

PROCEEDINGS OF THE 2017 ANNUAL CONFERENCE OF THE HOUSING EDUCATION AND RESEARCH ASSOCIATION

Lowell, Massachusetts

October 8-11, 2017

Gina Peek and Suk-Kyung Kim

Editors

**Table of Contents**

[AAHE/HERA Presidents 4](#_Toc495065868)

[Conference Locations and Dates 6](#_Toc495065869)

[Abstract Reviewers 9](#_Toc495065870)

Referred Abstracts - Poster Presentations

[Introducing Students to HERA through Experiential Learning - Axton Betz-Hamilton 11](#_Toc495065871)

[The Mobile Energy Education Trailer – Kandace L. Fisher-McLean, Michael Goldschmidt, Robert Broz, James Crawford, Robert Schultheis, Joseph Zulovich, & David Brune 13](#_Toc495065872)

[Kitchen Design Strategies for Families of Children with Down Syndrome – Savanna Baxley, Kathleen Parrott, & Eunju Hwang 15](#_Toc495065873)

[Environmental Challenges of North Carolina Low-Income Elderly Renters – Daejin Kim, Sung-Jin Lee, Suk-Kyung Kim, Valerie L. Giddings, & Sheryl Renee Robinson 17](#_Toc495065874)

[Different Perceptions of Aging in Place Depending on Socioeconomic Characteristics – Suk-Kyung Kim, & Sung-Jin Lee 20](#_Toc495065875)

Referred Abstracts - Oral Presentations

[Ethnic Variations in the Relationship between Older Adults’ Residential Satisfaction and Life Satisfaction - Mira Ahn, Jiyun Kang, & Hyun Joo Kwon 24](#_Toc495065876)

[Housing Choice Vouchers and Housing Security – Deborah Mitchell, & Marilyn Bruin 27](#_Toc495065877)

[Apartment Industry Terminology: Challenges with Real Estate Media, Research Methodology – Carla Earhart, & Debra Shidler 29](#_Toc495065878)

[Recruiting High School Students to Careers in Residential Property Management – Natasha Knight, Carla Earhart, Carol Friesen, Sotiris Hji-Avgoustis, Erin Donovan, & Robert Parrillo 36](#_Toc495065879)

[The Healthy and Sustainable Homes Initiative – Kandace L. Fisher-McLean 39](#_Toc495065880)

[Where’s the Loo? An Examination of Toilets and Healthy Housing – Greg Galford & Gina Peek 42](#_Toc495065881)

[Healthy Homes: Using Smartphone Apps for Stakeholders and Consumers – Michael Goldschmidt & Gina Peek 44](#_Toc495065882)

[Loan Denial Rates in Mississippi: A Racial Issue – Leslie Green-Pimentel 47](#_Toc495065883)

[Choosing Healthy Housing Materials for Millennials – Hyun Joo Kwon, & Mira Ahn 50](#_Toc495065884)

[Carolina in My Mind: And in My Own Home – Sung-Jin Lee, Daejin Kim, Kathleen R. Parrott, Valerie L. Giddings, & Sheryl Renee Robinson 53](#_Toc495065885)

[College Students’ Experiences, Perception and Expectation of Disaster Management Education Programs – Hyun-Jeong Lee, & Sohee Moon 56](#_Toc495065886)

[Veterans and Homelessness through the Lens of Housing Adjustment Theory – Michelle Longworth 59](#_Toc495065887)

[Nuisance Laws: Issues in Real Estate Management and Housing – Robert Parrillo 62](#_Toc495065888)

[Ripped From the Headlines – Kathleen Parrott, & Eunju Hwang 64](#_Toc495065889)

[Trends in First-Time Homebuyer Characteristics, 1997-2015 – Shannon Rieger 67](#_Toc495065890)

[Housing Issues, Rurality, and Local Amenities among Nonmetropolitan Communities in Georgia – Kim Skobba, Karen Tinsley, & Adenola Osinubi 69](#_Toc495065891)

[Home Environmental Interventions to Improve the Health of Older Adults – David A. Turcotte, Susan Woskie, Rebecca Gore, Emily Chaves, Kelechi Adejumo, & Rosemary Rungu 72](#_Toc495065892)

[Global Housing Policy: Settlement Sustainability – Ann Ziebarth 75](#_Toc495065893)

|  |  |
| --- | --- |
| American Association of Housing Educators (AAHE)  1965-1966 Tessie Agan  1966-1967 James Montgomery  1967-1968 Gertrude Esteros  1968-1969 Maie Nygren  1969-1970 Ruth Smith  1970-1971 Avis Woolrich  1971-1972 Robert Rice  1972-1973 Christine Salmon  1973-1974 Glenda Pifer  1974-1975 Walter Moran  1975-1976 Jane Crow  1976-1977 Roberta Null  1977-1978 Vera Ellithorpe  1978-1979 Gertrude Nygren  1979-1980 Kay Stewart  1980-1981 Alice Stubbs  1981-1982 Betty Jo White  1982-1983 Joseph Wysocki  1983-1984 Carol Meeks  1984-1985 Sherman Hanna  1985-1986 Mary Yearns  1986-1987 Glenda Herman  1987-1988 Robert Thee  1988-1989 Anne Coveney  1989-1990 Carolyn Turner  1990-1991 Joye Dillman  1991-1992 Jacquelyn McCray  1992-1993 Kathleen Parrott  1993-1994 Golden Jackson  1994-1995 Sandra Zaslow  1995-1996 Rosemary Goss  1996-1997 John Merrill  1997-1998 Linda Redman  1998-1999 Dana Stewart  1999-2000 Karen Johnson  2000-2001 Joseph Ponessa  2001-2002 Joseph Laquatra | Housing Education and Research Association (HERA)  2002-2003 Marilyn Bode  2003-2004 Shirley Niemeyer  2004-2005 Sue Crull  2005-2006 Julia Beamish  2006-2007 Anne Sweaney  2007-2008 Marilyn Bruin  2008-2009 Jorge Atiles  2009-2010 Ann Ziebarth  2010-2011 Ken Tremblay  2011-2012 Christine Cook  2012-2013 Sarah Kirby  2013-2014 Martha Keel  2014-2015 Andy Carswell  2015-2016 Michael Goldschmidt  2016-2017 Pamela Turner |
| Wysocki, J. (2007). Housing Education and Research Association: Our 40th anniversary. *Housing and Society*, *34* (1), 5-10. | |

# AAHE/HERA Presidents

# AAHE/HERA Conference Locations and Dates

1946 Urbana, Illinois - April 1-4, 1946

1948 West Lafayette, Indiana: October 17-19, 1948

1957 Urbana, Illinois: October 9-12, 1957

1958 Ames, Iowa: October 22-25, 1958

1959 Stillwater, Oklahoma: October 7-10, 1959

1960 Ithaca, New York: October 12-15, 1960

1961 Manhattan, Kansas: October 11-14, 1961

1962 Minneapolis, Minnesota: October 18-20, 1962

1963 University Park, Pennsylvania: Oct. 30- Nov. 2, 1963

1964 East Lansing, Michigan: October 14-17, 1964

1965 Columbia, Missouri: November 3-6, 1965

American Association of Housing Educators (AAHE)

1966 Urbana-Champaign, Illinois: October 26-29, 1966

1967 Lafayette, Indiana: October 11-14, 1967

1968 Athens, Georgia: October 27-29, 1968

1969 Davis, California: October 15-17, 1969

1970 Lincoln, Nebraska: October 14-16, 1970

1971 Blacksburg, Virginia: October 17-20, 1971

1972 Dallas, Texas: October 10-13, 1972

1973 Madison, Wisconsin: October 10-13, 1973

1974 Boston, Massachusetts: October 29-November 2, 1974

1975 Fort Collins, Colorado: October 7-11, 1975

1976 Columbus, Ohio: October 12-16, 1976

1977 Tucson, Arizona: October 19-21, 1977

1978 Minneapolis, Minnesota: October 11-14, 1978

1979 College Station, Texas: October 16-19, 1979

1980 University Park, Pennsylvania: October 6-8, 1980

1981 San Francisco, California: October 6-10, 1981

1982 Knoxville, Tennessee: August 10-12, 1982

1983 Lincoln, Nebraska: October 4-7, 1983

1984 Washington, D.C.: August 8-10, 1984

1985 Ames, Iowa: October 15-18, 1985

1986 Santa Fe, New Mexico: October 14-17, 1986

1987 Newport, Rhode Island: November 2-7, 1987

1988 Corvallis, Oregon: October 11-14, 1988

1989 Greensboro, North Carolina: October 24-27, 1989

1990 Columbia, Missouri: October 16-19, 1990

1991 Durham, New Hampshire: October 15-18, 1991

1992 Winnipeg, Manitoba Canada: September 16-19, 1992

1993 Columbus, Ohio: October 6-9, 1993

1994 Atlanta, Georgia: October 18-21, 1994

1995 Salt Lake City, Utah: October 11-14, 1995

1996 Manhattan, Kansas: October 16-19, 1996

1997 New Orleans, Louisiana: October 22-25, 1997

1998 33rd International Housing Conference, Seoul South Korea: August 5-8, 1998

1999 Orlando, Florida: October 18-23, 1999

2000 Stone Mountain, Georgia: November 15-18, 2000

2001 Big Sky, Montana: July 22-July 25, 2001

2002 Minneapolis, Minnesota: October 23-26, 2002

Housing Education and Research Association (HERA)

2003 Washington, DC (held in conjunction with AAFCS): June 28-30, 2003

2004 Chicago, Illinois: October 20-23, 2004

2005 Denver, Colorado: October 4-7, 2005

2006 Ithaca, New York: October 8-11, 2006

2007 Charlotte, North Carolina: October 23-26, 2007

2008 Indianapolis, Indiana: October 7-10, 2008

2009 Santa Fe, New Mexico: November 1-4, 2009

2010 Portland, Oregon: November 3-6, 2010

2011 Baton Rouge, Louisiana: October 12-15, 2011

2012 Roanoke, Virginia: October 28-31, 2012

2013 Tulsa, Oklahoma: October 27-30, 2013

2014 Kansas City, Missouri: October 5-8, 2014

2015 Springfield, Illinois: October 11-15, 2015

2016 Jacksonville, Florida: October 23-26, 2016

2017 Lowell, Massachusetts: October 8-11, 2017

# Abstract Reviewers

Mira Ahn

Tilanka Chandradasa

Carla Earhart

Greg Galford

Leslie Green-Pimentel

Eunju Hwang

Sung-Jin Lee

Pamela Turner

Gus Vouchilas

Ann Ziebarth

**Referred Abstracts - Poster Presentations**

# Introducing Students to HERA through Experiential Learning

Axton Betz-Hamilton, South Dakota State University

Professional organizations are faced with the need for continued recruitment of members; HERA is no exception. The purpose of this project was to recruit HERA members along with provide students experiential learning opportunities in planning, designing, and executing a national conference.

Experiential learning “is any learning that supports students in applying their knowledge and conceptual understanding to real-world problems or situations where the instructor directs and facilitates learning” (University of Texas, n.d., para.1). With this definition in mind, a hospitality management student was recruited to plan the conference menu, using the menu guides provided by the conference hotel. This student had completed a course that included a menu design component, so she was able to apply the knowledge learned in class to designing the menu for each conference meal function. This application of knowledge learned in a prior class echoes a value of experiential learning to students, highlighted by Clark and White (2010), which is the “opportunity to apply knowledge they are learning in classes” (p. 118). This student graphically designed the conference program as well. The work was completed over the summer, and the student kept in regular contact with the instructor for guidance and feedback via e-mail and Skype.

Parr and Trex (2011) noted that students who participated in a student-run agricultural operation experiential learning activity liked instruction that helped facilitate their activities. This occurred in working with an undergraduate student who assisted with facilitating the conference for independent study credit during the Fall semester. This student, a family studies student with an interest in working with homeless individuals, assisted attendees with registration, introduced speakers, and helped troubleshoot technological challenges, with direct guidance from a faculty member. Training occurred in face-to-face sessions with the student before and during the conference. The student noted the networking this opportunity provided, as well as that the research sessions she attended, helped her connect what she learned in an introductory housing course to larger social issues.

Institutional support for these experiential activities included the approval of the students to earn independent study credits that applied towards their degree plan, and financial support to cover student travel to the conference. Additional support was provided by an instructor who allowed recruitment for this project to occur during a presentation to a freshman-level introductory course of approximately 30 students.

In sum, by providing students with experiential learning opportunities in planning the HERA conference, students could apply knowledge they had learned in prior courses and engage in professional networking. A benefit to HERA is introducing students to the organization who may choose to become members and/or promote the organization within their networks. From the experiential learning opportunities provided in this project, one of the two students who assisted with planning the conference joined HERA. From this presentation, attendees will learn creative ways to market professional, experiential learning opportunities to students and execute such activities on a limited budget.

References

Clark, J., & White, G.W. (2010). Experiential learning: A definitive edge on the job market. *American Journal of Business Education, 3* (2), 115-118.

Parr, D.M., & Trexler, C.J. (2011). Students’ experiential learning and use of student farms in sustainable agricultural education. *Journal of Natural Resources and Life Sciences Education, 40*, 172-180.

University of Texas. (n.d.). *Experiential learning defined*. Retrieved from https://facultyinnovate.utexas.edu

# The Mobile Energy Education Trailer

Kandace L. Fisher-McLean\*, University of Missouri – Extension

Michael Goldschmidt, University of Missouri – Extension

Robert Broz, University of Missouri – Extension

James Crawford, University of Missouri – Extension

Robert Schultheis, University of Missouri – Extension

Joseph Zulovich, University of Missouri – Extension

David Brune, University of Missouri – Extension

The purpose of the Mobile Energy Education Trailer is to supplement our currently energy efficiency and energy alternatives curriculum with the goal of providing the public with a hands-on, walk through demonstration of various home energy techniques and products. As Extension specialists, we can utilize our expert knowledge and resources to educate the public based on the latest research and product developments in the field of energy. However, having hands on demonstration materials is an important element that is often lacking in our education to the public. Demonstration materials can be costly, but are necessary to provide tangible illustrations. For example, we can provide live demonstrations of how an infrared camera works in the real world environment and provide people with the opportunity to learn how to use it.

There are currently two mobile energy education trailers designed to take to festivals, fairs, and other public events. The trailers are each 6 feet wide x 12 feet long and pulled behind a truck to the designated events. It is predicted that the various elements in the trailer will be of most interest to middle income clientele looking for the most beneficial ways to save money while retrofitting in their home, rather than those who may be interested in building a new home.

Each mobile energy trailer includes a generator, a weather station with an expanding pole, an infrared camera and thermometer, and a solar collection panel. There is also a door and window wall, which demonstrates door/window types and how to insulate around them. The wall also shows three different types of insulation as well as a demonstration on how to insulate around electric sockets. The energy trailers include a lighting wall demonstrating various lighting techniques and light bulbs explaining their energy use and the type of light emitted. The solar collection panel with lights and battery can roll outside the mobile energy trailer for demonstration. There are also storage containers with additional insulation, caulk, and weather-stripping for demonstrations. Three folding tables and a pop-up tent are included with copies of the Exploring Energy Efficiency and Alternatives Curriculum developed by Montana State University and the University of Wyoming – Extension.

In June 2017, specialists with the University of Missouri – Extension will participate in a 2-day in-service education opportunity. This training is designed to introduce them to the features of the mobile energy education trailer and how to operate features in the trailer such as the generator, solar panels, use of weather station, and infrared camera. Specialists will also receive additional education to expand their knowledge on various energy education topics that will be of interest to consumers such as water heaters, insulation, duct sealing, weatherization and indoor air quality, infrared camera use, photovoltaic basics, and lighting strategies. Specialists will be provided with supplemental materials and fact sheets that they can utilize to further educate the clientele they serve while demonstrating the features of the mobile energy education trailer.

# Kitchen Design Strategies for Families of Children with Down Syndrome

Savanna Baxley, Virginia Tech

Kathleen Parrott, Virginia Tech

Eunju Hwang\*, Virginia Tech

The goal of this project was to design a prototype kitchen space suited for families of children with Down syndrome. People with Down syndrome are born with an extra copy of chromosome twenty-one. It effects development in the brain and body, resulting in learning problems and certain physical characteristics. Common traits are shorter stature, low muscle tone, poor understanding of abstract concepts, and excellent visual memory (McGuire & Chicoine, 2006). For this project, we synthesized research findings into design strategies for kitchens that would promote independence and responsibility for the individual with Down syndrome, as well as increased opportunity for shared family activities and interaction. Then, a prototype kitchen was developed for a family who has a female, teenaged Down syndrome child.

The client is a family planning to buy a new home in the Christiansburg, VA area. At pre-design stage, a researcher from the team visited multiple houses in Christiansburg that could meet the needs of the family. Among those options, the family selected a house which had an excellent open kitchen and a finished basement with a wet bar and bedroom, and a potential independent space for dance practice and a daily communication wall for the teenager with Down syndrome. After the housing visits, a representative of the team visited hardware stores with the family to identify their preferences on products and to gather information on kitchen appliances, finishes and design. The family preferred to use a transitional-rustic style with dark beaded cabinetry, a farmhouse sink, warm oak floors, tranquil blue colors, and brass cabinetry hardware.

Final design outcomes included various universal design features for independent and stimulating kitchen space for people with Down syndrome. These included various textures throughout to enhance stimuli; a lowered section of countertop and a microwave drawer for ease of use, given the teenager’s shorter stature; an induction cooktop for safety; a built-in booth to promote positive memories because of the teenager’s love of going to restaurants with her family; a radio hookup with speakers because of her love for music that creates positive feelings; and a chalkboard to write out the teenager’s days, giving her a sense of schedule and purpose. All of these design features in the prototype kitchen are designed to maximize the client’s use of the kitchen, while also easily being usable by the parents. The poster presentation of this abstract will include the prototype kitchen and selected product specifications.

Reference

McGuire, D. E., & Chicoine, B. (2006). *Mental wellness in adults with Down syndrome: A guide to emotional and behavioral strengths and challenges*. Bethesda, MD: Woodbine House.

# Environmental Challenges of North Carolina Low-Income Elderly Renters

Daejin Kim, North Carolina A&T State University

Sung-Jin Lee\*, North Carolina A&T State University

Suk-Kyung Kim, Michigan State University

Valerie L. Giddings, North Carolina A&T State University

Sheryl Renee Robinson, North Carolina A&T State University

Background and Purpose

In the United States, 34.0% of renter households are age 50 and older (Joint Center for Housing Studies of Harvard University, 2016); and 14.6% are age 65 and older (National Multifamily Housing Council, 2016). Elderly renters, particularly those with low-incomes, have less flexibility in making home modifications, such as installing safety and accessibility features within a unit, due to the lack of ownership and absence of resources. This causes environmental challenges for elderly renters as they age. The purpose of this study was to explore environmental challenges of low-income elderly renters in North Carolina, as a case study approach. This study includes older renters 62+; HUD defines the individual aged 62+ as an *elderly* person (U.S. Department of Housing and Urban Development, n.d.).

Methodology

From July 2016 through February 2017, the research team visited 22 homes of elderly renters (per N.C. A&T Behavioral IRB Study #16-0013). They currently live in a central North Carolina city. The research team took photos of home features during the visit which mainly focused on the following interior areas: entrance, living room, kitchen, hallway, and bathroom. When analyzing photos, ten home features with possible hazard threats (or environmental challenges) were examined. They were doorways, steps, handrails, furniture arrangement, cabinetry access, hallway width, toilet height, grab bars, shower threshold, and door width. The total number of environmental hazards was considered as an ‘environmental challenge’ score (highest = 10 and lowest = 0). For instance, if the house had ‘no grab bar’ in the bathroom, the score of one was given as the environmental challenge score.

Findings

The sample population ranged in age from 62-86 years with a mean age of 71.6 years (SD = 5.47). The majority were African American (19), female (16), and single (14). All research participants were unemployed and most of them (20) earned less than $25,000 annually. Twelve participants lived in apartments, six lived in single-attached homes (townhome type), and four in single-detached homes. Average number of environmental challenges per home was 4.6 out of 10. Common hazards were high bathtub (17 inches) (22), lack of safe handrails (14), high threshold in the entry way (3 to 7.5 inches) (12), low toilet height (less than 17 inches) (11), narrow door width (11), and lack of grab bars (10).

Research findings showed the bathroom was the most common space with many environmental challenges. The frequency of hazards regarding environmental challenges differed depending on housing types. Residents in single-detached homes (*M* = 5.3) and single-attached homes (*M* = 5.2) had more environmental challenges than those living in apartments (*M* = 4.1).

Conclusions and Implications

Findings indicate that there are various environmental challenges in the home of elderly renters. Removing or reducing hazards from their homes is essential for minimizing environmental challenges confronting elderly renters (Kutty, 2000). Taking a qualitative approach, this study had a small sample. The presentation which includes visual images taken in their homes will provide additional findings which reveal environmental challenges in low-income elderly renter’s homes. These findings will be useful for various stakeholders that advocate for elderly renters.

References

Joint Center for Housing Studies of Harvard University. (2016). The state of the nation’s housing 2016. Retrieved from <http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files> jchs\_2016\_state\_of\_the\_nations\_housing\_lowres.pdf

Kutty, N. K. (2000). The production of functionality by the elderly: A household production function approach. *Applied Economics, 32*(10), 1269–1280.

National Multifamily Housing Council. (2016). Quick facts: Resident demographics. Retrieved from <http://www.nmhc.org/Content.aspx?id=4708>

U.S. Department of Housing and Urban Development. (n.d.). Section 202 supportive housing for the elderly program. Retrieved from <https://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/mfh/progdesc/eld202>

Acknowledgement

“The project described was supported by Project Number, NCX-273-5-13-170-1 from USDA National Institute of Food and Agriculture. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the National Institute of Food and Agriculture."

# Different Perceptions of Aging in Place Depending on Socioeconomic Characteristics

Suk-Kyung Kim\*, Michigan State University

Sung-Jin Lee\*, North Carolina A&T State University

Background and Purpose

A significant number of previous studies highlight older peoples' preference to aging in place (Kwon, Ahn, Lee, & Kim, 2015). Most studies assume elderly residents’ independent living and suggest ways home environments could support their aging. The current housing programs that support aging-in-place also assume couple or single-person households live without their grown-up children (Greater Lansing Housing Coalition, 2014; Kim, 2014). However, low-income seniors with limited or no income sources may not meet this assumption. The purpose of this study is to examine low-income elderly residents' opinions regarding aging-in-place and suggest improvement to existing supportive programs and residential design.

Research Method

A survey was conducted using the stratified sampling method: seniors in the income-based rental units (or low-income group) and the other middle- and higher-income group that owned their homes and exceeded 40% of the annual income for the single-person household. It was higher than $19,000 per year in the mid-Michigan region according to Michigan Housing Development Authority (2014). The target area of the research was the Lansing Metropolitan area in Michigan, which covered Ingham, Eaton, and Clinton Counties. The respondents were asked about their homeownership status, income level, whether single-person household or not, and their preference for living with their grown-up children. A total of 139 responses was collected. Their ages ranged from 60 to 99, with an average of 70.1 years old. About 69.9% were homeowners and 30.1% were renters. All renters lived in income-based rental units in the region. Additionally, information about income-based rental units in the target area was collected. Rental prices, unit size, and number of bedrooms were identified with floor plans. The data were statistically analyzed using the SPSS version 23.

Findings

Place for Aging, Living with Grown-Up Children, and Home Renovation

Residents’ opinions were compared by income level and homeownership. About 83.3% of homeowners and 48.8% of renters wanted to age in their homes. Most renters preferred to age in a retirement community or senior apartments. A higher percentage of low-income seniors (11.1%) showed an interest in living with their grown-up children, compared to 0.8% of the other income seniors. This difference was statistically significant at p<.01 level. About 22.0% of low-income seniors wanted to renovate their homes (or housing units) to support their aging in place while 25.4% of other income seniors did. About 34% of low-income seniors haven’t even thought about home renovation to support their aging.

Available Rental Unit Options for Low-Income Seniors

The results led the researchers to examine the rental unit conditions offered to low-income seniors. In the target area, main housing options for low-income seniors are income-based apartments or subsidized single-family housing units. Many apartments were three-story or higher with multiple units together and each unit ranged from 500 to 1,000 square feet. Most of the individual living units were one- or two-bedroom units. Several income-based rental units offered two to five bedroom units such as townhouse and duplexes. Yet, the number of the residential units with more than two bedrooms was insufficient for the low-income population of seniors.

Suggestions and Conclusion

Although the response rate from low-income seniors was low (11.3%), their needs for senior housing conditions differed significantly from the seniors in the middle- or higher-income groups. For instance, low-income seniors wanted residential floor plan options that allow them to live with grown-up children and grandchildren. The need for three to five bedroom units for low-income seniors was significant. Therefore, it is necessary to offer more floor plan options in rental units to accommodate up to three-generational families. More findings about low-income seniors’ opinions and rental unit floor plan analysis will be presented at the conference. These findings propose improvements in designs and supportive programs for low-income seniors’ aging in place.

References

Greater Lansing Housing Coalition. (2014). Fair and affordable housing initiatives: The next five years. Retrieved from <http://www.glhc.org/images/pdfs/housingplans/GLHC_ICE_ExecutiveSummary.pdf>

Kim, S.-K. (2014). Regional affordable housing study: Final report for the Mid-Michigan Program for Greater Sustainability. Retrieved from <http://www.midmichigansustainability.org/Projects/RegionalAffordableHousingStudy.aspx>

Kwon, H.-J., Ahn, M., Lee, S.-J., & Kim, S.-K. (2015). U.S. Baby boomers’ desire to age in place and residential satisfaction. *Journal of Housing for the Elderly, 29*, 348–372.

Michigan Housing Development Authority. (2014). Compliance current income and rent limits. Retrieved from <http://www.michigan.gov/mshda/0,4641,7-141-5555_8002_26576_26582-76409--,00.html>

**Referred Abstracts - Oral Presentations**

# Ethnic Variations in the Relationship between Older Adults’ Residential Satisfaction and Life Satisfaction

Mira Ahn\*, Texas State University

Jiyun Kang, Texas State University

Hyun Joo Kwon, Purdue University

Background

Many studies have reported that a well-designed residential environment is critical to increasing the life satisfaction of older people. However, there is little research in the literature that examines the relationship between residential satisfaction and life satisfaction in a comprehensive context, including other well-being domains. One meaningful implication from this perspective would be from the relationships investigated within a comprehensive model that can help develop a strategy to enhance life satisfaction in later life by providing insights into the relative significance of residential satisfaction to life satisfaction when compared to other constructs. Considering the increasing population of older Hispanics in the U.S., examining the ethnic variations in these relationships may also be beneficial in providing services specific to particular ethnicities.

Purpose

The purpose of this study was twofold. The first purpose was to develop and test a comprehensive model by including life satisfaction and three constructs which represent personal environment (physical and financial confidence), the built environment (residential environment), and the social environment (social connectedness) to examine the impact of residential satisfaction on life satisfaction from a holistic perspective. These hierarchical constructs were selected based on human ecology theory (Bubolz & Sontag, 1993). The second purpose was to determine any variations in the relationships among the selected constructs and life satisfaction in the developed model between older Hispanics and Whites.

Methods

Data were collected through an online survey that was offered to a random sample of non-Hispanic, White (n=328) and Hispanic (n=322) older persons (60+) living in their homes in the U.S. (N=650). The sample was sourced by Qualtrics, who directed respondents matching the desired demographics to the survey link from their large list of consumers until the targeted number of surveys were validated to be complete using validation questions. Measurements for each construct (i.e., physical and financial confidence, residential environment, and social connectedness) were adopted from existing studies. Structural equation modeling (SEM) was used to ensure measurement validity and reliability and then simultaneously analyze the relationships among a number of constructs. More specifically, we used multi-group SEM. Because our sample consisted of two different ethnic groups, it is necessary to first ensure that the two groups interpreted survey items equivalently (i.e., measurement equivalence) before running the research model for each group.

Results and Discussion

The results of the multi-group analysis confirmed measurement equivalence, in other words, that the two different ethnic groups viewed all the measurements in a same way, which enabled us to continue to examine the differences in linear relationships among variables of models between White and Hispanic groups. There was no significant difference between these two groups, suggesting these groups were not different in terms of the relationships among the variables of the model. In both groups, all the predictors of life satisfaction were significant: physical confidence (γ = 0.21 for Whites, 0.24 for Hispanics), financial confidence (γ = 0.32 for Whites, 0.35 for Hispanics), residential satisfaction (γ = 0.14 for Whites, 0.14 for Hispanics) and social connectedness (γ = 0.37 for Whites, 0.35 for Hispanics).

The significance of this study was developing and testing a comprehensive model for understanding the relationship between residential satisfaction and life satisfaction. In both groups, residential satisfaction was statistically significant in predicting life satisfaction. However, its impact was the lowest among other constructs. There was no ethnic difference in the relationships in the model between older Whites and Hispanics.

Given that many current housing programs for older Americans focus on singular goals (Greenfield, 2011), such as improving physical environment, or providing affordable rental houses, the results of this study can provide valuable insights for initiating more efficient and integrated housing related programs that contribute to enhance the life satisfaction of all older Americans.

References

Buboltz, M. M., & Sontag, M. S. (1993). Human ecology theory. In P. G. Boss, W. J. Doherty, R. LaRossa, W. R. Schumm, & S. K. Steinmetz (Eds.), *Sourcebook of family theories and methods: A contextual approach* (pp. 419–450). New York: Plenum Press.

Greenfield, E. A. (2011). Using ecological framework to advance a field of research, practice, and policy on aging-in-place initiatives. *The gerontologist, 52*(1), 1-12.

# Housing Choice Vouchers and Housing Security

Deborah Mitchell, University of Minnesota

Marilyn Bruin\*, University of Minnesota

Housing choice vouchers were intended to make affordable quality housing accessible for low-income households. The purpose of the study was to examine a variety of indicators of housing security to determine their contribution to explain housing satisfaction. The study was a pilot for a larger project to develop and test a scale to measure housing security that would facilitate comparative housing research. In the fall of 2015, a random sample of households with a housing choice voucher and a random sample on the waitlist received housing security questionnaires. The survey instrument included 62 questions measuring socio-economic characteristics, housing security, housing characteristics, and neighborhood characteristics. Indicators of housing insecurity or housing stress included questions developed by Christine C. Cook as part of the NC 1171, *Rural Families Speak.*

Usable questionnaires were returned from 59 voucher holders. Before receiving a voucher, 33% did not have money to pay rent, 30% did not have money to pay utilities, and 15% needed housing to accommodate special needs. The mean age of the voucher holders was 59, 83% of the respondents were white, 22% had a child under 18 years old in their home, 72% received SSI disability benefits, 14% received income assistance, and 24% were employed. Twenty-five surveys were returned from households on the waiting list. On the waitlist, the mean age was 49, 76% were white, 78% had a child, 44% received SSI disability benefits, 4% received income assistance, and 44% were employed.

A correlation matrix (N=84) revealed no significant correlations between having a voucher, adequate housing, and paying rent on time. Voucher holders more likely to need child care, medical care, dental care, yet voucher holders less likely to worry that income is not enough. Those worried about income correlated were also more likely dissatisfaction with housing cost, size, and property management. Satisfaction with size correlated with satisfaction property manager, safety, and racial makeup of neighborhood. Satisfaction with property management correlated with satisfaction with cost, size, safety, and racial makeup of neighborhood.

Five measures of satisfaction with specific dimensions of housing: 1. satisfaction with housing costs; 2. satisfaction with size of housing unit; 3. satisfaction with the property manager; 4. perception of safety; and, 5. satisfaction with the racial makeup of the surrounding neighborhood were inter correlated and evaluated as a scale measuring housing satisfaction. Factor analysis suggested one factor, with an eigenvalue of 2.345 that explained 59% of the variance. The five variables were summed to form the scale, housing satisfaction, with a Cronbach’s Alpha of .753. The housing satisfaction scale ranged from 10 to 21; the mean, median, mode were 16.

A regression model with having a voucher, age, race, worries about paying rent, and food insecurity explained .09% of the variance in housing satisfaction. Nonwhite residents and residents with food insecurity are more likely to be satisfied with their housing. Vouchers were not a powerful predictor of housing satisfaction and did not provide enough financial resources to eliminate food insecurity

# Apartment Industry Terminology: Challenges with Real Estate Media, Research Methodology

Carla Earhart\*, Ball State University

Debra Shidler, Ball State University

Purpose and Objectives

The right choice of words can have a remarkable effect on how the public views apartments (Holtzman, 2006), dispelling stereotypes by using more appropriate terminology. The purpose of this study was to replicate an earlier pilot study (Earhart & Spindler, 2011) in which a small sample of online news articles (n=20) were reviewed for appropriate apartment industry terminology. With increases in apartment development and more people renting, it is important to conduct a larger study to determine if there has been a parallel increase in appropriate terminology by the media in the years since the original study.

Methodology and Procedures

Using *Google News* search engine, the terms *apartment* and *multifamily* were used to locate articles from among all online news outlets. Of the 22,000 generated, the first 100 articles were reviewed and considered for further examination. Ten articles were rejected because they did not fit the study parameters (duplicates, editorials, legal notices, etc.). Each of the 90 remaining articles were copied and pasted into a Word document, and reviewed noting usage of terminology promoted by the National Apartment Association Education Institute (NAAEI, 2009):

* *Apartment home* (most desirable)*, unit* (less desirable)*,* and other terms used in reference to an individual home in a multifamily building;
* *Apartment community* (most desirable)*, complex* (less desirable)*,* and other terms used to describe collective multifamily spaces;
* *Resident* (most desirable)*, tenant* (less desirable)*,* and other terms used in reference to the individuals living in multifamily housing;
* *Community manager* (most desirable)*, landlord* (less desirable)*,* and any other terms used to describe the apartment community staff, owner, or other business professionals associated with apartment communities.

Content analysis was used to determine the number of times each term was used in each article, and then tabulated for the entire set of articles.

Results

Descriptive statistics were used to present the results of the content analysis (see Tables 1-4), with these overall findings:

* The less desirable term *unit* is being used much more than the preferred term *apartment home*, similar to the findings in the original study;
* Like the original pilot study, the less desirable term *complex* is still being used more than the preferred term *apartment community*;
* On the positive side, the more desirable term *resident* continues to be used more often than the less desirable term *tenant*; however, the follow-up study found the term *renter* also being used frequently;
* In the original pilot study, neither *community manager* (preferred) nor *landlord* (not preferred) were found; however, a negative finding in the follow-up study was that both terms were used, although infrequently, with the term *landlord* being used more often than the term *community manager*.

Conclusions and Implications

A major concern from these findings is that many of the online news articles that contain the less desirable terminology (*unit*, *complex*, *tenant*, *landlord*) were written for real estate media, some in publications specific to the multifamily housing industry. It is suggested that the apartment industry provide training for real estate-related media personnel on appropriate terminology.

As this type of research continues to be in its infancy, there is a need for further study. There were specific methodological challenges encountered with this study, which will be shared in the presentation as a guide to future researchers.

References

Earhart, C., & Spindler, D. (2011). Proceedings from the Hawaii International Conference on Business. Honolulu, HI, 1184-1190. Retrieved from <http://www.hicbusiness.org/BUS2011.pdf>

Holtzman, D. (2006). Managing the Message. *Shelterforce,* (146). Retrieved from <http://nhi.org/online/issues/146/managingthemessage.html>

National Apartment Association Education Institute (2009). *National Apartment Leasing Professional resource guide: The leasing interview.* Arlington VA: National Apartment Association Education Institute.

Table 1.

*Terms found in online news articles used to represent an individual home in a multifamily building*

|  |  |  |
| --- | --- | --- |
| Term | Article Frequency (%)  n=80 | Overall Frequency of Occurrence (%)  (n=444) |
| Apartment | 42 (52.5%) | 132 (29.73%) |
| Apartment Home+ | 5 (6.25%) | 12 (2.7%) |
| Apartment Unit | 11 (13.75%) | 56 (12.61%) |
| Dwelling | 2 (2.5%) | 4 (0.9%) |
| Home | 6 (7.5%) | 20 (4.5%) |
| Residence | 3 (3.75%) | 3 (0.67%) |
| Rental | 1 (1.25%) | 2 (0.45%) |
| Rental Home | 2 (2.5%) | 4 (0.9%) |
| Space | 2 (2.5%) | 2 (0.45%) |
| Unit\* | 71 (88.75%) | 205 (46.17%) |
| (Unit Type) | 4 (5%) | 4 (0.9%) |

+Most desirable term; \*Less desirable term

Table 2.

*Terms found in online news articles used to represent the collective multifamily living spaces*

|  |  |  |
| --- | --- | --- |
| Term | Article Frequency (%) n=89 | Overall Frequency of Occurrence (%) n=981 |
| *Acquisition* | 10 (11.24%) | 15 (1.53%) |
| *Apartments* | 35 (39.33%) | 120 (12.23%) |
| *Apartment Community+* | 11 (12.36%) | 14 (1.43%) |
| *Asset* | 23 (25.84%) | 44 (4.49%) |
| *Building* | 45 (50.56%) | 91 (9.28%) |
| (Building Type) | 3 (3.37%) | 4 (0.41%) |
| *Community* | 33 (37.08%) | 69 (7.03%) |
| *Complex\** | 38 (42.7%) | 120 (12.23%) |
| *Development* | 20 (22.47%) | 66 (6.73%) |
| *Investment* | 6 (6.74%) | 8 (0.82) |
| *Multifamily Community* | 5 (5.62%) | 12 (1.22%) |
| *Multihousing* | 2 (2.25%) | 2 (0.2%) |
| *Product* | 12 (13.48%) | 20 (2.04%) |
| *Project* | 21 (23.6%) | 41 (4.18%) |
| (Proper Name of Apartment Community) | 54 (60.67%) | 213 (21.71%) |
| *Property* | 48 (53.93%) | 141 (14.37%) |
| *Rental Community* | 1 (1.12%) | 1 (0.1%) |
| *Structure* | 1 (1.12%) | 1 (0.1%) |

+Most desirable term; \*Less desirable term

Table 3.

*Terms found in online news articles used to represent the individuals living in multifamily housing*

|  |  |  |
| --- | --- | --- |
| Term | Article Frequency (%) n=49 | Overall Frequency of Occurrence (%) n=168 |
| *Dweller* | 1 (2.04%) | 1 (0.6%) |
| *Occupant* | 2 (4.08%) | 2 (1.19%) |
| *People* | 8 (16.33%) | 11 (6.55%) |
| *Renter* | 35 (71.43%) | 66 (39.29%) |
| *Resident+* | 28 (57.14%) | 72 (42.85%) |
| *Tenant\** | 13 (26.53%) | 16 (9.52%) |

+Most desirable term; \*Less desirable term

Table 4.

*Terms found in online news articles used to represent the apartment community staff, owner, or other business professionals associated with apartment communities*

|  |  |  |
| --- | --- | --- |
| Term | Article Frequency (%)  n=75 | Overall Frequency of Occurrence (%) n=313 |
| *Architect* | 6 (8%) | 6 (1.92%) |
| *Broker* | 1 (1.33%) | 2 (0.64%) |
| *Community Manager+* | 1 (1.33%) | 1 (0.32%) |
| *Company* | 9 (12%) | 20 (6.39%) |
| *Developer* | 42 (56%) | 119 (38.02%) |
| *Employee* | 1 (1.33%) | 1 (0.32%) |
| *Engineer* | 1 (1.33%) | 1 (0.32%) |
| *Investor* | 18 (24%) | 38 (12.14%) |
| *Landlord\** | 8 (10.67%) | 15 (4.79%) |
| *Management* | 1 (1.33%) | 1 (0.32%) |
| *Manager* | 4 (5.33%) | 6 (1.92%) |
| *Owner* | 29 (38.67%) | 48 (15.34%) |
| *Partner* | 10 (13.33%) | 15 (4.79%) |
| *Professional* | 1 (1.33%) | 1 (0.32%) |
| (Proper name of business entity) | 13 (17.33%) | 31 (9.9%) |
| *Worker* | 1 (1.33%) | 8 (2.56%) |

+Most desirable term; \*Less desirable term

# Recruiting High School Students to Careers in Residential Property Management

Natasha Knight\*, Ball State University

Carla Earhart\*, Ball State University

Carol Friesen, Ball State University

Sotiris Hji-Avgoustis, Ball State University

Erin Donovan, Ball State University

Robert Parrillo, Ball State University

Introduction and Purpose

Nationwide there is increased interest in multifamily rental housing, which has led to increased development of apartment communities. However, finding qualified staff for these communities continues to be a challenge. The purpose of this presentation is to share the need, process, and preliminary outcomes for increasing the talent pool of property management professionals through the combined efforts of public and private support with the educational expertise from a state university.

Increase in Multifamily Housing Developments

Renting an apartment is an increasingly popular housing option. This growing interest in apartment living has resulted in increased development and occupancy of apartment communities, both in Indiana and nationwide. In Indianapolis alone more than 3000 apartment homes were added to the inventory in 2016, with another 3700 slated for delivery in 2017. Despite the increased inventory, apartment occupancy rates are the highest since 1997 (Tikijian Associates, 2016).

Shortage of Educated Talent Pool

The increase in apartment development/occupancy has resulted in a concomitant increase in career opportunities in residential property management. However, Lee (2017) reports that 71% of real estate firms are having trouble filling some positions… positions with generous levels of compensation. Lee (2017) also reports a future nationwide shortage of 15,000-25,000 qualified workers per year in the real estate industry, continuing the challenge of staffing the growing number of apartment communities.

Introducing High School Students to Residential Property Management

It is important to provide high school students with a better understanding of career opportunities in residential property management, and to introduce them to the basic skills and knowledge needed for a career in this field. Through a grant from the Indiana Department of Workforce Development, and private support from Weidner Apartment Homes, Ball State University is introducing high school students, parents, teachers, guidance counselors, and administrators to the field of residential property management, and educating high school students through a series of introductory college-level courses. The following activities have been accomplished in the first year of this project:

* Created four residential property management courses for online delivery to high school students;
* Collaborated with university personnel and professional organizations in property management to prepare promotional materials for high school students;
* Established partnerships with a variety of high school student groups such as DECA, FCCLA, JAG, and TeenWorks;
* Made direct contact with over 1,000 individuals at 50 Indiana high schools through phone calls, emails, visits, and meetings, with exposure to thousands more through state/national conferences and social media.

Preliminary Indicators of Success

Preliminary indicators of the success of the Ball State University project include the following, and will be elaborated upon in the conference presentation:

* There have been 15 enrollments in property management courses at the high school level, with requests for more courses to be offered;
* At least one Indiana high school is planning to add a residential property management course to their Family and Consumer Sciences curriculum;
* The number and quality of freshmen choosing to study RPM has increased;
* Based on the preliminary success of this project, property management companies have contributed additional resources to the university to extend this project and to create additional events to encourage Indiana high school students to study residential property management.

Because the lack of qualified property management staff is occurring nationwide, other universities may want to emulate this model to help create a talent pool of educated property management professionals for the future.

Acknowledgements

Appreciation is extended to the Indiana Department of Workforce Development and Weidner Apartment Homes for funding this project. Additional project partners include the Ball State University Residential Property Management Advisory Board, the Ball State University Office of Extended Education, and the Indiana Department of Education Division of Career and Technical Education.

Bibliography

Lee, C. (2017). *Transformational Leadership in the New Age of Real Estate.* Chicago: Institute of Real Estate Management.

Tikijian Associates. (2016). *Market.* Retrieved from Tikijian Associates: http://www.tamultihousing.com/pdf/Indiana%20Apartment%20Market%20Overview%20Brochure%202016%20WEB.pdf

# The Healthy and Sustainable Homes Initiative

Kandace L. Fisher-McLean, University of Missouri – Extension

The purpose of the Healthy and Sustainable Homes Initiative is to “align and unite stakeholders around healthy and safe housing solutions for the benefit of children and families in the St. Louis region (Generate Health, 2017a).” A committee formed to address healthy homes issues after Generate Health (formally known as the Maternal, Child and Family Health Coalition) launched the Mapping a Course Initiative to “unite and call the community to action for healthier women, children and their families (Generate Health, 2017b).” In their 2008 report, they found that:

* In 2006, 1 out of every 2.5 children in St. Louis City lived in families with incomes below 100% of federal poverty level and 1 in every 4 lived in extreme poverty. Participants cited inadequate housing as one of the key factors influencing poverty and health in St. Louis (Annie E. Casey Foundation, 2008).
* 7,000 people were waiting for public housing in the St. Louis area and 400,000 live in substandard or overcrowded conditions (Beyond Housing, 2008).
* There was also a need to improve the health of home environments and to increase safe and supportive communities.

Many of the organizations that formed the committee included individuals who regularly performed home visits as part of their organization’s services or individuals who educated the public regularly regarding health and safety concerns in the home. Some of the organizations included: Nurses for Newborns, The Asthma and Allergy Foundation, the St. Louis County Health Department, the University of Missouri – Extension, Beyond Housing, Lemay Housing Partnership, Rebuilding Together, and the Tower Grove Neighborhoods Community Development Corporation. As interests evolve, new organizations have joined the committee and some have left.

As the organizations met and began to communicate, it was recognized that the best way to reach individuals would be to address health and safety issues directly in their homes. Some of the organizations, such as Nurses for Newborns already had home health workers providing “in-home nursing visits to promote healthcare, education, and positive parenting skills for at-risk families (Nurses for Newborns, 2017).” They agreed that one of the ways they could further their mission would be to address home health and safety risks as well. However, their staff would have to be educated on how to identify and address health and safety issues when they were in the home.

Therefore, one of the successful projects created by the committee included the development of a Quick Observational Tool designed for home health workers to help them identify homes with health risks (e.g., lead paint, asbestos, leaky roof, etc.). The second step, with the written consent of the homeowner, would be to connect them with a home remediation specialist to remedy the concerns. A home remediation specialist would include various types of contractors who could make repairs to improve the health and safety of a home. A second step could also include connecting them with an educational specialist to educate them about some additional things that they could do to improve the health and safety of their home as well. Although home health specialists, local health departments, and other education specialists have taken an active interest in the committee, home remediation workers and non-profits have been harder to generate interest from.

Recently, the leadership of the Healthy and Sustainable Homes Initiative has changed. With the change in leadership, a few key organizations (a representative from the University of Missouri Extension, St. Louis County Health Department, and the Tower Grove Neighborhoods Community Development Corporation) are revamping the Quick Observational Tool and will begin pilot testing its use in late 2017. This Quick Observational Tool, once finalized and set into motion could prove to be an essential instrument for home health care workers. The health of the home is something that greatly impacts its inhabitants and can have an effect on various health issues. It is of interest during this presentation to review the Quick Observational Tool with other housing professionals and to generate additional ideas as we set forth in piloting the tool and educating home health professionals on its use in their industry.

References

Generate Health. (2017a). He*althy and sustainable home committee.* Retrieved from

http://generatehealthstl.org/programs/health-equity/

Generate Healthy. (2017b). Mapping a course to a healthier community for women, children, and families.

Retrieved from http://generatehealthstl.org/images/docs/mapping\_a\_course.pdf

Nurses for Newborns. (2017). About use. Retrieved from http://www.nursesfornewborns.org/about-us/

# Where’s the Loo? An Examination of Toilets and Healthy Housing

Greg Galford\*, Chatham University

Gina Peek, Oklahoma State University

Introduction

The most ubiquitous household item, the toilet, is a product of the recent past. The US Census first began collecting data about toilet facilities in 1940, when about 33 percent of homes did not have a flush toilet. Some states provide stark examples: 81.3 percent of Mississippi homes did not have a flush toilet. Instead, these homes used other means to dispose of waste, including privies or no means of disposing waste at all. By 1990, homes were better equipped to handle disposal: 74.8 percent used public sewer systems, 24.1 percent used septic tanks or cesspools, and only 1.1 percent used other means (U.S. Census Bureau, 2011). This represents an extreme change in both culture and infrastructure. Globally, it is estimated that 2.4 billion people lack basic sanitation facilities; of these, 946 million defecate in the open or in water sources (World Health Organization, 2016). The goal of this presentation is to document the contribution of toilets to healthy housing. The objectives include: Documenting toilet history, relating toilets and sanitation infrastructure to healthy homes concepts, and toilet solutions for the future.

Why Do We Care

Toilets have made an important contribution to health, welfare, and safety. As noted in the Healthy Homes Reference Manual (2006), protection against disease is a basic principle of healthy housing. Toilets provide a reliable means of sanitation and thereby reducing the risk of disease including cholera, hepatitis, typhoid fever, and E. coli. It is worth mentioning that toilets make life more comfortable. The U.S. is covered by a network of sanitation infrastructure. Deferred maintenance on aging systems occurs despite importance. Cities and towns are faced with the issue of how to repair, renovate, or replace existing systems that will be expensive to replace in kind. Across the globe, mass migration from rural to urban areas lead to living environments without planned municipal infrastructure produces environments that foster disease. Non-profit entities like the Gates Foundation are currently searching for alternatives that will respond to the needs of the 21st century. The toilet may be reinvented for sustainability (Bill & Melinda Gates Foundation, n.d.).

Methods

This literature review will position the toilet within a healthy homes framework. Using a micro approach, information about the history of toilet on the consumer level in private homes will be provided. The basic history of the toilet will segue into a macro discussion of how sanitation infrastructure relates the toilet to healthy homes concepts. This review will also frame current research and design trends to explain the context to predict the path toward a more sustainable future.

Results and Implications

Toilets are a relevant concern for housing professionals with implications for teaching, research, and Extension. Embodying micro and macro healthy homes concepts, toilets are crucial to daily life. Toilets, as a healthy homes concept, raise both social and political questions in the U.S. and around the globe.

References

Bill & Melinda Gates Foundation. (n.d.). Reinvent the toilet challenge. Retrieved from <http://www.gatesfoundation.org/What-We-Do/Global-Development/Reinvent-the-Toilet-Challenge>

Centers for Disease Control and Prevention and U.S. Department of Housing and Urban Development. (2006). Healthy housing reference manual. Retrieved from <https://www.cdc.gov/nceh/publications/books/housing/housing_ref_manual_2012.pdf>

U.S. Census Bureau. (2011). Historical census of housing tables: Sewage disposals. Retrieved from <https://www.census.gov/hhes/www/housing/census/historic/sewage.html>

World Health Organization. (2016). Sanitation. Retrieved from <http://www.who.int/mediacentre/factsheets/fs392/en>

# Healthy Homes: Using Smartphone Apps for Stakeholders and Consumers

Michael Goldschmidt\*, University of Missouri

Gina Peek, Oklahoma State University

Background

The National Healthy Homes Partnership translates research into an outreach program dedicated to reducing housing deficiencies and mitigating risks. The partnership has assisted individuals, families, and professionals using a variety of educational tools (Booth & Peek, 2013), including programs, guides, exhibits, media (broadcast, print and social). In the last year, the partnership assisted in developing two smartphone apps, for the US Department of Housing and Urban Development, for use by professionals (including extension specialists) and consumers.

Objectives

The goal of the stakeholder app is to increase knowledge of healthy homes issues for outreach programs by professionals working directly with families. The goal of the consumer app is to increase awareness of unhealthy home conditions and suggest mitigation strategies for the hazards for families. Each app incorporates the eight guiding principles of healthy housing: dry, clean, maintained, safe, ventilated, pest-free, contaminant-free, and thermally-controlled (U.S. Department of Housing and Urban Development, 2016). These principles are widely recognized across federal agencies and national organizations (U.S. Department of Housing and Urban Development, 2013).

Methods

The apps are based on the companion publications, “Everyone Deserves a Safe and Healthy Home”. Like the apps, there are two versions of this document: a consumer action guide (U.S. Department of Housing and Urban Development, 2017a); a stakeholder guide for protecting the health of children and families (U.S. Department of Housing and Urban Development, 2017b).

Consumer Smartphone App

The consumer app titled “Healthy Homes Basics” was developed jointly by the National Healthy Homes Partnership, HUD Office of Lead Hazard Control and Healthy Homes, Penngood, and Mobomo and is directed to consumers and families with little or no knowledge of healthy homes issues. The app provides basic information, checklists on each topic and room, and low and no-cost action steps for families. The consumer app also includes quiz questions to test consumer understanding of the content.

Stakeholder Smartphone App

The stakeholder app titled “Healthy Homes Partners” was developed jointly by Oklahoma State University, the National Healthy Homes Partnership, HUD Office of Lead Hazard Control and Healthy Homes, and USDA-NIFA, and is directed to educators and professionals working directly with families and consumers. Each section provides peer-reviewed, technical information about individual hazards and directs the stakeholder to action steps to assist families. Each chapter guides the stakeholder through a holistic approach to healthy homes and shows the interrelated nature of each topic. This app also includes a room-by-room checklist and links to additional resources from federal agencies and university extension programs. Users of the app are able to bookmark common topics and links for quick reference, and to take a quiz to test comprehension of the material.

Conclusions

Healthy homes education is relevant to teaching, research, and Extension. The Healthy Homes Partnership represents translational research and partnership outputs are functional across diverse audiences, including consumers, healthy homes practitioners, and housing educators. These recently developed smartphone apps can be used in a variety of ways to advance knowledge on unhealthy housing issues and to encourage action steps for families.

Acknowledgement

Funding for the National Healthy Homes Partnership is provided by the United States Department of Agriculture – National Institute of Food and Agriculture (USDA – NIFA; National Program Leader Beverly Samuel) through an interagency agreement with the U.S. Department of Housing and Urban Development – Office of Lead Hazard Control and Healthy Homes (HUD – OLHCHH).

References

Booth, L. B., & Peek, G. G. (2013). The Healthy Homes Partnership: A Cooperative Extension Model. *Journal of Extension, 51*(1).

U.S. Department of Housing and Urban Development. (2013). Advancing healthy housing: A strategy for action. Retrieved from <http://portal.hud.gov/hudportal/documents/huddoc?id=stratplan_final_11_13.pdf>

U.S. Department of Housing and Urban Development. (2016). Eight tips for keeping a home healthy. Retrieved from <http://portal.hud.gov/hudportal/documents/huddoc?id=HH8Tips.pdf>

U.S. Department of Housing and Urban Development. (2017a). Everyone deserves a safe and healthy home – A consumer action guide. Retrieved from <https://portal.hud.gov/hudportal/documents/huddoc?id=consumers_edhh.pdf>

U.S. Department of Housing and Urban Development. (2017b). Everyone deserves a safe and healthy home – A stakeholder guide for protecting the health of children and families. Retrieved from <https://portal.hud.gov/hudportal/documents/huddoc?id=stakeholder_edshh.pdf>

# Loan Denial Rates in Mississippi: A Racial Issue

Leslie Green-Pimentel, Delta State University

Introduction

A racial homeownership gap exists nationwide. In 2014, homeownership rates were 71% for White households and 41.2% for Black households (Corporation for Enterprise Development (CFED), 2016). Even with policies like the Fair Housing Act and the Equal Credit Opportunity Act, minority households still face discrimination in the mortgage market. The Home Mortgage Disclosure Act (HMDA) of 1975 requires lenders to report information about mortgage loans so discriminatory lending practices can be more easily identified. HMDA data revealed that discriminatory practices by financial institutions toward minority households still exists in the US (Williams, McConnell, & Nesiba, 2005) and in the Southern U.S. where loan denial rates for minority races have increased over time in urban areas of Mississippi (Ezeala-Harrison, Glover, & Shaw-Jackson 2008).

This study will examine loan denial rates by race in Mississippi and examine the predictors of loan denial among Mississippi mortgage applicants. Mississippi is characterized by extreme poverty, low household income, and a high minority population (U.S. Census 2014). The homeownership rate is high (78.5% for Whites and 60.7% for Blacks; CFED, 2016), but evidence of discriminatory practices in mortgage lending still exist (Ezeala-Harrison, Glover, & Shaw-Jackson 2008).

Methods

The sample came from 2013-2015 HMDA data and included only applicants seeking a mortgage for an owner-occupied dwelling in Mississippi. The dependent variable was whether or not an applicant’s loan was denied (1 if loan was denied; 0 if loan was originated). Independent variables included: race (as measured by the U.S. Census), gender, household income in dollars, presence of a co-applicant, loan type (Conventional, FHA, VA, FSA/RHS), and the requested loan amount in dollars. Other important control variables exist, but were not available in the HMDA data.

Research Questions

1. What was the loan denial rate by race in 2013, 2014, and 2015 in Mississippi?
2. What was the high APR mortgage loan (HAL) rate by race in 2013, 2014, and 2015 in Mississippi?
3. Among Mississippi mortgage applicants in 2015, was *loan denial* affected by race?
4. Among Mississippi mortgage applicants in 2015, were the *reasons for loan denial* affected by race?
5. What is the effect of race on the probability of being denied a mortgage loan among applicants living in rural versus urban areas of Mississippi?

Questions one and two were addressed using cross tabulations. Questions three and four used a chi-square test for independence and Cramer's V. Research question five used three logistic regression models; each examined a specific geographical area (mostly urban, mostly rural, and completely rural as defined by the U.S. Census). Data analysis was performed using SAS. Outliers were removed and the variables in the regression model were checked for multicollinearity; no problems existed.

Results

Highlights of the results for each research question follow. 1) Loan denial rates were higher among Blacks compared to Whites. 2) The majority of applicants who received a HAL were White. 3) Whether or not a loan is denied has a significant but moderate relationship with race (Chi-Square = 1,909.64; DF = 3; P<0.0001; Cramer’s V = 0.2819). 4) Reasons for loan denial have a significant but weak relationship with race (Chi-Square = 46.94; DF=24; P=0.0034; Cramer's V = 0.1064). 5) The probability of being denied a mortgage loan was significantly higher for Blacks (compared to Whites) across all three models examined in research question five. Further details regarding the logistic regression findings will be shared in the presentation. Implications of the findings will also be discussed.

References

Corporation for Enterprise Development (2016). 2016 Assets and Opportunity Scorecard. Retrieved March 27, 2017 http://assetsandopportunity.org/scorecard/

Williams, R. A., McConnell, E., & Nesiba, R. (2005). The Changing Face of Inequality in Home Mortgage

Lending. *Social Problems* 52(2), 181-208.

Ezeala-Harrison, F., Glover, G. B., & Shaw-Jackson, J. (2008, April). Housing Loan Patterns Toward

Borrowers in Mississippi: Analysis of Some Micro Data Evidence of Redlining. *The Review of Black Political Economy*. 35, 43-54.

U.S. Bureau of the Census. (2014). Mississippi AmericanFactFinder. Retrieved July 14, 2016 from

http://factfinder.census.gov

# Choosing Healthy Housing Materials for Millennials

Hyun Joo Kwon\*, Purdue University

Mira Ahn, Texas State University

With growing concern over the effects of indoor air quality on human health, attention to healthy housing materials has intensified (Joint Center for Housing Studies of Harvard University, 2015). Since residents can participate in the selection of housing materials not only for new construction but also for remodeling, it is important to understand their perceptions of healthy housing materials. Millennials are the most environmentally conscious generation (Vermillion & Peart, 2010) and are expected to bring much greater purchasing power to the housing industry in the coming decades (Joint Center for Housing Studies of Harvard University, 2015). Their perceptions are therefore valuable for product developers, marketers, designers, and educators.

This study explored the knowledge, perceived benefits, threats, and barriers that affect millennials’ intention to choose healthy materials such as paint and carpets based on the Health Belief Model (HBM) (Janz & Becker, 1984). The HBM explains and predicts health-related behavior according to a person’s subjective beliefs and perceptions about that behavior ([Becker, 1974](#_ENREF_2)). In addition to the perceived benefits, threats, and barriers) of HBM, this study included knowledge as an antecedent of predicting the choice of healthy housing materials.

Data were collected through an online survey with a random sample of millennials born between 1982 and 2000 who are homeowners in the U.S. (N=254). The measurements for each key construct (i.e., *knowledge*, *perceived benefits*, *threats*, and *barriers*) were modified from scales in the literature. *Knowledge*, the newly added variable, is general awareness of healthy housing materials and consists of four items. *Perceived benefits* include three items about perception of positive aspects of choosing healthy housing materials. *Perceived threats* include three items and refer to the perception of negative results related to health when one does not choose healthy interior materials. *Perceived barriers* include five items and refer to the perception of obstacles such as costs, product options and design when choosing healthy housing materials. Before starting the survey, participants were shown images and a sentence that describe healthy housing materials. Structural equation modeling was used to test the proposed path model. The Statistical Package for the Social Sciences and AMOS version 20.0 were used.

The proposed model showed an acceptable model fit (GIF=.988, NIF=.985, CFI=.987, RMR=.054) (Hu & Bentler, 1998). It indicates that *perceived benefits* and *threats* were significantly positively related to *intention to choose* healthy housing materials. In these paths, *perceived benefits* was a stronger indicator of *intention to choose*. However, there was no significant impact of *perceived barriers* on *intention to choose* healthy housing materials. The impact of knowledge showed significant relationships to the key constructs of the HBM: *knowledge* was significantly positively related to *perceived benefits*, *threats*, and *barriers*, where it has the greatest impact on *perceived threats*.

This study indicates that two constructs from the original HBM (*perceived benefits* and *threats*) had significant effects on the intention to choose healthy housing materials. Considering that *perceived benefits* and *barriers* were consistently the strongest predictors revealed in HBM studies (Carpenter, 2010), this study has critical implications for understanding millennials’ selection of healthy housing materials. No significant effect of perceived barriers on millennials’ intention to choose healthy materials by could be found in either the current nature of healthy housing materials or millennials. For example, there would be insufficient product and cost options in market. Further research using qualitative methods may illuminate the non-significant finding with regard to barriers and the intention to choose healthy housing materials.

Another notable finding from this study is the significance of *knowledge* on all three constructs in the HBM. Awareness of healthy housing materials significantly affects belief about the benefits, threats, and barriers of choosing the materials, thereby affecting actual intention to choose them. The resources and channels of obtaining knowledge need to be explored and used in to encourage millennials to choose healthy construction materials for their homes.

References

Becker, M.H. (1974) The health belief model and personal health behaviour, *Education Monographs,2*(4), 324–508.

Carpenter, C. J. (2010). A meta-analysis of the effectiveness of health belief model variables in predicting behavior. *Health communication, 25*(8), 661-669.

Hu, L., & Bentler, P.M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological methods, 3*(4), 424-453.

Janz, N. K., & Becker, H. M. (1984). The health belief model: A decade later. *Health Education & Behavior, 11*(1), 1-47.

Joint Center for Housing Studies of Harvard University. (2015). *Improving America’s housing 2015: Emerging trends in the remodeling market*. Retrieved from: http://www.jchs. harvard.edu/research/improving-americas-housing

Oliver, J. D. (2007). Increasing the adoption of environmentally friendly products: Who are the non-adopters, and what will get them to buy green? Paper AAI3277001. Retrieved from ETD Collection for University of Rhode Island website: http://digitalcommons.uri.edu/ dissertations/AAI3277001

Vermillion, L. J., & Peart, J. (2010). *Green Marketing: making sense of the situation.* Paper presented at the Allied Academies International Conference. Academy of Marketing Studies. Proceedings.

# Carolina in My Mind: And in My Own Home

Sung-Jin Lee\*, North Carolina A&T State University

Daejin Kim, North Carolina A&T State University

Kathleen R. Parrott, Virginia Tech

Valerie L. Giddings, North Carolina A&T State University

Sheryl Renee Robinson, North Carolina A&T State University

A qualitative case study, investigating support of North Carolina (NC) low-income elderly homeowners aging in place, was well-placed in NC because (1) NC ranks 9th among U.S. states in number of those aged 65 and over (U.S. Census Bureau, 2014); (2) a high proportion (43%) of the NC aging population resides in urban areas but only 20 counties are urban or regional city/suburban areas while 80 counties are rural; and (3) 80% of the aging cohort are homeowners (North Carolina Division of Aging and Adult Services, 2011). This study explored NC low-income elderly homeowners’ residential environments including neighborhood and city. Residential environmental features were considered as either constraints (environmental features disliked) or resources (those liked), that could influence their successful aging in place.

Methodology

Between June 2013 and May 2014, 30 low-income elderly homeowners in a central NC city were interviewed with open-ended questions on neighborhood and city environment, such as what they most and least liked about their neighborhood and city. A non-profit housing organization providing services to the elderly population assisted with sample recruitment. Participants were contacted by the organization, and then by the Housing Research Team to schedule an interview. Interview responses were tape-recorded and transcribed for content analysis, a qualitative data analysis following procedures designed to convert textual information to more relevant managerial data (Berelson, 1971).

Findings

Interview participants (average age = 73 years old) were mostly single (*n*=28), female (29), African Americans (19) with income less than $25,000 (29). Eighteen interviewees lived alone, and nine lived with children or grandchildren. They liked their neighborhoods because of strong and friendly social interaction with their neighbors including ‘friend(s)/neighbor(s) help each other’ (17) and friendly/nice neighbor(hoods) (9). However, some disliked their neighborhood because of an unfriendly neighbor (14), noise (5), lack of safety (3), and/or maintenance (3). In terms of city features, they liked convenience (10) and the feeling of a hometown (6), but disliked crime and lack of safety (4) and no friendship (3). Most residents enjoyed a strong relationship with their neighborhood or city, but some expressed a weakened relationship due to neighbors’ turnover. These findings indicated four main themes on residential environments for NC low-income elderly homeowners aging in place: (1) social relationships; (2) safety; (3) convenience; and (4) opportunity.

Conclusions and Implications

Those who engage with low-income elderly populations, including policymakers, social workers, non-profit organizations and city planners, can consider these themes when developing a livable residential environment for homeowners aging in place. The research presentation will expand on residents’ personal views of their neighborhoods and city by providing interview quotes, to help audiences understand current living environments of the low-income elderly homeowners in North Carolina. Two study limitations were found: (1) the sample was relatively small and from a single location and (2) the frequency counts for each question were not equal because the study employed open-ended interview questions and the interviewer used prompts that encouraged some participants to respond while others did not.

Acknowledgement

“The project described was supported by Project Number, NCX-273-5-13-170-1 from USDA National Institute of Food and Agriculture. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the National Institute of Food and Agriculture*."*

References

Berelson, B. (1971). *Content analysis in communication research*. New York, NY: Hafner Press.

North Carolina Division of Aging and Adult Services. (2011). *A profile of people age 60 and over North*

*Carolina.* Retrieved from http://digital.ncdcr.gov/cdm/ref/collection/p249901coll22/id/714207

U.S. Census Bureau. (2014). *65+ in the United States: 2010*. Retrieved from

https://www.census.gov/content/dam/Census/library/publications/2014/demo/p23-212.pdf

# College Students’ Experiences, Perception and Expectation of Disaster Management Education Programs

Hyun-Jeong Lee\*, Chungbuk National University

Sohee Moon, Chungbuk National University

Background and Research Purpose

Recently, we had experienced many major natural and man-made disasters in South Korea. Especially, a strong earthquake of magnitude 5.6 in Gyeongju in September 2016 followed by more than 600 aftershocks (as of April 2017) was recorded to be the strongest earthquake in Korea in last 40 years. However, disaster management education programs in Korea are offered to limited populations such as pre-school children and students in elementary, middle and high schools, and programs for other population are insufficient (Jang, Go & Hyun, 2015) and many Koreans were not preparing for disasters because they did not know what to do to prepare for a potential disaster (Korea Institute of Civil Engineering and Building Technology (KICT), 2016), In a study by KICT, it was reported that majority of Koreans perceived a strong need for disaster management education opportunities and showed their intention to participate in such programs. As a part of research study series to develop resident education programs in Korea, this study was aimed to explore college students’ experiences, perception and expectation of disaster management education programs in order to provide basic information to develop education programs targeting general public.

Methods

A questionnaire was developed by the researchers based on previous studies and modified through a series of pretests. From April 17, 2017, to April 19, 2017, a paper survey was conducted to students at a national university located in Cheongju. Total 352 useable responses were collected, and analyzed statistically using IBM SPSS 23.0.

Major Findings

Findings indicated that respondents perceive the following as the most common disasters in Cheongju: vehicle accidents, yellow dust (Asian dust), earthquake, fire and extreme heat. Respondents tended to believe Cheongju was relatively safer from natural and man-made disasters than entire Korea. Among the respondents only 11.6% were found to prepare disasters. Three most frequent reasons not to prepare disaster were “as I do not think I will suffer disaster damage,” “as I do not know what to prepare,” and “as there were very little chance of disaster occurrences.” Two most frequent types of disaster management were “to check escape route and facilities” and “insurance purchase.” Major sources of disaster management information were mass communications (TV, radio, etc.), internet and social network services. About 60% had experiences to participate in one or more disaster management education programs, and 65% showed their intention to participate in such programs. Among those who showed intention to participate in any disaster management education programs, 61% preferred on-site education to online programs. Most preferred locations were colleges and disaster experience facilities. Major reason not to intend to participate in education programs was “I do not have time or do not want to bother myself.” The most trusted parties to develop and implement disaster management education programs were found to be disaster-related public institutions and colleges.

The findings imply that disaster management education programs need to be developed. Considering the college students’ preferences, on campus programs in each college would be best for both proximity and confidence.

Acknowledgement

This work was supported by the National Research Foundation of Korea Grant funded by the Korean Government (NRF-2015R1C1A1A01054998).

References

Korea Institute of Civil Engineering and Building Technology. (2016). The public wants disaster prevention policies and disaster countermeasure education programs regularly: Findings from public perception survey on national disaster countermeasure (Public release). Goyang, Korea: Author.

Jang, S. H., Go, M. J., & Hyun, S. H. (2015). Standard classification of disaster for establishing customized disaster safety education system. Seoul, Korea: National Disaster Management Research Institute of Ministry of Public Safety and Security.

# Veterans and Homelessness through the Lens of Housing Adjustment Theory

Michelle Longworth, University of Minnesota

The research paper summarizes a literature review of peer reviewed journal articles and government reports about homeless veterans as a subpopulation with housing issues. The goal is to use Earl W. Morris and Mary Winter’s Housing Adjustment Theory (1978) to describe housing preferences and deficits for this specific housing subgroup. Housing constraints, including resource constraints and housing norms for homeless veterans are summarized. Specific resource constraints including benefits and programs from Housing and Urban Development-Veterans Affairs Supportive Housing (HUD-VASH) are discussed; resource constraints provide both supportive assistance and additional constraints (Morris & Winter, 1978).

Morris and Winter’s (1979) housing model assumes an universal goal or norm of attaining appropriate housing that is often elusive for homeless veterans. Research literature catalogues examples of households’ experiences including homelessness in response to all forms of housing deficits within the theoretical model. Mobility within the housing adjustment theory is a behavioral adjustment to eliminate a housing deficit, for example, the effort to find a larger apartment due to growth of a family, or the move to another neighborhood for better schools. Mobility, as related to homelessness, might be serial and include staying with friends, then going to a shelter, and then staying in an abandon building. Theoretically, this behavior could be an adjustment behavior to mitigate deficits; however, this example of moving from place to place never alleviates the housing deficit. Adaptation to non-normative living situations, such as living out of a van and/or adjustment to unstable housing may or may not postpone pathology. The correlation between mental illness, chemical dependency, homelessness, and non-compliance with supportive housing rules suggest that chaotic adjustments result in pathology rather than housing satisfaction.

The homeless veterans are faced with an overwhelming number of constraints even within supportive housing programs (Applewhite, 1997; Byrne, Montgomery, & Fargo, 2016; O’Connell, Kasprow, & Rosenheck, 2009; M. J. O’Connell, Kasprow, & Rosenheck, 2008; Tsai, Kasprow, & Rosenheck, 2013; Tsai, Rosenheck, & Kane, 2014). However, if the majority of homeless veterans want to transition into the community and a stable home, this fact supports Morris and Winter’s normative housing theory in that even among homeless individuals, the aspiration for normative housing is not eliminated (Morris & Winter, 1978).

Additional longitudinal research on veteran housing experiences before and after they leave supportive housing programs is needed to develop a deeper understanding of veterans’ housing behavior. The research findings could provide evidence of the diversity of needs among veterans and their household norms (Austin et al., 2014; Kasprow, Rosenheck, Frisman, & DiLella, 2000; O’Connell et al., 2009; M. J. O’Connell et al., 2008; M. O’Connell, Kasprow, & Rosenheck, 2010; Tsai et al., 2013, 2014; Tsai, Rosenheck, Kasprow, & Kane, 2015). Such evidence could influence the design of supportive housing programs that offer affordable, safe, stable, and satisfying housing for a deserving population. Furthermore, evaluation of such housing programs would also provide the opportunity for additional elaboration of the Morris and Winter’s Housing Adjustment Theory to predict and explain veterans’ decisions, family organization, and family function, behavioral response to deficits, constraints, and normative housing aspirations and expectations (Morris & Winter, 1978).

References

Applewhite, S. L. (1997). Homeless Veterans: Perspectives on Social Services Use. *Social Work*, *42*(1), 19–30. https://doi.org/10.1093/SW/42.1.19

Austin, E. L., Pollio, D. E., Holmes, S., Schumacher, J., White, B., Lukas, C. V., & Kertesz, S. (2014). VA’s expansion of supportive housing: Successes and challenges on the path toward housing first. *Psychiatric Services*, *65*(5), 641–647. https://doi.org/10.1176/appi.ps.201300073

Byrne, T., Montgomery, A. E., & Fargo, J. D. (2016). Unsheltered Homelessness Among Veterans: Correlates and Profiles. *Community Mental Health Journal*, *52*(2), 148–157. https://doi.org/10.1007/s10597-015-9922-0

Kasprow, W. J., Rosenheck, R. A., Frisman, L., & DiLella, D. (2000). Referral and Housing Processes in a Long-Term Supported Housing Program for Homeless Veterans. *Psychiatric Services*, *51*(8), 1017–1023. https://doi.org/10.1176/appi.ps.51.8.1017

Morris, E., & Winter, M. (1978). *Housing, family, and society*. New York, NY: Wiley.

O’Connell, M. J., Kasprow, W., & Rosenheck, R. (2009). Direct placement versus multistage models of supported housing in a population of veterans who are homeless. *Psychological Services*, *6*(3), 190–201. https://doi.org/10.1037/a0014921

O’Connell, M. J., Kasprow, W., & Rosenheck, R. A. (2008). Rates and Risk Factors for Homelessness After Successful Housing in a Sample of Formerly Homeless Veterans. *Psychiatric Services*, *59*(3), 268–275. https://doi.org/10.1176/ps.2008.59.3.268

O’Connell, M., Kasprow, W., & Rosenheck, R. A. (2010). National dissemination of supported housing in the VA: Model adherence versus model modification. *Psychiatric Rehabilitation Journal*, *33*(4), 308–319. https://doi.org/10.2975/33.4.2010.308.319

Tsai, J., Kasprow, W. J., & Rosenheck, R. A. (2013). Latent Homeless Risk Profiles of a National Sample of Homeless Veterans and Their Relation to Program Referral and Admission Patterns. *American Journal of Public Health*, *103*(S2), S239–S247. https://doi.org/10.2105/AJPH.2013.301322

Tsai, J., Rosenheck, R. A., & Kane, V. (2014). Homeless Female U.S. Veterans in a National Supported Housing Program: Comparison of Individual Characteristics and Outcomes With Male Veterans. *Psychological Services*, *11*(3), 309–316. https://doi.org/10.1037/a0036323

Tsai, J., Rosenheck, R. A., Kasprow, W. J., & Kane, V. (2015). Characteristics and Use of Services Among Literally Homeless and Unstably Housed U.S. Veterans With Custody of Minor Children. *Psychiatric Services*, *66*(10), 1083–1090. https://doi.org/10.1176/appi.ps.201400300

# Nuisance Laws: Issues in Real Estate Management and Housing

Robert Parrillo, Ball State University

Introduction

Many municipalities have laws, which “encourage” or compel property owners/managers to evict residents after a certain number of nuisance violations. Municipalities often suggest that these laws are beneficial to the community and even helpful to property owner/managers. This project proposes that this may not be the case. In fact, these laws may be bad for residents, owners/managers and communities. Furthermore, these laws pose potential legal issues. Finally, this project falls under the submission guidelines as dealing with “Issues and Policies.” This is not a research presentation but rather will discuss an important policy concern. Among other things, the project will synthesize and analyze current law and research, so to highlight important issues and offer suggestions for improvement.

Analysis

Impact on Individuals

These statutes may disproportionally impact the poor, minorities, victims of abuse, and people with children. Fair housing laws were enacted to protect many of these groups. Furthermore, fair housing laws protect certain groups of people from intentional discrimination and from laws and policies that may have a disparate impact on the protected groups.

Activities which are considered a nuisance are defined under the statute. These can be pretty broad and the behaviors covered can fall far short of a crime. This can lead to the situation of a resident being evicted for relatively minor things or for the bad behavior of others. Recently, screening potential residents based on criminal convictions has come under scrutiny as potentially disproportionally impacting minorities and thus violating fair housing laws. Interestingly, these nuisance laws could result in an eviction on grounds much less severe than a criminal conviction, which could not have been a legitimate reason for denying a rental application in the first place. Thus, you could evict tenants on grounds less serious than you could deny an application. This seems odd and can potentially even create a due process violation.

Impact on Owners/Managers

These nuisance laws can also pose problems for owners/managers. For one, this can be seen as a form of third party policing, requiring property owners to do the job of the state. This can lead to greater costs and more responsibilities to owners/managers. Furthermore, this can create bad will and even an escalation to violence. Evictions are already difficult; nuisance ordinances might just add to the problem. Additionally, some statutes suggest that owners do a better job of screening. This can add to the problem, already pointed out above, that screening for criminal convictions can potentially violate the law.

Furthermore, this project will suggest that, in most cases, the state should not tell owners/managers and residents when an eviction should occur. The lease is a contract between owners/managers and residents. The state should not interfere in the way suggested by these statutes. Also, the nuisance statutes could “compel” owners/managers to evict, in situations that might not be a violation of the lease. Thus, creating legal problems for the owner/manager.

Impact on Communities

Although these statutes may seem valid, they may just be a way for a state to remove those that it thinks are undesirable. Furthermore, these laws can have other undesirable consequences to communities, such as having abandoned properties or units, and increased violence. In certain regions, policing can cause even more tension. Future research will look at some of these issues in a more quantitative way. For now, this paper will just focus on the policy issues.

Bibliography

Gehart, F. (2016). Domestic violence victims a nuisance to cities. *Pepperdine Law Review,* *43*, 1101.

Kastner, A. (2015). The other war at home: Chronic nuisance laws and the revictimization of survivors of domestic violence. *California Law Review,* *103*, 1047.

Title VIII of the Civil Rights Act of 1968, 42 U.S.C. §§ 3601-3619 (1988).

# Ripped From the Headlines

Kathleen Parrott\*, Virginia Tech

Eunju Hwang, Virginia Tech

“Ripped from the headlines…our latest picks feel like real life” (Audiofile, 3/22/17). The statement meant to promote audio books is a challenge to the relevance of our program in residential environments and design. As we prepared for an accreditation review, we asked ourselves questions about the applicability of teaching assignments to the future careers of our students. What did we “rip from the headlines” so that our students could address “real life” in the classroom? Did we address societal trends and issues as we taught residential design?

In this abstract, we describe the teaching activities and class projects developed to incorporate contemporary relevance into our residential design curriculum. We also suggest evidence that the contemporary relevance of our curriculum fosters alumni career success. An analysis of our courses and classroom projects, concomitant to the accreditation review, revealed three ways that we were, in fact, addressing contemporary issues, societal trends, and “real life”.

* Projects and teaching activities based on contemporary issues, including:
  + Gender neutral bathroom design in a dormitory shared by men and women;
  + Analysis of community walkability and accessibility for older adults;
  + Housing designs for multi-generational families;
  + Kitchen design for a family with an autistic child;
  + Housing designs for families with disabled members; and
  + Kitchen designs for child care centers to address licensing codes as well as current philosophies of child care.
* Projects for clients reflecting contemporary society, including:
  + Kitchen designs for cross-cultural or international families;
  + Kitchen designs for churches and other organizations that use their facilities for various community outreach and educational programs;
  + Multifamily housing designs;
  + Housing designs emphasizing sustainable products and lifestyle choices; and
  + Kitchen designs for cultural groups adhering to specific dietary choices.
* Projects and teaching activities with student outcomes that provide pre-professional preparation, such as:
  + Projects with real/professional clients;
  + Use of learning contracts to encourage and foster greater self-directed learning;
  + Opportunities for community and professional presentations of project outcomes;
  + Gallery exhibits of student work; and
  + Independent studies and undergraduate research projects for students who want further experience or learning opportunities.

Career Preparation

In a university setting, classroom teaching needs to consider career preparation. If our residential design curriculum is to be relevant to contemporary society, it must also help prepare students for meaningful and successful employment in their chosen career paths. Through our recent successful accreditation review, we were able to show measures of alumni successes that could be considered as related to our contemporary curriculum relevance, including:

* Employment within the residential design industry;
* Awards and recognition for career achievement, particularly early career achievements, such as “30 under 30” type awards;
* Participation in professional organizations, especially taking leadership roles; and
* Mentoring of new professionals.

Conference Presentation

The focus of the conference presentation will be the teaching activities and projects developed to incorporate contemporary relevance into our residential design curriculum. Examples of projects will be presented. Successes will be shared.

References

AudioFile Magazine. (2017, March 22). Audiobook Reviews & Recommendations. Retrieved from [newsletters@audiofilemagazine.com](mailto:newsletters@audiofilemagazine.com)

# Trends in First-Time Homebuyer Characteristics, 1997-2015

Shannon Rieger, Joint Center for Housing Studies

As the national homeownership rate completes its 12th consecutive year of decline, substantial attention has focused on the role of foreclosures in the reduction (Joint Center for Housing Studies of Harvard University, 2016, 2017). Far less evidence exists to describe the decline in homeownership entry among first-time homebuyers and the factors that might contribute to this slowdown. This research examines trends in the annual volume and demographic composition of first-time homebuyers using data from the 1997-2015 American Housing Surveys (AHS). This analysis relies on AHS data for several reasons. First, AHS data provides an important source of comparison with National Association of Realtors data, the most frequently cited source of information about first-time homebuyers. Second, newly available internal data from the 2015 AHS offers nationally representative current information on first-time homebuyers that is not available in the 2015 public-use file. Third, while survey changes and the introduction of a new AHS sample in 2015 limit historical comparisons with pre-2015 data, survey consistency between 1997 and 2013 permits analysis of how the characteristics of first-time homebuyer have changed over time, providing insight into longer-term trends.

How many households purchase their first home each year, and who are they? Has the demographic profile of first-time homebuyers shifted over time? According to analysis of internal 2015 AHS data, approximately 2.5 million households purchased their first homes between 2014 and 2015, accounting for 42 percent of all owner-occupied units acquired during this period. 63 percent of first-time buyers during this period were non-Hispanic white, while 18 percent were Hispanic, 11 percent were non-Hispanic black, and 8 percent were non-Hispanic Asian or some other race. Households headed by a person under age 35 comprised a majority of first-time buyers, with 25-34 year olds accounting for 48 percent of all buyers, and households under age 25 contributing another 6 percent. Among all recent homebuyers under age 35, 71 percent were first-time buyers, compared with 37 percent of 35-54 year olds, and 14 percent of households aged 55 and over.

Between 1997 and 2013, the number of first-time buyers shrank from 3.7 million households in 1997 to 3.3 million households in 2005 to 2.1 million in 2013, while the annual homeownership entry rate—or the share of all households who purchased their first home that year—fell from 3.7 percent to 3.0 percent to 1.8 percent over the same period. By age group, between 1997 and 2013 the first-time homeowner entry rate declined from 9.3 percent to 5.8 percent for households under age 35, from 2.9 percent to 1.3 percent for households aged 35-54, and from 0.6 percent to 0.3 percent for households aged 55 and over. The racial and ethnic composition of first-time buyers shifted notably as well, with the share of buyers who were non-Hispanic black dropping from 14 percent in 1997 to 8 percent in 2013, while the share who were Asian or from some other racial/ethnic group rose from 5 percent to 8 percent over the same period.

Taken together, this snapshot of 2015 and trends from 1997-2013 indicate a substantial drop-off in overall first-time homebuying activity over the past two decades, particularly among younger households and black- or African-American-headed households. This analysis will examine these and related trends in detail, with the goals of learning more what factors have contributed to declining first-time homebuying activity; the extent to which reductions in first-time homebuying have contributed to the homeownership rate decline; and potential implications of trends in first-time homebuying for the future of homeownership.

References

Joint Center for Housing Studies of Harvard University. (2016). State of the Nation’s Housing. Retrieved from <http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/jchs_2016_state_of_the_nations_housing_lowres.pdf>

Joint Center for Housing Studies of Harvard University. (2017). State of the Nation’s Housing. Retrieved from <http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/harvard_jchs_state_of_the_nations_housing_2017.pdf>

# Housing Issues, Rurality, and Local Amenities among Nonmetropolitan Communities in Georgia

Kim Skobba\*, University of Georgia

Karen Tinsley, University of Georgia

Adenola Osinubi, University of Georgia

Balancing housing needs and community factors presents a challenge for many communities, regardless of location. However, the varying patterns of growth and shifting demographic characteristics in non-metropolitan communities present particular challenges. Non-metro counties in the U.S. have experienced an overall decline in population over the past 10 years. However, the change in population has been uneven with some areas losing population while others have experienced population gains (United States Department of Agriculture, 2017). These demographic changes are linked to different housing issues in rural and small towns in the U.S. Local housing markets in non-metro communities are diverse and are influenced by a combination of economic, physical and locational factors. Hamilton, Hamilton, Duncan and Colocousis (2008) identified four distinct categories of rural communities ranging from amenity-rich communities to chronically poor rural communities. More prosperous communities often experience amenity-based migration, which brings newcomers who support the growth of the business-sector and lead to increased housing values making it difficult for long-term, less-affluent residents to find and keep a place to live (Nelson & Nelson, 2010). At the other end of the continuum are high poverty rural areas experiencing decline, with low home values, a prevalence of dilapidated homes, and a high level of vacancies (Housing Assistance Council, 2012). Despite poor housing conditions, housing cost burdens affect many households in chronically poor rural communities. Households in these communities are also more likely to live in overcrowded conditions (Housing Assistance Council, 2012).

Research Methods and Preliminary Results

This paper will use survey data to explore the question: “How do rural and small town affordable housing needs and conditions vary by local community characteristics?” The paper will explore this question using data on housing and neighborhood conditions of rural and small towns in Georgia obtained through a recent survey of elected officials and staff members of municipalities in nonmetropolitan counties in Georgia as well as data on population change, residential vacancies and affordability for each community represented in the survey. The data for this study were collected, between September and November 2015, using an online survey sent to a database of elected officials and city staff of 521 municipalities in the state of Georgia. The questionnaire for this study, designed to gather the following categories of information on at the municipal level, was developed after completing a literature review. The questionnaire was divided into four sections: 1) community amenities and economic development characteristics; 2) assessment and perceptions of housing adequacy, availability, appropriateness and affordability;3) identification of tools, resources and programs used to address housing problems in the community; and 4) local social capital and community capacity. After collecting the data, we downloaded the responses into Excel, added data from the U.S. Census Bureau, National Low-Income Housing Coalition ‘s Out of Reach rental affordability data, and Valassis List residential vacancy data for each participant’s community. There were 388 completed surveys overall, with a per-community response rate of 60%. This research uses a subset of 214 surveys received from elected officials or staff member of municipalities within small metro and nonmetropolitan counties based on USDA Rural-Urban Continuum Codes. The research will focus on survey questions about the community amenity and economic development characteristics and how they related to community housing and neighborhood conditions and needs.

Our preliminary results suggest that dilapidated and substandard housing, vacant housing and pockets of blight are significant problems for rural and small town communities in Georgia. Rural communities with less than 1000 and amenity-based communities tended to report lower levels of dilapidated housing, vacant housing and pockets of blight. Housing affordability and supply issues were also present, particularly a lack of rental housing for young adults, families with children and empty nesters and retirees in amenity-based communities and rural communities outside of small metro areas in Georgia. Our findings suggest that though housing and neighborhood conditions, supply and affordability issues are present in most, if not all, rural and small town communities, the type and extent of these problems vary based on local characteristics more than degree of rurality. Final results will include an analysis of housing and neighborhood needs and conditions related to population changes over the past decade.

Acknowledgement

This research is funded by a grant from the USDA NIFA Agricultural Food and Research Initiative.

References

Hamilton, L.C., Hamilton, L.R., Duncan, C.M., & Colocousis, C.R. (2008). Place matters: Challenges and opportunities in four rural Americas. *Carsey Institute Reports on Rural America*, 1(4). Durham, New Hampshire: University of New Hampshire.

Housing Assistance Council. (2012). Taking stock: Rural people, poverty and housing in the 21st century. Washington: DC. Author.

Nelson, L., & Nelson, P.B. (2010). The global rural: Gentrification and linked migration in the rural USA. *Progress in Human Geography*, 35(4), 441-459.

United States Department of Agriculture. (2017). Population and Migration Overview. Retrieved from <https://www.ers.usda.gov/topics/rural-economy-population/population-migration/>.

# Home Environmental Interventions to Improve the Health of Older Adults

David A. Turcotte\*, University of Massachusetts Lowell

Susan Woskie, University of Massachusetts Lowell

Rebecca Gore, University of Massachusetts Lowell

Emily Chaves, University of Massachusetts Lowell

Kelechi Adejumo, University of Massachusetts Lowell

Rosemary Rungu, University of Massachusetts Lowell

Research has documented that housing conditions can negatively impact the health of residents, particularly vulnerable populations (Northridge, 2010). Asthma has many known indoor environmental triggers including dust, pests, smoke and pets, as evidenced by approximately 7.1 million children (U.S. EPA, 2013) and 18 million adults (CDC, 2014) of the U.S. population who have asthma. We evaluated the hypothesis that multi-trigger, multifaceted healthy homes interventions improve the respiratory health and reduce home asthma triggers for older adults. Health and environmental improvements will be described from a completed intervention research project conducted with older adults with asthma. Although several studies have conducted culturally/linguistically appropriate, multifaceted home intervention research with asthmatic children (Crocker et al, 2011; Turcotte et al, 2014), there is no literature on multifaceted home intervention research has not been conducted with older adults with asthma.

Methodology and Procedures

A comprehensive health and environmental assessment and subsequent intervention were completed in 90 households in one study involving 93 older adults living in public and privately managed multifamily rental housing in Lowell, the fourth largest cities in Massachusetts. The two largest populations among the sample of older adults included Hispanics (45%) and Asians (19%). Health and environmental assessments conducted in English, Khmer and Spanish included survey questionnaires, visual observations, and environmental sampling at baseline and follow-up 11-12 months later to evaluate impact of the intervention on the health of older adults. Environmental assessment included evaluation of asthma trigger activities (ATAs) and exposures before and after healthy homes intervention (questionnaire, home survey, measurement of nitrogen dioxide (NO2), dust samples for rodent and cockroach allergens, biomarker for cigarette smoke exposure (urinary cotinine). Health assessment included collecting data on respiratory health outcomes before and after healthy homes intervention (on symptoms, quality of life, medication use, doctor/ER/hospital visits, and exhaled nitric oxide (eNO) a measure of lung inflammation). Interventions included education on asthma and environmental triggers of asthma; environmental remediation including mattress/pillow covers, provision of vacuum with HEPA filters and green cleaning supplies and changes in home as needed: commercial cleaning, integrated pest management (IPM), gas stove replacement, mold remediation, installation/repair of exhaust fans.

Results

Final assessments with older adults show statistically significant health improvement from baseline to follow-up in the following areas: doctor visits due to asthma, symptoms and impact quality of life indicators and ACT score, a measure of asthma control adequacy and reduction in many home asthma triggers for older adults. The comparison of baseline to follow-up change in ACT, PSS-4 and SQRQ score, wheeze, asthma attack, healthcare utilization and environmental data was done using a paired sample t-test. All statistical analysis was done using SAS (Version 9.2) or Stata (Version 11) statistical software.

Conclusions and Implications

The findings suggest that as in the case with asthmatic children, culturally/linguistically appropriate, multifaceted home interventions decrease most measures of asthma severity and healthcare utilization in these older adults with asthma. The study demonstrates that a relatively low cost comprehensive home environmental intervention can significantly improve the health and emotional well-being of our study population of older adults. Consequently, policymakers should provide more funding to support additional studies or pilot projects that include such interventions and changes in housing conditions to further evaluate health outcome changes to older adults with asthma**.** The promising results of improved health and reductions in healthcare utilization could provide healthcare insurers a financial incentive to cover home visits and such intervention items as vacuums with HEPA filters and mattress and pillow covers.

Acknowledgement

The study was funded by a $750,000 grant from the US Department of Housing and Urban Development, Office of Lead Hazard Control and Healthy Homes (grants MAHHU0014-13).

References

Crocker, D.D., Kinyota, S., Dumitru, G.G., Ligon, C.B., Herman, E.J., Ferdinands, J.M., et al. (2011); Effectiveness of home-based, multi-trigger, multicomponent interventions with an environmental focus for reducing asthma morbidity: a community guide systematic review. *Am J Prev Med*, Aug;41(2 Suppl 1):S5-32.

Center for Disease Control (2014). *National Health Interview Survey*, National Center for Health Statistics.

Northbridge, J. (2010). The role of housing type and housing quality in urban children with asthma. *Journal of Urban Health, 28,* 211-224.

Turcotte, D., Alker, H., Chaves, E., Gore, R., & Woskie, S. (2014). Healthy Homes: In-Home Environmental Asthma Intervention in a Diverse Urban Community. *American Journal of Public Health,* 104(4):665-71.

U.S. Environmental Protection Agency. (2013, March). *Asthma Facts.* Retrieved from http://www.epa.gov/asthma/pdfs/asthma\_fact\_sheet\_en.pdf

# Global Housing Policy: Settlement Sustainability

Ann Ziebarth, University of Minnesota

The evolution of UN Sustainable Development Goals for human settlements illustrates the complex way in which population growth and demographic changes are linked to sustainable development. Population growth and rapid urbanization are global concerns impacting communities in mega-cities as well as remote rural regions. The purpose of this paper is to review the evolution of international goals and development programs involving human settlements and housing development through the lens of critical frameworks and post development theory. Frans Schuurman (2009) argues that while critical development theory formed the foundation of Development Studies, it has been overtaken by a pragmatic neoliberal approach and that it is time to return to a more critical theoretical perspective. Since 2008 financial crisis, critical development theory has emerged as a utilitarian means of interpreting problems from globalizing capital (Schuurman 2009). These problems include global population growth and migration, rapid urbanization and dominance of megacity growth, as well as slums and informal settlements. Trends resulting from population migrations have left peri-urban and rural places further and further behind in terms of individual wellbeing, economic opportunities, and community development.

The data for the study are comprised of published documents from UN Habitat Conferences in 1976, 1996, and 2016. Selected case studies gleaned from published reports are utilized as examples to specifically discuss the evolving international priorities for addressing human settlement and sustainability goals leading to the current UN Sustainable Development Goal 11 “to make cities and human settlements inclusive, safe, resilient and sustainable.” The goal focuses on ensuring access for all to adequate, safe, and affordable housing and basic services and upgrade slums by 2030. Achieving this goal is ambitious given the projected increasing population as well as exacerbation of urban and rural income disparities globally. The implementation of UN Sustainable Development Goals frequently involves financial support from international development agencies including the World Bank, the International Monetary Fund, and nation state aid. Highlighting the changing UN Habitat goals and international funding priorities, the finding reveal a shifting response to overwhelming global housing needs from direct support for government sponsored housing and community development programs to support for non-governmental agencies and community-led efforts, and more recently, to an emphasis on enabling policies for private market solutions. This presentation seeks to provide a critical analysis of the development direction set forth by international agencies utilizing the work of Dani Rodrik focusing on “deep globalization” as a contemporary reflection on the roots of Development Studies in the critical theory of Robert Michael on oligarchy, Max Weber on bureaucracy, and Foucault on governmentality. The conclusion proposes a blueprint for progress regarding housing, human settlements and community development.

References

Mukand, S., & Rocrick, D. (2015). *The political economy of liberal democracy*. National Bureau of Economic Research Working Paper. No. 21540. Cambridge, MA: NBER.

Rodrik, D. (2016). Is liberal democracy feasible in developing countries? *Studies in Comparative International Development, 51*(1), 50-59.

Rodrik, D. (2011). *The Globalization Paradox*. New York: W.W. Norton & Company.

Schuurman, F. J. (2009). Critical Development Theory: Moving out of the twilight zone. *Third World Quarterly, 30*(5), 831-848.

Tania, M. L. (2007). Governmentality. *Anthropologia, 49*(2), 275-281.

Tolbert, P. S. (2010). Robert Michels and the iron law of oligarchy. Retrieved from http://digitalcommons.ilr.cornell.edu/articles/397/

United Nations. (2012). United Nations Human Settlements Programme. Retrieved from www.unhabitat.org

Weber, M. (1922). *Economy and Society*. Berkeley: University of California Press