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Healthful Homes for Urban Youths and Families

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Healthful Homes for Urban Youths and Families

Abstract

The concept of a *healthful home* offers the basis for a comprehensive approach to addressing the well-established relationship between health and housing. Many environmental health hazards found in homes—such as lead, mold, environmental tobacco smoke, and pesticides—can be reduced or eliminated through the use of scientifically validated (yet sometimes quite simple) interventions that improve health outcomes for residents. A team from the University of Connecticut's Department of Extension developed an effective curriculum for teaching urban 4-H youth leaders, youths, and others in their communities about the importance of healthful homes and practical ways of improving home environments.

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Introduction

The concept of a *healthful home*—a home designed and maintained to support the health of its residents—offers the basis for a comprehensive approach to addressing the well-established relationship between health and housing. According to the U.S. Office of the Surgeon General, improving housing conditions—for example, by reducing exposure to lead poisoning, environmental tobacco smoke, and pesticides—can improve health outcomes (U.S. Department of Health and Human Services, 2009, p. 1).

In 2013, the National Center for Healthy Housing found that some 35 million U.S. metropolitan homes had one or more health and safety hazards that could cause significant illness, injury, or death (National Center for Healthy Housing [NCHH], 2013). Yet many of the hazards identified in the study can be reduced or eliminated through the use of scientifically validated (yet sometimes simple) interventions that improve health outcomes for residents (NCHH, n.d.).

Healthful homes are particularly important for Connecticut families at risk. The state's housing stock is considerably older than the national average. Children living in older homes—especially children in low-income families, who face greater challenges of finding affordable, safe, and healthful homes—are most vulnerable to such housing-related health problems as lead poisoning and asthma. In 2013, according to the Connecticut Department of Public Health (DPH), 2,275 Connecticut children under the age of 6 were reported as lead-poisoned (Connecticut Department of Public Health [DPH], 2015a). Black children were twice as likely to be lead-poisoned as White children; Hispanic children were 1.5 times as likely to be lead-poisoned as non-Hispanic children (Connecticut DPH, 2015a). Moreover, an estimated 30,000 Connecticut children in grades 6–12 were

reported as having an asthma episode or attack in 2013 (Connecticut DPH, 2015b). Asthma rates, too, are disproportionately higher for Blacks and Hispanics. Yet both lead poisoning and asthma attacks can be prevented or reduced through environmental interventions.

In its *Healthy Homes Strategic Plan*, Connecticut DPH (2011) recognized public education on such issues as a major goal. University of Connecticut (UConn) Extension faculty and staff have been actively engaged in such outreach efforts for more than a decade, in accord with Maring, Singer, and Shenassa's (2011) assertion that Extension has a strong role to play in supporting a healthful homes initiative.

Tools for Healthy Living Program

A UConn Extension multidisciplinary team, of which we are part, identified urban youths as an important potential audience for such public education. Not only are they disproportionately subject to such problems as lead poisoning and asthma, they also are capable—given appropriate guidance—of improving their own home environments and sharing their knowledge with peers, family members, and the broader community.

Although much material is available for adults, such as the U.S. Department of Agriculture (USDA) publication *Help Yourself to a Healthy Home*, no comprehensive curriculum for urban school-aged youths existed. With support from a Children, Youth, and Families at Risk grant, funded by the USDA National Institute of Food and Agriculture, our team designed an age-appropriate healthful homes curriculum for youths in grades 4–6 and implemented it in Hartford County's urban 4-H afterschool clubs. Tools for Healthy Living (Bothell, Gaudio, Gray, & Horn, 2014) was developed for two of Connecticut's most distressed municipalities—Hartford and New Britain. It aimed to meet the needs of "underserved youth with accessible, high-quality, educational youth development programming" (Skuza, 2004, "Site-Based Youth Development Program," para.2) in their own schools or community centers.

Program Model and Content

The lessons employ the 4-H model of experiential learning, emphasizing a hands-on approach, critical thinking, problem solving, and decision-making skills, as well as discussion, reflection, application to youths' lives, and journaling. The program combines the principles of healthful homes with information from the National 4-H Mandate of Healthy Living (National 4-H Healthy Living Task Force, 2009) and relevant National Health Education Standards (Centers for Disease Control and Prevention, 2015).

As Table 1 shows, the curriculum introduces the general principles of healthful homes (NCHH, 2011) and addresses specific issues most relevant to urban youths (lessons 1–7). After further assessing related needs of this population, and noting that 4-H is "an ideal setting for education on food safety" (Diehl, Pracht, Forthun, & Simonne, 2010, "Introduction," para. 4), we added coverage of three key issues of food safety in the home (lessons 8–10). It must be stated that some home environmental problems—such as lead in the water supply in Flint, Michigan—cannot be resolved by individual actions of youths and their families. To encourage youths to begin thinking as positive agents of change (Webster, 2016), the curriculum also includes a lesson on healthful homes advocacy—within families, schools, and larger communities (lesson 11).

Table 1.

Tools for Healthy Living: Curriculum Content

Lesson

Purpose

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| 1. What Is a Healthy Home? | Introduce the concept of a healthful home and features that make a home healthful: A healthful home is clean, dry, safe, free of pests and dangerous chemicals, and in good repair and has fresh air |
| 2. Look Out for Lead | Explain health effects of lead poisoning, and explore strategies for reducing the risk of lead poisoning |
| 3. Breathe Easy: Avoid Asthma Triggers | Explain what asthma is, and explore strategies for reducing asthma triggers |
| 4. Message to Mold: Dry Up! | Explain health effects of mold, and explore strategies for preventing mold from growing |
| 5. Don't Invite Pest Guests | Explain health effects of pests, and explore strategies for controlling pests safely by eliminating their food, water, and shelter |
| 6. Smoke Is No Joke | Explain dangers of first-hand, second-hand, and third-hand environmental tobacco smoke, and explore strategies for avoiding them |
| 7. Clutter | Explain health effects of clutter, and explore a process for controlling it |
| 8. Battle Bad Bacteria | Explain four key rules of food safety (clean, separate, cook, and chill), and explore strategies for implementing them |
| 9. Hot Hot Hot or Cold Cold Cold | Explain the importance of controlling food temperature to prevent bacterial growth, and provide examples |
| 10. Join the Scrub Club | Explain the importance of proper handwashing and cleaning of kitchen surfaces, and practice proper techniques |
| 11. Stand Up for a Healthy Home | Explain the importance of self-advocacy, and explore effective strategies for advocating for a healthful home |
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Each lesson involves a take-home newsletter on the lesson topic for youths' families (available in English and Spanish). Literacy levels are carefully controlled for both youth and adult materials. At the end of the program, youths produce long-term projects to share what they have learned with their larger communities.

Program Implementation

Lesson content was developed by experienced Extension staff; two locally recruited instructors were trained by a master trainer (Haugen, Stevenson, & Meyer, 2016); and pilot testing of the curriculum was conducted in 2012 with 90 youth participants. Full program delivery began in 2013 and has continued through subsequent school years at four to seven sites and with 60–90 youth participants annually.

In an evaluation of the program, an independent evaluator/educator collected pretest and posttest data and observational data. The evaluation report commended the program for its high-quality, well-designed, and engaging lessons; hands-on activities (individual, small-group, and large-group) that promote youths' attention to the content; relevance of the content to the youths in their homes and schools; and youth success in learning and applying the content and concepts (Gubbins, 2015). Quantitative data showed significant gains in awareness, knowledge, and skills in many content areas (Gubbins, 2015). In 2015 the program passed the peer review to become a national 4-H curriculum.

Conclusion

Urban youths, their families, and their larger communities benefit by making homes more healthful and safer. Key components of this program's success include carefully designed content for the target audience, detailed lesson plans, highly interactive lessons, compatibility with 4-H principles of positive youth development, training of local community members as instructors, and strong partnerships with afterschool sites. Youths showed increased understanding and awareness of environmental risks and identified strategies for minimizing such risk in their homes.

Several urban 4-H clubs were created and sustained as a result of the project.

For information about obtaining a copy of the curriculum, contact Sharon Gray (Sharon.gray@uconn.edu) or Mary-Margaret Gaudio (mmgaudio@uconn.edu).

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