the 10 hours of required training. Five hundred and seventy-eight [578] youth completed the retrospective post-pre evaluation comprised of seventeen items.

### **Results**

At the last session of 4-H Health Rocks! youth were asked to rate the strength of their agreement with thirteen statements regarding drug usage and life skill development using a scale of 1-4 with 1=strongly disagree and 4=strongly agree. They were instructed to provide a rating that reflected their increased agreement 'after' the program and then provide a rating of their increased agreement 'before' the program. Three hundred and sixty-eight youth [64%] increased their agreement with at least one of the statements when comparing post training ratings and pre-training ratings. One-fourth of the youth increased their agreement with the following statements: [1] Using drugs can ruin my relationship with my family and friends [knowledge of the consequences of actions] and [2] If a friend wanted to try drugs, I can talk them out of it [concern for others life skill]. Nearly one-fourth also increased their agreement with the statements: [3] People who use drugs sometimes see or hear things that are not really there; [4] Once you start smoking, it is hard to stop; and [5] When I feel stressed I am able to talk about it with people I trust. In response to the final set of four questions regarding program satisfaction and experience, 3.3 was the average rating on the four-part scale for the statement 'I learned a lot during the training'. Complete findings can be found in the Evaluation section of this planned program.

## **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
724	Healthy Lifestyle

### **Outcome #21**

#### **1. Outcome Measures**

Knowledge Gained Regarding Strategies And Skills Needed By Childcare Providers To Enhance Child Development

#### **2. Associated Institution Types**

- 1862 Extension

#### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

#### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
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2014

176

### 3c. Qualitative Outcome or Impact Statement

#### Issue (Who cares and Why)

As more women and mothers enter the workforce, child care has become an increasingly important public policy issue. These issues include the growing need for childcare, childcare affordability, and child care quality. Education on child development is critical to creating and sustaining quality child care.

#### What has been done

Early in 2014, Family Life Extension Educators engaged in a partnership with Pennsylvania State University and the University of Nebraska at Lincoln through a grant from the Department of Defense to deliver the Childcare and Youth Training and Technical Assistance Project [CYTTAP]. The goal of the CYTTAP program is to improve the quality and quantity of childcare for off-installation military families by providing training for childcare providers. The training was held across Illinois in eight locations and included topics from Rock Solid Foundations curricula [emotional literacy, responsive environments, friends and play skills] and Better Kid Care modules [math, sparking kids' curiosity, and emergency preparedness]. A total of 384 childcare providers participated in one or more of the training curriculum topical sessions. An end-of-program retrospective pre-post evaluation to identify changes was collected from participants. A follow-up evaluation was distributed to those for whom mail or email addresses were available; however, a low response rate occurred and precluded reporting those findings.

#### Results

End-of program evaluation surveys were collected from a total of 356 participants [129 from Rock Solid Foundations participants and 227 from Better Kid Care participants]. The evaluations included both questions related to program satisfaction and improvements and knowledge and confidence in implementing childcare practices and strategies. Two-thirds of the Rock Solid Foundations evaluation respondents [89 of 129] indicated they had increased their understanding and application of what they learned into their work in childcare settings. Using a 4-part scale with 1=None and 4=A lot, more than half of the respondents increased their level of understanding regarding: [1] Strategies to promote children's social and emotional development; [2] The importance of being intentional about supporting children's social emotional competency; [3] Strategies that can be used to build positive relationships with children; [4] Strategies that can be used to build social skills in young children; and [5] The impact of the environment on helping children expand their social skills. In addition, three-fifths [79 of 129] increased their likelihood to apply one or more practices or strategies they learned in the training. All but four of the 227 Kid Care Instructor module evaluation respondents indicated that they learned 'Much' or 'Very much' that applies in their work in childcare settings and nearly half [110] increased their confidence in implementing the strategies discussed in the training.

### 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

## **Outcome #22**

### **1. Outcome Measures**

Improved Emotional Health And Well-Being Through Actions Taken To Reduce Household Clutter And Accompanying Stress

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Condition Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	76

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

Excess stress and conflict can be a detriment to achieving a healthy lifestyle. One of the stresses may be living in a cluttered environment. Taking action to organize one's life is one way to help to reduce that stressor.

#### **What has been done**

University of Illinois Extension Educators, Family Life continued to offer workshops for various adult audiences [community groups, child care providers] statewide titled Simplify Your Life: Clear the Clutter & Your Stress. The workshop reached 118 individuals. The objectives of the workshop included helping participants to: [1] Understand how clutter can cause stress; [2] Identify their own reasons for the build-up of clutter; [3] Learn the barriers and benefits of dealing with clutter; and [4] Learn techniques to clean-up their clutter. As a part of the program participants developed an action plan to get organized.

Follow-up evaluations were collected from participants to identify what steps were taken to complete participants' action plans.

#### **Results**

Follow-up evaluations for Simplify Your Life: Clear the Clutter & Your Stress indicated that 69 [85%] participants indicated that they now think differently about de-cluttering after attending the workshop and 64 [79%] had started or finished their plan to de-clutter. With respect to experiencing a sense of relief/reduction of stress due to progress made from de-cluttering, nearly all [94%] of the 81 who answered the question indicated 'Yes' [48%] or 'Somewhat' [44%]. These and other responses to the evaluation completed by the Simplify Your Life: Clear the Clutter & Your Stress participants evidenced the impact this particular family life program had on improving

residents' emotional health and well-being.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle

#### 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

##### Chronic Disease Management

In 2014, pre- and post-evaluations consisting of four sections of questions were collected from 60 participants at the beginning and again at the end of **I on Diabetes** programs conducted in ten 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 two of the 60 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

Forty-six [46] of 60 participants [77%] 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 disagree' to 'Strongly agree', 33 [55%] reported they could now more easily prepare healthy foods, 30 of 60 participants [50%] who completed the evaluations indicated they improved their ability to select healthier choices when dining out, and 28 [47%] indicated they could easily select foods that fit their meal plan. Twenty-two [22] of 60 [37%] increased agreement that healthy foods taste good. Only 16 of 60 [27%] 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'. Forty-eight [48] of 60 participants [80%] indicated that they improved their confidence in managing their diabetes. More than half of the 60 who answered these questions indicated an increased confidence in the following: Estimating the amount of food you should eat [39 or 65%]; Selecting foods that will reduce the risk for heart disease [37 or 62%]; Knowing which foods have carbohydrates [35 or 58%]; Preparing foods that fit into their meal plan [32 or 53%]; and Following a healthy diabetes meal plan [32 or 53%]. Only 21 [35%] 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', 48 of 60 participants [80%] reported increasing their frequency in taking at least one recommended action. More than forty percent of the participants revealed increasing the following practices: Setting goals to help manage their diabetes [32 or 53%]; Using food labels to plan their meals [28 or 47%]; Following a meal plan to help manage diabetes [27 or 45%]; and Keeping track of the amount of foods with carbohydrates they eat each day [26 or 43%].

Approximately one-third indicated increasing their frequency in taking the following actions: Trying to limit fat intake [22 or 37%]; Trying to be physically active [22 or 37%]; Reading food labels [21 or 35%]; Eating at least three regularly-spaced meals a day [20 or 33%]; and Trying to limit salt intake [19 or 32%].

In 2014, a one-month and a three-month evaluation was sent to 40 participants in the University of Illinois Extension's **Meals for a Healthy Heart** program. The program is a two-part face-to-face series that focuses on increasing participant awareness of the major risk factors of coronary heart disease. During the series participants received information on heart healthy foods, menu planning, healthy eating away from home, physical activity and weight management. All but one of the 19 participants who responded to an evaluation that was distributed one month after the program's completion indicated taking at least one, and as many as six, of the following actions: Read more food labels to help plan their meals [18--95%]; Used less sodium to season food [15--79%]; Increased physical activity [13--68%]; Made a weekly meal plan [12--63%]; Checked blood pressure more often [7--37%]; and Checked their cholesterol [6--32%].

After receiving a follow-up evaluation mailed three months after the program ended, eleven participants responded. Nine of the 11 participants made at least one and as many as four changes in the following eating habits since participating in the program: Read more labels [8 of 11 reported doing so]; Decreased salt/sodium intake [7 of 11 did--another plans to do so]; Decreased intake of high fat foods [5 of 11 did]; Increased fiber intake [2 of 11 did]; Ate a variety of foods based on MyPlate food guidance system [2 of 11 did-one plans to do

so]; and Changed to monounsaturated fats in food preparation [ 1 of 11 did]. Eight of the eleven respondents indicated that they had decreased the use of mono-unsaturated fat and seven indicated increasing their fiber intake before attending the program.

Three additional questions sought to elicit respondents' opinions about the following changes resulting from their participation in the program:

More confident in planning and preparing heart healthy meals -- ten checked 'yes' and one checked 'uncertain'.

Making more heart healthy food choices when eating away from home -- eight checked 'yes', two checked 'no', and one checked 'uncertain'.

More aware of the relationship between diet and chronic diseases [such as heart disease, diabetes, or stroke] -- ten checked 'yes', and one checked 'uncertain'.

### **Health Rocks!**

Five hundred seventy-eight [578] of the 795 youth participants in 4-H Health Rocks!, a national healthy living program aimed at 8-16 year olds with the goal of bringing youth, families, and communities together to reduce tobacco, alcohol, and drug use, completed a retrospective post-pre evaluation comprised of seventeen items. In addition to learning the facts about drugs and the consequences of taking them, the educational activities encompassed building life skills such as showing concern for others, making healthy lifestyle choices, managing stress, and developing refusal skills. Thirteen of the 17 evaluation items addressed these skills using a scale of 1-4 with 1=Strongly disagree and 4=Strongly agree. The youth were instructed to provide a rating that reflected their level of agreement 'after' the program and then reflect back and provide a rating of their level of agreement 'before' the program. Three hundred and sixty-eight youth [64%] increased their agreement with at least one of the statements when comparing post training ratings and pre-training ratings. Note: This evaluation tool has been designed for use nationally.

Data regarding the increases between before and after the program follow in the order of highest to lowest number of youth who increased their level of agreement with each of the thirteen statements.

142 of 578 [25%] increased agreement that 'Using drugs can ruin my relationship with my family and friends'.

142 [25%] increased agreement that 'If a friend wanted to try drugs, I can talk them out of it'.

136 [24%] increased agreement that 'People who use drugs sometimes see or hear things that are not really there'.

129 [22%] increased agreement that 'Once you start smoking, it is hard to stop'.

124 [21%] increased agreement that 'When I feel stressed I am able to talk about it with people I trust'.

105 [18%] increased agreement that 'People who smoke can die from lung cancer'.

105 [18%] increased agreement that 'I need to think about how my choices will affect my future'.

103 [18%] increased agreement that 'I am able to say no if others offered me cigarettes'.

95 [16%] increased agreement that 'I don't have to drink or smoke even if some other young people do it'.

93 [16%] increased agreement that 'I would help other kids like me to stay away from alcohol or other drugs'.

92 [16%] increased agreement that 'It is important for me to stay focused on learning at school'.

85 [15%] Increased agreement that 'I have goals for myself'.

73 [13%] increased agreement that 'I feel good about myself'.

In response to the final set of four questions regarding program satisfaction and experience, 3.275 was the average rating on the four-part scale for the statement 'I learned a lot during the training'.

## Key Items of Evaluation

### Chronic Disease Management

All but two [97%] of the 60 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', 46 of 60 participants [77%] 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'" 48 of 60 participants [80%] 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', 48 of 60 participants [80%] 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.

Responses from the participants in **Meals for a Healthy Heart** indicated that all but one participant took at least one, and as many as six recommended actions to reduce the risk of heart disease: Eighteen [95%] took action to read more labels to help plan meals; Fifteen [79%] took action to reduce their use of sodium [a recommended action to reduce the risk of heart disease]; and Thirteen [68%] increased their physical activity.

Approximately one-half to three-fourths of the 11 three month evaluation respondents are maintaining changes such as reading food labels to select healthy food or decreasing intake in salt/sodium or high fat foods in order to reduce the risk of developing heart disease. In addition, more than two-thirds who responded to the questions feel more confident in planning and preparing heart healthy meals, making heart healthy choices when eating away from home, and increased their awareness of the relationship between diet and heart disease.

### **Health Rocks!**

Three hundred and sixty-eight youth [64%] increased their agreement with at least one of the statements regarding learning facts about drugs and the consequences of taking them and building life skills such as showing concern for others, making healthy lifestyle choices, managing stress, and developing refusal skills when comparing post training ratings and pre-training ratings. Of note: Examination of the data suggests that youth are challenged with using the post-pre evaluation format. Greater effort will need to be made by instructors to help them understand how to complete the ratings.