American Association of Housing Educators
2002 Annual Conference: *Housing and Community*
Minneapolis, Minnesota
October 23 – 26, 2002

PROCEEDINGS

TABLE OF CONTENTS

CONFERENCE PROGRAM vii

FACILITY MAPS

Radisson Hotel Metrodome xii
McNamara Alumni Center xii

REFEREED ABSTRACTS

Allen, Katherine; Eleanor Foerste & Celeste White
TREES AND CONSTRUCTION: KEEPING TREES ALIVE IN THE URBAN LANDSCAPE 1

Atiles, Jorge H. & Stephanie A. Bohon
HOUSING NEEDS OF LATINO MIGRANTS IN GEORGIA 4

Auh, Seongyeon; Christine C. Cook, Sue R. Crull & Cynthia N. Fletcher
CHILDREN'S HOUSING ENVIRONMENTS: WELFARE FAMILIES IN IOWA 8

Backman, Grace
HOMEOWNER SERVICE DELIVERY PARTNERSHIP 12

Beamish, Julia O.; Joan McLain-Kark & Karen Roberto
OLDER ADULTS' PREFERENCES FOR VIRTUAL ASSISTED LIVING PRIVATE SPACES 15

Bruin, Marilyn J. & Elizabeth J. Sandell
ENHANCED COMPREHENSIVE TENANT EDUCATION:
A PROGRAM FOR HARD-TO-HOUSE HOUSEHOLDS 18

Bruin, Marilyn J. & Amanda Smoot
SECTION 8 HOUSING VOUCHERS: PROVIDING FAMILY HOUSING IN THE SUBURBS 21

Bunker-Hellmich, Lou & Delores Ginthner
COLLABORATIVE DESIGN: A JOINT PROJECT OF INTERIOR DESIGN AND HOUSING STUDENTS 24

Chicoine, Jean L.
THE ESSENCE OF AGING IN PLACE FOR UNMARRIED ELDERLY WOMEN OF DIVERSE BACKGROUNDS: DOING PHENOMENOLOGY 26

Crull, Sue R.; Christine C. Cook, Karla M. Embleton & Thessalenuere Hinnant-Bernard
TEACHING HOUSING ON THE INTERNET 29

Crump, Jeff R.
CIVIC ENGAGEMENT IN ACTION: IMPLEMENTING COMMUNITY-BASED SERVICE LEARNING IN HOUSING STUDIES 32

Delgadillo, Lucy & Leona K. Hawks
FINANCIAL PROFILE OF FIRST TIME HOME BUYERS IN NORTHERN UTAH 35

Earhart, Carla C.
HOUSING BOOTH AT THE "REALITY STORE": FOSTERING COLLABORATION BETWEEN THE UNIVERSITY AND PUBLIC SCHOOLS 39

Goss, Rosemary Carucci; Julia O. Beamish & Glenda G. Andes
DESIGN AND MANAGEMENT ISSUES IN ASSISTED LIVING FACILITIES 42

Hadjiyanni, Tasoulla & Julia Robinson
HMONG HOUSING NEEDS AND ASPIRATIONS 45

Hawks, Leona K. & Lucy Delgadillo
THE UTAH HOUSE: IDEAS FOR UNIVERSAL DESIGN, ENERGY EFFICIENCY AND HEALTHY INDOOR ENVIRONMENTS 48

Higgitt, Nancy C. & Janice L. Ristock
KIDS ON THE STREET: FACILITATORS AND BARRIERS FOR KIDS AND COMMUNITIES 51

Hwang, Eunju & Ann C. Ziebarth
HOUSING SATISFACTION AMONG KOREAN AMERICAN ELDERS 54

Johnson, Caryl
PRACTICAL APPLICATION OF CONDUCTING HISTORICAL FIELD RESEARCH IN AFRICA & THE CARIBBEAN 57

Kind, Kennita & Savannah S. Day
A HISTORICAL VIEW OF COOKSTOVES AND RANGES LISTED IN THE SEARS ROEBUCK CATALOG AND SALES CIRCULARS, 1895-2002 61

****TESSIE AGAN GRADUATE STUDENT PAPER AWARD WINNER****
Kutintara, Benjamas
HOME ENVIRONMENTS AND ALLERGEN AVOIDANCE PRACTICES IN A HOT, HUMID CLIMATE 63

Laquatra, Joseph
LIMITED RESOURCE HOUSEHOLDS AND INDOOR AIR QUALITY 64

Martin, Caren S.; Denise A. Guerin & Lou Bunker-Hellmich
PRACTITIONER-FRIENDLY RESEARCH FINDINGS: THE INCEPTION AND DEVELOPMENT OF INFORMEDESIGN – A CLEARINGHOUSE FOR DESIGN AND HUMAN BEHAVIOR RESEARCH 69

McFadden, Joan R.
HOUSING CHOICES AND CONNECTIONS 72

Miranne, Kristine B.
THROUGH A CHILD'S EYES: COMMUNITY MAPPING IN NORTHEAST DETROIT 76

Niemeyer, Shirley; Raina Gulbrandson & Bev Tech
HOUSING POLICY: SPECIAL NEEDS AUDIENCES TALK ABOUT HOUSING ISSUES 79

Parrott, Kathleen; JoAnn Emmel & Julia Beamish
RESIDENTIAL DESIGN AND HOUSING RESEARCH: RECOMMENDATIONS FROM THE VIRGINIA TECH KITCHEN STUDY 82

Sweaney, Anne L.; Jorge H. Atiles, Douglas C. Bachtel, Brenda J. Cude, Kelly S. Manley, Mick Ragsdale, Tom Rodgers, Gladys Shelton, Karen Tinsley & Janet S. Valente
THE STATE OF WORKFORCE HOUSING IN GEORGIA: METHODOLOGY AND FINDINGS 85

Tofle, Ruth Brent; Benyamin Schwarz & Habib Chaudhury
DESIGN INTERVENTIONS IN A NURSING HOME: DO THEY MAKE A DIFFERENCE IN THIS HOUSING OPTION? 88

Tremblay, Kenneth R., Jr., & Lawrence Von Bamford
ARCHITECTURE AND DESIGN OF A HISTORIC MINING TOWN 91

Worthington, Heather & Ann C. Ziebarth
BIG IDEAS FROM SMALLER COMMUNITIES: CITIZEN PARTICIPATION IN MIXED-USE REDEVELOPMENT 94

Yearns, Mary H.
IF UNIVERSAL DESIGN IS SUCH A GOOD IDEA, WHY AREN'T MORE CONSUMERS BUYING IT?
(AND WHAT HOUSING EDUCATORS CAN DO ABOUT IT) 97

Yust, Becky; Diane Corrin & Susan Gust
PREVENTION OF LEAD POISONING THROUGH EDUCATION 100

Ziebarth, Ann C.
EMPLOYER INVOLVEMENT IN AFFORDABLE HOUSING 103

APPENDICES

Registrants and Speakers 106
Registrants Exhibiting Current Works 111
Invited Community Participants 112
2002 AAHE Executive Board 113
2002 AAHE Conference Committee 113

CONFERENCE OVERVIEW Back cover

Program

American Association of Housing Educators
2002 Annual Conference: *Housing and Community*

Wednesday, October 23

10:00-11:45
AAHE Board Meeting
Radisson Hotel Metrodome Meadows Restaurant Private Dining Room

12:00-5:00
Preconference Workshop: *Scholarly Writing--Turning Research into Publication*
Facilitator: Dr. Robert McDonnell, Professor of English, Bellingham, WA
U of M McNeal Hall Room 274, St. Paul Campus, University of Minnesota

1:00-5:00
AAHE Registration
Radisson Hotel Metrodome 1st Floor

6:00-8:00
Opening Reception – Greetings from Dean Carol Meeks, Iowa State University, & Dean Shirley Baugher, University of Minnesota
Radisson Hotel Metrodome Faculty Room

Thursday, October 24

7:30-4:00
Registration
McNamara Alumni Center

7:30-9:00
Continental Breakfast
A.I. Johnson Room, McNamara Alumni Center

8:00-9:00
Committee Meetings:
Awards, *Maroon Room*
Membership, *Ski-U-Mah Room*
Public Affairs, *Minnesota Room*
Publications, *Gold Room*

9:00-4:00
Current Work and Books on Display
Minnesota Room

9:30-10:15
Opening General Session: AAHE President Joe Laquatra and representatives of the offices of St. Paul Mayor Randy Kelly and Minneapolis Mayor R.T. Rybak
A.I. Johnson Room, McNamara Alumni Center

Thursday, October 24, continued

10:15-10:30

Break

10:30-12:00

Session I.a.—Research
Ski-U-Mah Room
Moderator: Sue Crull

10:30 Children's housing environments: Welfare families in Iowa
Seongyeon Auh, Christine Cook, Sue Crull & Cynthia N. Fletcher

11:00 Section 8 housing vouchers: Providing family housing in suburbs
Marilyn J. Bruin & Amanda Smoot

11:30 Kids on the street: Facilitators and barriers for kids and communities
Nancy C. Higgitt & Janice L. Ristock

Session I.b.—Research
Gold Room
Moderator: Evelyn Franklin

10:30 Older adults' preferences for virtual assisted living private spaces
Julia O. Beamish, Joan McLain-Kark & Karen Roberto

11:00 The essence of aging in place for unmarried elderly women of diverse backgrounds: Doing phenomenology
Jean L. Chicoine

12:00-1:15

Luncheon & General Session: *Serving the housing needs of new communities of people*
Jon Gutzman, Executive Director, St. Paul Public Housing Agency
A.I. Johnson Room

1:30-3:30

Session II.a.—Issues & Policy
Ski-U-Mah Room
Moderator: Nancy Higgitt

1:30 Enhanced comprehensive tenant education: A program for hard-to-house households
Marilyn J. Bruin & Elizabeth J. Sandell

2:00 Home owners service delivery partnership
Grace Backman

2:30 Through a child's eyes: Community mapping in northeast Detroit
Kristine B. Miranne

3:00 Big ideas from smaller communities: Citizen participation in mixed use redevelopment
Heather Worthington & Ann Ziebarth

Session II.b.—Instructional Strategies
Gold Room
Moderator: Lucy Delgadillo

1:30 Collaborative design: A joint project of interior design and housing students
Lou Bunker-Hellmich & Delores Ginthner

2:00 Civic engagement in action: Implementing community-based service learning in housing studies
Jeff R. Crump

2:30 The Utah house: Ideas for universal design, energy efficiency, and healthy indoor environments
Leona K. Hawks & Lucy Delgadillo

3:00 Teaching housing on the internet
Sue R. Crull, Christine C. Cook, Karla M. Embleton & Thessalenuere Hinnant-Bernard

Thursday, October 24, continued

3:30-4:00

Break [*set-up for poster session*]

4:00-6:00

Poster Session & Reception
A.I. Johnson Room
Refereed posters:
A historical view of cookstoves and ranges listed in the Sears Roebuck catalog and sales circulars, 1895-2002
Kennita Kind & Savannah S. Day
Architecture and design of a historic mining town
Kenneth R. Tremblay, Jr. & Lawrence Von Bamford
American Indian housing: A culture in crisis
Felecia Sazama, – Tessie Agan Undergraduate Student Paper Award
Invited posters:
American Indian Housing Corporation ♦ Bright Keys Development and Construction ♦ Central Community Housing Trust ♦ Community Housing Partnership ♦ Home Ownership Center ♦ Housing Link ♦ Housing Minnesota ♦ Minnesota Housing Resources ♦ Twin Cities Habitat for Humanity ♦ St. Paul Public Housing ♦ St. Stephen's Human Services ♦ U. S. Department of Housing and Urban Development

5:30-7:00

Iowa State University Alumni Reception
Radisson Hotel Metrodome Rotary Room

6:00

Dinner on your own [*for non-ISU Alums!*]

Friday, October 25

7:30-9:00

Registration
McNamara Alumni Center

7:30-9:00

Continental Breakfast
A.I. Johnson Room

8:00-9:00

Section Meetings:
Academic, *Maroon Room*
Extension, *Gold Room*
Research, *Minnesota Room*

9:00-9:45

General Session: Tessie Agan Graduate Student Paper Award
Home Environments and Allergen Avoidance Practices in a Hot, Humid Climate
Benjamas Kutintara, Virginia Polytechnic Institute and State University
A.I. Johnson Room

Friday, October 25 (continued)

9:45-10:00

Break

9:45-5:00

Current Work and Books on Display
Minnesota Room

10:00-12:00

Session III.a.—Research
Maroon Room
Moderator: Chris Cook

10:00 Financial profile of first time home buyers in northern Utah
Lucy Delgadillo & Leona K. Hawks

10:30 The state of workforce housing in Georgia: Methodology and findings
Anne L. Sweaney, Jorge Atiles, Douglas C. Bachtel, Brenda J. Cude, Kelly S. Manley, Mick Ragsdale, Tom Rodgers, Gladys Shelton, Karen Tinsley & Janet S. Valente

11:00 Employer involvement in affordable housing
Ann Ziebarth

III.b.—Programming & Instruction
Gold Room
Moderator: Sharon Laux

10:00 Trees and construction: Keeping trees alive in the urban landscape
Katherine Allen, Eleanor Foerste & Celeste White

10:30 Practitioner-friendly research findings: The inception and development of InformeDesign--a clearinghouse for design and human behavioral research
Caren S. Martin, Denise A. Guerin & Lou Bunker-Hellmich

11:00 If Universal Design is such a good idea, why aren't more consumers buying it?
Mary H. Yearns

11:30 Housing booth at the "Reality Store": Fostering collaboration between the university and public schools
Carla C. Earhart

12:00-1:15

Luncheon & General Session: *Meeting community housing needs*
Katherine Hadley, Commissioner, Minnesota Housing Finance Agency
A.I. Johnson Room

1:30-3:00

Session IV.a.—Research
Maroon Room
Moderator: Lucy Delgadillo

1:30 Housing needs of Latino migrants in Georgia
Jorge H. Atiles & Stephanie A. Bohon

2:00 Hmong housing needs and aspirations
Tasoulla Hadjiyanni & Julia Robinson

2:30 Housing satisfaction among Korean American elders
Eunju Hwang & Ann Ziebarth

Session IV.b.—Research
Gold Room
Moderator: Sharon Laux

1:30 Limited resource households and indoor air quality
Joseph Laquatra

2:00 Prevention of lead poisoning through education
Becky Yust, Diane Corrin & Susan Gust

Friday, October 25, continued

3:00-3:15

Break

3:15-4:45

Session V.a.—Research
Maroon Room
Moderator: Marilyn Bruin

3:15 Residential design and housing research: Recommendations from the Virginia Tech kitchen study
Kathleen Parrott, JoAnn Emmel & Julia O. Beamish

3:45 Design interventions in a nursing home: Do they make a difference in this housing option?
Ruth Brent Tofle, Benyamin Schwarz & Habib Chaudhury

4:15 Design and management issues in assisted living facilities
Rosemary Carucci Goss, Julia O. Beamish & Glenda G. Andes

Session V.b.—Research
Gold Room
Moderator: Nancy Higgitt

3:15 Practical application of conducting historical field research in Africa & the Caribbean
Caryl Johnson

3:45 Housing choices and connections
Joan R. McFadden

4:15 Housing policy: Special needs audiences talk about housing issues
Shirley Niemeyer, Raina Gulbrandson & Bev Tech

4:45

Dinner on your own

Saturday, October 26

8:00-9:00

Section Meetings
Academic, *Maroon Room*
Extension, *Gold Room*
Research, *Minnesota Room*

9:00-10:30

Brunch
AAHE Business Meeting
A.I. Johnson Room

10:30-11:30

AAHE Board Meeting
Maroon Room

11:30-3:00

Post Conference Tour of Twin Cities Housing
Board bus in front of the Radisson Hotel Metrodome

TREES AND CONSTRUCTION:
KEEPING TREES ALIVE IN THE URBAN LANDSCAPE

Katherine Allen, Eleanor Foerste & Celeste White
University of Florida Cooperative Extension Service

The Shimberg Center for Affordable Housing estimates that by the year 2010 there will be over 7 million households in Florida. The East Central Florida Regional Planning Council indicates that central Florida's net population has grown 17.6% since 1990, and is increasing daily by 162 people. Orlando is one of the nation's most active housing markets. Orlando's ratio of 3.09 units built per 100 existing households far exceeds the U. S. average of 1.37.

Using population projections and data from aerial photography and satellite imagery, it is estimated that 130,000 acres per year will be converted from rural to urban uses in Florida between 2000 and 2020. Florida's urban land use accounts for 10-11% of land area, compared to a national average of 2-3%. The urbanization and development required to accommodate Florida's continued population growth has resulted in massive deforestation.

In cities, urban "heat islands" can result in temperatures up to 10 degrees higher than in the surrounding countryside. The reason is that there are few trees, shrubs, and other plants to shade buildings, intercept solar heat and absorb cooling rainwater. The result of this combination of factors causes the temperature of man-made surfaces and the air around them to rise. Generally, the larger the city is, the greater the temperature difference. A building surrounded by trees in Florida can use up to 40% less cooling energy than a treeless site.

A barrier to better tree protection is the lack of knowledge among builders, architects, building inspectors, utility companies, and homeowners about basic tree biology, the effects of construction on trees, and the procedures to minimize negative impacts to trees. The Extension offices in Orange and Osceola counties were receiving numerous complaints from homeowners that their trees were dying four to five years after construction.

There are economic benefits in saving trees to both builders/developers, and homebuyers. For construction professionals, the direct benefits are factors that affect profit: increased market value, rate at which lots are sold, and decreased landscaping and energy costs. An additional benefit is that a developer or builder may become known as an environmental leader and advocate. A homeowner enjoys the beauty and splendor of a treed area while taking advantage of the screening function (for both view and noise) and the cooling benefits. Furthermore, trees increase in value from the time they are planted until they mature.

Unfortunately, there is limited information on a national level targeting tree protection and preservation. The materials that are available are not Florida specific. In addition, none of the educational materials on tree protection are available in the format described in this proposal. If even ten percent of the forested land that is cleared each day were subjected to a construction design

that reduces habitat destruction and loss of native species, negative impacts on over 150,000 acres of land would be prevented over a ten-year period.

The program targets five specific audiences; certified arborists, building contractors, registered architects, landscape architects, and certified landscape professionals. Based on University of Florida Cooperative Extension Service experience with existing continuing education programs such as ***Build Green and Profit***, for licensed builders and building inspectors, and ***Sell Green and Profit***, for real estate licensees, we also expect to impact other audiences who can benefit from this information such as engineers, planners, real estate licensees and consumers.

Program Description
(content/materials, leadership, unique delivery methods)

This facilitator-led module can be presented in its entirety or integrated into larger continuing education programs. A 79-slide PowerPoint presentation is designed to accompany the 80-page Participant's Guide. A 98-page Facilitator's Manual, containing speaker notes for the PowerPoint presentation and tips on how to present the information, was prepared. A CD-ROM (from which the PowerPoint can be run or downloaded and from which both the Participant's Guide and Facilitator's Manual can be printed) contains all of the needed presentation materials. There are various opportunities throughout the program for the facilitator to encourage interactivity among the participants.

Specific topics addressed by this program provide participants with an understanding of how the construction process can be designed to minimize negative impacts on trees and natural areas, as well as:

- the benefits of saving trees, covering energy, social, environmental and economic aspects,
- the examination of three case studies on tree protection,
- the function and location of tree roots,
- the tree protection zone,
- the assessment of tree health based on age, size, location and health indicators,
- the construction impacts to trees from clearing, compaction, grading, utility installation, pavement installation, excavation, dumping, storage, water changes, and soil fills, and
- tree protection techniques.

The program ends with participants applying the new information learned to situation exercises. Not only does this encourage critical thinking skills, but it also allows time for participants to discuss and reflect about ways they might utilize the knowledge.

Materials were distributed at an in-service training on October 24, 2000, to approximately 45 County Extension faculty representing 35 counties in Florida. Four sets of the slides and notes will be available through the University of Florida's Institute of Food and Agricultural Sciences Media Library on a rotational basis for use by county Extension faculty throughout the state.

The program development team consisted of an Osceola County Natural Resource Agent, an Orange County Horticulture Agent and an Orange County Energy Agent. It has been used as both a stand-alone program and as part of the Build Green and Profit continuing education program.

Program Impact
(evaluation methods, results, transferability, marketing/publicity)

The program's content and effectiveness were reviewed to ensure technical accuracy and to assure the program meets the needs of the intended audience. The content has been approved in Florida for continuing education for landscape professionals, such as certified arborists, and through the Construction Industry Licensing Board, the Building Code Administrators' and Inspectors' Board, and the Architecture and Interior Design Board. Pre and post-tests with 39 questions were developed to measure knowledge gained. In the state of Florida, the program has been presented in 13 counties since July 2001 for a total of 24 times with 468 participants. One hundred and eight participants completed both the pre and post assessment tool. Incomplete test results are excluded from program averages. There was a 25% increase in knowledge after participating in the two-hour module.

The curriculum development team later concluded that a tool to determine practice change was also needed. The tool has been made available as a follow-up survey to use with future classes to indicate what the participants have done as a result of the class. It includes 19 tree protection measures and will be distributed at least six months after the conclusion of the class.

In addition, the two-hour module was submitted to an Orange County Commissioner for information and was used in helping the Orange County Commissioners approve an amended tree protection and removal ordinance. The ordinance is designed to protect trees in unincorporated Orange County, control their removal, and prevent clear-cutting by developers. Under this new tree policy, developers, cannot bulldoze trees more than 24 inches in diameter, a buffer of trees along the edge of a construction site must be maintained if within 200 feet bordering a tree, and trees as small as eight inches must be protected. The amount of mitigation money for removed trees is capped at $9,000 an acre.

The program is available (PowerPoint, Facilitator's Guide and Participant Manual) on CD and is for sale for $50. ***Trees and Construction: Keeping Trees Alive in the Urban Forest*** can be self-sustaining by charging a registration fee. The materials have already been distributed at an in-service training on October 24, 2000 to approximately 45 County Extension faculty representing 35 counties in Florida. Four sets of the slides and notes will be available through the University of Florida's Institute of Food and Agricultural Sciences Media Library on a rotation basis for use by county Extension faculty throughout the state.

This program was the recipient of the Outstanding Program Award at Trees Florida 2001, the annual conference of the FL Urban Forestry Council and the FL Chapter of the International Society of Arboriculture and judged by a panel of the state's premier tree professionals.

HOUSING NEEDS OF LATINO MIGRANTS IN GEORGIA[i]

Jorge H. Atiles & Stephanie A. Bohon
The University of Georgia

Background

During the 1990s, the United States experienced a rapid increase in the Latino population. In the South alone, the Latino population grew to about 11.6 million in 2000. Of the states experiencing the most growth, Georgia is third behind Arkansas and North Carolina, with a 299 percent increase in ten years. Of the fifty states, Georgia ranks eleventh in total Latino population size with over 435,000 Latino residents. Along with this rapid growth, many housing issues have emerged for Georgia's Latinos.

Objectives

This research is a pilot study of Latino migrant needs in the state of Georgia. It was designed to identify the housing-related needs of recent Latino migrants. With needs identified, this study would serve as a basis for an instrument to conduct a systematic survey of Latino migrant needs in the state. The ultimate goal is to design appropriate policy and educational programs to reach this population.

Methodology

Qualitative research methods were utilized in this study. In-depth open interviews with 68 key informants and 13 focus groups with 103 Latino migrant individuals were conducted in six different counties. These counties represented rural and urban areas with the largest Latino population in Georgia.

County Extension Agents identified key informants from a broad cross-section of county residents who work most closely with Latinos. Key informants included social workers, religious leaders, attorneys, policemen, county agents, educators, and health workers. During the open interviews, key informants were asked to talk about the housing needs and problems of their Latino clientele. The themes that resulted from these interviews helped the facilitation of discussion during the focus groups.

Focus groups with Latino residents were also conducted in an effort to verify and elaborate on the information received from the key informants. Participants included 50 men and 53 women aged 19 to 65 who were living in Georgia. Most focus group participants were homemakers (n=22) or farm or poultry workers (n=30), but, overall, the participants represented a broad range of occupations including educators, factory and construction workers, pastors, restaurant workers, administrators, social workers, doctors, and civil servants. Most focus group participants had minimal (elementary school) education, but about twenty percent had attended college.

Native Spanish-speaking moderators conducted all focus groups. Whenever possible, the researchers conducted visual surveys to verify housing conditions as depicted by key informants and Latino participants.

Results

Several themes emerged from the interviews and focus groups as to the housing needs of Latinos. It is important to note that the information provided by key informants was validated by the themes obtained during focus groups with Latinos participants. Among these were:

Lack of access to affordable, sanitary and adequate housing. Georgia's housing industry was able to build many new housing units that are high priced, thanks to the infusion of foreign, Latino labor. However, there is a continuing lack of affordable housing for the workforce, particularly, housing priced at or below $87,000 (Atiles, Bachtel, Cude, Manley, Ragsdale, Rodgers, Shelton, Sweaney, Tinsley, & Valente, 2001). Consequently, in each of the counties studied, Latinos were relegated to the lowest quality housing stock available. The majority of this housing is rental housing and tends to consist of pre-1970s manufactured homes and subsistence apartment living. Most respondents complained that better housing (i.e., quality, size and location) was not available to them.

Barriers to Affordable Housing for Latinos. The *lack of sufficient income* served as a constraint that condemns many Latinos (at least in the short-run) to dilapidated and crowded dwellings. For instance, the term *camas calientes*, or hot beds, conveys the fact that so many people share tight living quarters that the mattresses never get a chance to get cold. Another money-related issue is the fact that many Latino immigrants do not place their savings in a bank; therefore, credit worthiness was difficult to prove when attempting to buy or rent a home.

Like many of the poor, low-income Latinos are *constrained by their resources*, but the problem is exacerbated for those who *lack fluent English-language skills* or are illiterate. Latino respondents that were unaware of better, low-cost housing options were unable to read classified ads and know about less expensive housing. They were also unaware of housing assistance programs. Additionally, Latinos' *distrust of banking* systems often results in lack of credit history and insufficient evidence of savings for a down payment. Undocumented Latinos are particularly constrained, as they must balance housing choices with fear of deportation. Because most reputable landlords are likely to ask for information such as credit and work references, *undocumented workers* avoided these housing providers and instead dealt with unscrupulous landlords, dilapidated and unsanitary housing.

In the rural counties, a particularly pressing problem is *access to any housing*. New housing stock in rural areas has not kept pace with the new demand for workforce housing. In rural areas, the lack of suitable housing is also complicated by the lack of public transportation. Latinos who do not have personal transportation must find housing that is close to their work or close to someone who is willing to share a car.

Table 1 summarizes the major housing barriers identified in this study and their apparent magnitude based on the frequency of the themes and importance placed by respondents. Further research using quantitative data is needed to assess and test the actual magnitudes of these barriers.

Table 1. Barriers to Affordable Housing for Latinos in Georgia

Barrier	Magnitude
Lack of sufficient income	High
Inadequate supply of affordable housing	High
Lack of credit / history	High
Immigration status (Lack of documentation)	High
Lack of sufficient English language Skills	Medium
Lack of knowledge about existing housing programs	Medium
Lack of public transportation	Low
Illiteracy level in Spanish (Educational attainment)	Low

Conclusions and Implications

Lacking access to affordable and safe housing has severe implications for Latinos in Georgia (Atiles & Bohon, 2002). Because of crowded and dilapidated housing, Latino immigrants are at increased risk for illnesses. Particularly at risk are children suffering from respiratory illnesses that are likely attributed to poor indoor air quality. Such illnesses are expensive to treat and generally require parents to take time away from work to care for their sick children. This impedes the ability to save money for better housing, education, or other necessary preconditions for upward mobility.

Conclusions from this study include the need for:

1. Increasing the <u>supply</u> of affordable housing for the workforce.
2. Promoting <u>access to home financing</u> and clearing issues of documentation required to open bank accounts and access loans.
3. Promoting family <u>financial education</u> for Latinos to help them use banks, balance a checkbook, and avoid consumer fraud and predatory lending.
4. <u>Promoting tenant and homebuyer education</u> to teach Latino migrants about tenant-landlord laws and responsibilities and how to become a homeowner and sustain homeownership.
5. Teaching basic <u>housing life-skills</u> programs are needed to help Latino households understand home maintenance and upkeep in homes that are typically different from those in their place of origin (including teaching basic housing life-skills and indoor air quality issues).
6. Supporting the Georgia Cooperative Extension Service with <u>more human and financial resources</u> to reach the Latino audience effectively using

Spanish and low-literacy materials. The hiring of bilingual/bicultural extension staff at the state and county level is also critical.

References

Atiles, J., Bacthel, D.C., Cude, B.J., Fleming, W., Ragsdale, M., Rodgers, T., Shelton, G., Sweaney, A.L., Tinsley, K., & Valente, J.S. (2001, September). *Workforce Housing in Georgia* [Research Report]. Athens: University of Georgia Housing and Demographics Research Center, Department of Housing & Consumer Economics. Available online: http://www.fcs.uga.edu/hace/docs/Workforce%20Housing%20in%20Georgia.pdf

Atiles, J. H., & Bohon, S.A. (2002). The Needs of Georgia's New Latinos: A Policy Agenda for the Decade Ahead. Athens: Carl Vinson Institute of Government, University of Georgia.

This study was made possible by a grant from the University of Georgia Research Foundation and the University of Georgia's Office of International Development

CHILDREN'S HOUSING ENVIRONMENTS: WELFARE FAMILIES IN IOWA

Seongyeon Auh, Christine C. Cook, Cynthia N. Fletcher & Sue R. Crull
Iowa State University

Despite the importance of shelter in the lives of poor children, welfare reform initiatives have regularly fallen short in considering the need for and availability of affordable and adequate housing implications of changes in policy on children in poor families. This is especially true of children living in rural settings.

Most early childhood educators are well aware that young children learn by interacting with their environment (Wilson, 1997). Children's environments, however, are not all equal. Environments that limit opportunities to explore, to manipulate, and stimulate and those that are "dull, disorganized, or impoverished suggest to children that they are not valued or respected" (Wilson, 1997, 191). Inadequate housing can put children at risk of health problems, reduce their chances to form meaningful social relationships, limit access to important play opportunities, and add to psychological stress by damaging or ameliorating coping mechanisms. Increasingly there is evidence that environmental stressors – such as unaffordable and poor quality housing -- affect parenting strategies (Bartlett, 1997) and that neighborhood context shapes 'the geography of opportunity' (Galster & Mikelson, 1995; Shlay, 1993 & 1995).

Methods

Data for this study were drawn from the "Family Well-being and Welfare Reform in Iowa" project that is being conducted by Iowa State University Extension and the Iowa State University Center for Family Policy (Fletcher, Winter, & Gaddis, 1998). Seven communities were selected across the state based on various demographic characteristics such as population, ethnicity and adjacency or nonadjacency to a metropolitan area, and geographic location, (Fletcher et al., 1998). Families in each of the seven communities were randomly selected from a list of Family Investment Program (FIP) participants provided by the Iowa Department of Human Services (DHS). The potential families received a letter with information about the project and plan of interviews.

Beginning in 1997, Iowa State University Extension field staff conducted 60-to-90 minute interviews until five families from each community were completed. A total of 35 families were interviewed in Wave I. The questions in the first wave of the interview were adapted from the protocols of Edin and Lein (1997) and Weisner et al., (1995). Interviews were audio-recorded and Waves II [employment concerns and history] and III [child-rearing and child care issues] were transcribed; Wave I was summarized by two interviews and presented to researchers as field notes. By the fourth wave in Fall 1999 there were 18 families interviewed because others had moved, could not be located or were unwilling to continue. Of these 18, thirteen families met our criteria for inclusion in this investigation -- one child under the age of 10 living in the household. Data from each of the waves of interviews with these 13 families were used in the analysis. The principle investigator and a graduate assistant analyzed the content of

interviews in Wave IV and identified additional information from each of the preceding waves to form a longitudinal picture of housing issues of young children in rural low-income families.

Poor Housing and Poor Children

The characteristics of 13 families with children under 10 years are presented in the Table 1. Six of the seven communities in which respondents resided were in nonmetropolitan counties. These communities have very similar sociodemographic characteristics. In the communities we visited, more than half of all occupied housing structures were built before 1950. Most of the families interviewed were renters even though renting is uncommon in nonmetropolitan settings. Almost all of those interviewed had extended family ties in and around the small towns in which they lived. In fact, more than half of the respondents said they rented housing owned by kin or friends who lived nearby in the community or in neighboring towns. Several of the other respondents received government housing subsidies. The extensive use of formal and 'informal' housing subsidies appeared to be very important to poor rural families.

Poor children's lives in rural communities are not always as idyllic as might be expected. Despite important family ties for most respondents, isolation is a problem for some as was a lack of outside play space. Some families in this investigation reported serious housing problems that threatened their physical as well as their economic and psychological well-being. For many families the search for better yet cheaper housing seemed to be an on-going struggle. One respondent said,

> "[The former home] was in the historical part --well, across the street was considered the historical part of the community. So it was easy on the eyes. Down the road was a bar ...it wasn't the best neighborhood. We've always lived just on the outskirts of the bad neighborhood. I don't know why. That's where we can usually find the most affordable housing."

A lack of privacy for children and adults within the home was identified by respondents. Furthermore, housing units in which respondents lived commonly had leaking ceilings, broken toilets, nonworking refrigerators, damaged windows, and infestations of rodents and insects. Ann's experience is not atypical.

> "I didn't have a refrigerator for four months with a new born baby. I got home from the hospital from having Garrett and I couldn't even use the bathroom. I had to walk up to the [local convenience store]. There was a bathroom but I couldn't use the toilet because it was plugged up. No refrigerator for four months. It was quite a deal. A friend of mine let me use a little one which held about a half gallon of milk, and that was about it… and no freezer. I would shop a day at a time. It was fun, let me tell you."

Chronic Mobility

'Chronic mobility,' perpetually moving from place to place [Bartlett, 1997], is likely to be detrimental to children's development because it can undermine friendship formation, destabilize school attendance, and threaten attachment to family. The majority of children in this study had moved several times from one home to another since their birth but more importantly it appeared that families had a pattern of moving that was likely to continue. Janet, a six year old, had

moved a total of 8 times since her birth. According to respondents a mix of underlying causes precipitated residential mobility: changes in space needs because of changes in family size and configuration – birth of a new baby divorce and repartnering; housing dissatisfaction due to poor quality housing or excessive housing costs; dissatisfaction with neighbors or unsafe communities; and discovery of cheaper housing options such as doubling up or renting from kin or friends. These events resulted in 'serial housing inadequacy;' that is, mobility that simply exchanged one poor quality or unaffordable housing unit for another.

Conclusions

The data for this study were limited and more representative data are needed. However, themes emerged that highlight the impact of limited economic resources among those respondents on or recently removed from the welfare ranks. Two related housing strategies were identified: chronic mobility and serial housing inadequacy. Future investigations are needed to determined mechanisms to break these cycles. It may be that the specifics of the housing inadequacy – water quality or sanitation versus air quality and lead, etc.-- may be less important than the repetitive nature of the cycle. It continues to surprise us that housing is not regularly identified as one of the significant barriers for families seeking economic self-sufficiency. In our view, one of the most fruitful avenues of future research is the examination of housing economic hardship, chronic mobility and family stress and outcomes for children. The preliminary insights gleaned from these data are intended to inform community advocates, policy makers, and housing professionals. As decisions concerning reauthorization of welfare reform legislation are considered, children, housing and the rural context need more careful consideration.

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Table 1 Characteristics of families interviewed

Age Range of Children	
2 month – 1 year	7
2 years – 4 years	11
5 years – 7 years	6
8 years and older	1
Total	25
Sex of Children	
Male	15
Female	8
Unidentified	2
Total	25
Type of Resident	
Trailer or Mobile Home	2
Apartment	5
House	6
-- (Homeowner)	(1)
Total	13
Frequency of moving since the first child was born	
Never move	1
1 or 2 times move	4
3 or 4 times move	5
5 or more times move	3
Total	13
Parental Status	
Two Parents – Married	5
Single Headed	8
--(Living with Partner)	(3)
Total	13
Parental Education	
High school & GED	9
College years or more	8
No information	1
Total	18
FIP Participation	
Families on FIP	6
Families not on FIP	7
Total	13

HOMEOWNER SERVICES DELIVERY PARTNERSHIP

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The Homeowner Services Delivery Partnership is a collaborative of organizations that operate within each of seven regions of the state to provide a full continuum of home buyer and homeowners services. The continuum includes pre-purchase training (education and counseling), affordable financing, post-purchase services (education, counseling, referral), and foreclosure prevention counseling. (See Diagram 1).

Background

In the fall of 1998 a daylong Assembly was held to assess the current status of homeowners support services across the state of Minnesota. Participants represented components of the continuum of home owner services. Ideas were generated for strengthening and coordinating the delivery of services within the continuum geographically, professionally, and across audience diversity. A design team was selected to build an integrated model of homeownership services.

The design team model for a Statewide Delivery Partnership was the creation of geographical regions. In addition, the model has a central statewide organization to provide a variety of coordination and support functions. The model is designed to improve service consistency and provide access to new markets for services, while assuring sustainable home ownership. The Home Ownership Center (the HOC) was requested to be the statewide support organization. The HOC was organized in 1993 by the Family Housing Fund, lenders, government agencies, Realtors, community organizations, and others concerned about affordable and sustainable home ownership in the Twin Cities. The purpose of the Center is to promote communication among stakeholders, facilitate the flow of information about loan programs to under-served groups and standardize training and educational materials for preparing home buyers.

A phased-in approach was used by the Home Ownership Center to assume the role of a statewide organization. Phase one was primarily a planning and organizing phase to become familiar with the services of the continuum in place throughout Minnesota, for regional collaboratives to establish themselves, and the creation of mechanisms and infrastructure. Surveys, listening, fact-finding, and other methods were employed during this phase.

Phase two was planned for approximately three years and implements the plans developed for infrastructure and long-term funding developed in phase one. During this phase (current time frame) a toll-free telephone number and web site will be developed and usable. In addition, a long-term funding plan for financial support of continuum activities will be underway. Phase three happens in five to ten years when the activities within the model become wholly integrated into home ownership activities, being accepted by consumers and the industry.

Implementation

At present, home ownership services delivery is dispersed and provides uneven levels of services across the state. Local service providers are hard pressed to meet education and counseling needs and do not have resources to further develop the continuum of services in their areas. In some cases, information about existing services is not readily available among providers within the same region. Through the regional collaboratives, local service providers meet, plan and organize to improve service delivery and referrals by building on existing resources with coordination and support from the HOC.

An initial focus on developing the Statewide Partnership has been on pre-purchase training. This is one of the most developed and yet fragmented segments of the continuum. During 2000 the Home Ownership Center and the Minnesota Housing Finance Agency (MFHA) developed a plan to transfer the administration of the Home Stretch Program to the HOC in 2001. This would create one unified home buyer training program in Minnesota. The transition occurred and will continue to unfold in stages. Completed stages include the American Homeowner Education and Counseling Training Institute training and certification of nearly 100 providers in Minnesota that included creating a scholarship fund of $45,000 to help reduce the costs to trainees; completion of a survey of services documenting existing levels of services, locations, and gaps; regional meetings to report survey results, share census data, and plan for the future; and development of a new participant manual for pre-purchase education.

In process is a pilot project for a statewide reporting and evaluation system for the Home Stretch Program (pre-purchase training). After review of the pilot, a plan for statewide training and use will be put into place.

Future Plans

Future consideration includes examining continuum gaps in the affordable financing and post-purchase arenas. Many affordable financing products, including portfolio products, are available in Minnesota however they are not equally accessible across the state. As the median house sales price increases faster than incomes, there is an increased need for assistance programs that can partner with the available mortgage products. Creating a template for developing and marketing an affordable financing product to take across Minnesota is yet another aspect for future consideration.

Post purchase support activities occur across the state, but are not equally accessible, nor consistent. The goal of the model is to develop a standard statewide approach to home ownership issues following the closing.

A final piece of the continuum, Mortgage Foreclosure Prevention stated in 1991 in Minneapolis and St. Paul. In 1993 the state legislature appropriated funds to support foreclosure prevention services on a statewide basis. For several years the Minnesota Foreclosure Prevention Association has provided training and coordination of foreclosure prevention services in the state. There is in place a sophisticated network of service providers operating foreclosure prevention in Minnesota.

Diagram 1
Continuum of Home Owner Services

OLDER ADULTS' PREFERENCES FOR VIRTUAL ASSISTED LIVING PRIVATE SPACES

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The senior housing industry has divided housing developments into five categories that range along of a continuum of healthy, active lifestyles to frail, supported lifestyles. These five categories are: active adult communities, independent living developments, congregate care, assisted living, and nursing homes. The large number of adults living into their 80s and 90s will continue to push the demand for assisted living facilities. These residential environments encompass both private living areas and public spaces and the configurations and size of the facilities and spaces can vary greatly depending on the scope of the services and needs of the residents.

The purpose of this study was to examine older adults' preferences for the allocation of space in assisted living private units and to record their reaction to viewing alternatives in a virtual environment. Testing a prototype of an assisted living unit in the CAVE (Cave Automated Virtual Environment) can help discover how appropriate a private living space would be for older persons.

Literature

Very little is known about older adults' preferences for the design of assisted living environments. In a recent study, participants who were residents of a retirement community were asked to design their ideal private living quarters by using a scale model with movable furniture and walls (Talifarro, 1998). Participants believed the most important area of the private living area was the bedroom-bath area with a critical need for the bed to be located near the bathroom. Similarly, residents believed adequate storage was also very important. Most participants preferred to have all of the areas typically found in a house in their dwelling unit, and would utilize smaller spaces rather than not have an area.

Currently, there is limited research available that focuses on people's perceptions and performance of daily tasks in the virtual environment. The CAVE offers an opportunity for pre-construction evaluation of designed spaces. By touring a proposed space virtually, flaws, concerns, and suggestions can be made to improve a design before it is built. As a research tool the CAVE provides an opportunity to show options and determine preferences and trade-offs that can help determine design recommendations. The CAVE is a 10' x 10' room made of projection screens and powered by a supercomputer, which projects stereo images onto the screens. Stereo glasses enable users to see stereo 3D images in full scale. The wand enables users to explore environments of different sizes. The designer can observe people interacting in a full scale, three-dimensional space providing a predictive tool for gaining insight into how people will react to the built environment.

Preliminary work with the CAVE indicates its potential for research with older persons. The CAVE was used in an exploratory study to obtain user feedback on

a design for the Visualization and Animation (VA) Lab. The study had a small number of participants but indicated the strong sense of presence felt by the users. The participants also noticed details that they had not noticed in a previous viewing of the model on the personal computer (McLain-Kark & Lee, 1998). Research has shown that the user perceptions of spatial relationships of the interior environment in the CAVE are more accurate than perceptions of computer renderings and animation presented on the personal computer (Lee & McLain-Kark, 1999). This suggests that the CAVE is more effective than the PC in terms of communicating information about spatial relationships and superior to the PC in simulating the experience of walking through a space.

To examine older adults preferences for private spaces in assisted living, four models were developed and shown to older adults in the CAVE. Four questions guided the development of the study:

1. *Which model of private living space in assisted living do older adults prefer? Given their preference, do they prefer open or closed plans?*

2. *Are the assisted living spaces in the models appropriate for the activities that should occur in the space?*

3. *What trade-offs in the models of private living spaces are older adults willing to make to enhance function and comfort in the assisted living environment?*

4. *How did viewing a model space in the CAVE virtual environment affect their understanding of the space?*

Methods

Sixty adult volunteers over age 65 were first surveyed regarding their demographic and housing characteristics, lifestyle, and health status. Each participant was first shown a detached town home to orient them to the CAVE environment. Then they were shown four variations of a private living space in an assisted living development, each with 400 square feet. In each variation of the model, 30 square feet was added to the following: Social (living room), Sleep (bedroom), Food Prep (kitchen), and Storage. Then, the participant was asked which model he or she preferred. Once the participant stated a preference, he or she was shown an open plan variation of the model. After the CAVE session, participants were asked general questions about assisted living and their reactions to the virtual reality experience.

Findings

The Food Prep model was preferred by 50% (29) of the participants. The Social model was preferred by 33% (19), while the Sleep model was preferred by only 17% (10). The majority (90%) preferred the open plan. No participants preferred the Storage model. There was a correlation between preference for the Food Prep model and those who indicated an individual or less social lifestyle (?^{2} = 7.281, p = .026).

All models were perceived as adequate, but participants were more positive about the models with the larger kitchen and bedroom. All models were

perceived to be too small for most participants. In comments, many respondents indicated a desire for more windows, particularly in the living room and kitchen.

The CAVE or virtual reality experience was viewed positively. The CAVE virtual reality technology seems to be an effective tool for user feedback, especially for an evaluation of spatial relationships of interior environments.

From this exploratory study, designers should consider using an open plan and window areas to make the small size of the assisted living private space appear larger. In addition, the spaces should be flexible to meet individual preferences and needs.

Note:

Project funded by the Andrus Foundation.

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ENHANCED COMPREHENSIVE TENANT EDUCATION: A PROGRAM FOR HARD-TO-HOUSE HOUSEHOLDS

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As the number of affordable housing units decreases, it is increasingly difficult for young adults, adults with disabilities, single parents, and many individuals engaged in the workforce to compete for the limited supply of suitable, affordable rental units. With very low vacancy rates in the Twin Cities metropolitan area, increasing numbers of families are homeless, at risk of becoming homeless, or spending a high proportion of household income on housing. Many metro landlords use screening agencies to collect credit information as well as information from court records and previous landlords. When reviewing multiple applications for few vacant units, landlords "screen out" individuals and households perceived to be "at-risk" for problems with the timely payment of rent, excessive damage, complaints from neighbors, or evictions.

The purpose of this paper is to describe a policy response to the issue of hard-to-house tenants. "The goal of the Rental Housing Pilot Program is to develop and operate a holistic, uniform, and replicable program that works to house high-risk tenants with poor rental histories" (Minnesota Housing Finance Agency, 2000). ECTEP was developed by partners from the University of Minnesota Extension Service, Families That Work, HousingLink, Lutheran Social Services, and St. Stephen's Ministries in response to a request for proposals from the Minnesota Housing Finance Agency.

Project Goals and Audience

Goals

ECTEP is designed to support both tenants and landlords. Education and housing counseling prepares individuals at-risk for housing problems to conduct successful searchers for rental units; maintain healthy, stable, satisfying housing; and develop the skills needed to build positive rental histories. Risk mitigation for landlords of affordable units encourages their acceptance of participants. Goals include:

- Individuals at risk for housing problems develop the life skills needed to find, successfully complete the rental application process, and maintain an affordable rental unit.
- Tenants build successful business relationships with landlords.
- A curriculum and service delivery model is created that can be replicated in a variety of communities by a variety of agencies.

Audience

The target audience includes individuals and households who have been denied a rental unit for reasons other than a felony conviction or previous willful substantial damage to a rental unit. Participants are identified and referred by social service agencies serving low- and moderate-income households.

Implementation

A peer educator provides education in group settings as well as individual housing counseling. The peer educator also works directly with participants to develop individual plans to secure permanent housing. Lutheran Social Services and St. Stephen's Ministries help identify participants, place participants in appropriate housing, and monitor and manage risk mitigation funds. HousingLink, a provider of reliable information of available affordable housing units, is a key partner in establishing the tools and maintaining a network of providers of tenant education, case management, and affordable housing.

Families That Work (FTW) Program is an outreach effort of the College of Human Ecology at the University of Minnesota. FTW connects college resources on nutrition, food safety, parenting, financial management, and housing to the people of Minnesota. These outreach programs work with limited-resources households to build the skills to control their resources and contribute to strong communities.

The University of Minnesota Extension Service Housing specialist is responsible for training the peer educator and case managers on the curriculum. The *RentWise* program uses the *Rent Smart* curriculum developed by John Merrill, professor and housing specialist with the University of Wisconsin Extension. The University of Minnesota Extension Services selected *Rent Smart* because it emphasizes tenant responsibility. Eleven learning modules cover money management, the process of finding and applying for a rental unit, tenant rights, home maintenance, and neighborhood relationships including communication skills and conflict resolution. The objective is to help participants understand that records of timely rental payments, good housekeeping, and following rules established by property managers yield positive references and influence the ability to rent another unit.

RentWise was piloted by the University of Minnesota Extension Service with a variety of participant groups, adolescents, tenants in subsidized housing, and residents of transitional housing in both rural and suburban sites. Each community had an advisory group of local landlords and service providers to inform the pilots. Different learning modules and activities were emphasized based on local needs and rental markets. Information in the program was helpful to a variety of participants in different communities and types of housing. *RentWise* includes local resources to address issues specific to Minnesota residents. For example, the Tenant/Landlord Handbook from the Attorney General's Office and the "Shoe Box by the River" video from the Minnesota Housing Finance Agency are valuable local resources.

Evaluation

There is on-going evaluation of the tenant education and counseling activities for continuous program improvement. At the individual level, the peer educator examines progress toward short-term behavioral objectives with each participant. All project partners as well as other human service agencies and landlords provide input to build a replicable systematic program. This evaluation process

documents the model of collaboration and develops recommendations for the replicable model. Recommendations are being develop on

- How to broaden the service to meet the needs of the population on a permanent basis;
- How to provide service to the entire state; and
- How to duplicate the project in different geographic regions.

A quasi-experimental design is helping us evaluate progress toward objectives and document the effectiveness of the ECTEP program with the target audience. There are two main groups of at-risk tenants. One consists of individuals who do not receive tenant education and housing counseling. The second group consists of ECTEP participants who receive the educational and counseling interventions. This group is further divided into those who find and maintain housing with no additional support and those who need additional support, i.e. mediation and risk mitigation with a landlord, to maintain stable housing. Demographic data, access to social services and multiple measures of housing activities and characteristics are collected. Landlords are also surveyed; data from tenants and landlords are matched.

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SECTION 8 HOUSING VOUCHERS: PROVIDING FAMILY HOUSING IN THE SUBURBS

Marilyn J. Bruin & Amanda Smoot

Physical and social environments support family functioning and children's personal growth (Bartlett, 1997a; 1997b; Kaufman, 1996). "Good housing can facilitate positive family functioning and child development, just as bad housing can be an impediment' (Bevington and Chawla, 1998, p. 45). Housing that supports parents and children:

- Is affordable because parents under great financial stress are often distracted in parenting (Hicks-Bartlett, 2000).
- Is stable because children who move often are at increased risk for depression and behavioral disturbances (Bartlett, 1998).
- Balances privacy with a sense of belonging to a family and a community (Wylde, Baron-Robbins, and Clark, 1994).
- Is in a safe neighborhood with opportunities for children to engage in independent activities (Zimring & Barnes, 1987).

The purpose of this project is to identify concerns about housing among parents with Section 8 housing vouchers in a suburban context.

Methodology

In the project qualitative *and* quantitative methods are used. Combined or mixed methods of data gathering, analysis, and interpretation provide comprehensive explanations of complex social issues and inform social theory (Creswell, 1994; Tashakkori and Tefflie, 1998). The housing authority mailed surveys to the 230 Section 8 voucher holders with at least one child under the age of eighteen; 64 surveys were returned for a response rate of 28%. Survey data were used to describe demographics, as well as housing and neighborhood characteristics, and satisfaction.

An open-ended question, "Is there anything else you would like to tell us about your housing, neighborhood, and family?" was included in the survey; 27 respondents answered. A form with the survey allowed respondents to indicate a willingness to participate in a structured focus group interview; 12 respondents participated in focus group interviews about expectations, goals, and plans for housing.

We reviewed descriptive statistics and identified themes in the qualitative data from the open-ended question and interviews. In this abstract we compared the descriptive statistics with census data of the general population and summarized themes in the qualitative data.

Results

Descriptive statistics. Among the survey respondents, 64% were Caucasian, 97% were female heads of households, 47% had never married, another 33% were divorced or separated. Since our sample consisted of Section 8 voucher

holders, all are renters; 63% lived in a duplex, townhouse, or apartment. Two-thirds (67%) were employed.

In contrast county residents were 96% Caucasian, 7% of the households are headed by a female, and 85% were homeowners. The median household income in the county was $57,797 (U.S. Bureau of the Census, 2002). Interestingly the median age (34 years) and educational attainment was the same for the sample and the general population.

Affordability. Section 8 vouchers subsidize housing costs for households at or below 80% of the area median income; the respondents are low or moderate income. Financial stress was common among respondents; 87% worried that their income will not be enough to meet expenses. With a median income of $13,098, several parents were very thankful for the vouchers. Despite the subsidy, 44% said they would like to move to a community with more affordable housing.

Stability. One–third of the respondents had moved within the past 10 months, another third within the past 25 months. Twenty-eight percent reported their children had changed school during the previous school year.

Privacy and a sense of belonging. Only 37% were satisfied with their privacy. Two-thirds did not feel their children had a place to play inside; 43% did not feel that children could be noisy in their home.

We did not find indications the respondents felt a part of the community. Discrimination was most common response to the open-ended question. Survey data affirmed the responses; 70% said they had been discriminated in renting and 86% believed they had limited opportunities to choose a unit. Forty percent do not have anyone in the neighborhood they can count on; 62% do not have close neighborhood friends. Only 11% said they trust their neighbors.

Safety. Quantitative and qualitative data provided mixed indicators of perceptions of safety. Concerns about safety were common in responses to the open-ended question. For example a parent wrote, "*I get very scared in this building. It's always dirt and loud."* Twenty-nine percent have been a victim of crime within the past 12 months. However 73% say the family is safe when walking in the neighborhood after dark and 84% feel at home at night.

Satisfaction. Respondents indicated problems with housing affordability, stability, privacy and belonging, and safety, however 73% of the respondents were satisfied with the housing unit. Two-thirds of the parents were satisfied with the quality of schools; 84% believed they were in a good neighborhood for their children. Other respondents were frustrated and dissatisfied with the housing quality, management, and neighbors.

Conclusions and Implications

Parents with Section 8 housing vouchers in this suburban county were concerned about providing good housing for their children and its effect on their well-being. Focus group interviewee said "*Where you gonna put 'em to bed? Where you know, their toys, their cloths, uprooting them from what they are used to and doing a mental number on'em. And they gonna be in society later, and people are gonna wonder, 'Why are these people nuts?'"*

Respondents appreciated the suburban schools and a perception of neighborhood safety however did not feel their housing was affordable or provided privacy. The low level of housing stability may indicate recent moves to pursue the suburban lifestyle. Among our respondents suburban life was not without problems. Discrimination and isolation were frequently mentioned. Parent often felt they were in multi-family housing without spaces and policies that encouraged children to play and make noise.

This case study of low-income parents in a suburban county suggests continued unmet housing needs. They continue to need spaces and policies that allow children to play and be noisy. At the same time parents need to maintain a balance between a sense of privacy and a sense of belonging; our respondents indicate neither.

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This research is support by the Agricultural Experiment Station at the University of Minnesota.

COLLABORATIVE DESIGN: A JOINT PROJECT OF INTERIOR DESIGN AND HOUSING STUDENTS

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Upon completion of their education, housing students are frequently employed in administrative or managerial positions where they are likely to be faced with making design decisions for their facilities or programs. To be better informed about those decisions, housing students would benefit from a greater understanding of the design process and its concepts and language. Interior design students need to understand the issues and concerns of users from a facility management perspective. All students need to develop basic teamwork skills as they will be involved in group projects throughout their careers. In an effort to meet these goals, a collaborative design project involving interior design and housing students was undertaken and is described in this paper.

Students from an advanced interior design studio and a housing course focusing on the needs of the elderly and children met concurrently and were assigned the task of designing an assisted living facility for the elderly that also housed a childcare center. Four design teams were formed, comprised of four interior design students and two to three housing students. Team members worked together to generate program information on the psychological, physical, and social needs of the elderly in assisted living and for children in the childcare center. Programming information served as the basis and foundation for joint decisions in completing the schematic and design development phases of the project.

As each group of students came to the project with a unique set of skills and expertise, different aspects of the project were assigned to interior design and housing students. Interior design students were responsible for space planning, floor plans, perspectives/axonometrics, and materials/finish boards. Housing students documented the programming information that had been generated by all team members; and selected and specified materials, finishes, and furnishings.

Team members began their collaboration early in the semester and remained engaged in the process for approximately 10 weeks. Class periods were structured as studio sessions with occasional short lectures included. Various professionals including a childcare center owner, an interior design practitioner, and a researcher in elderly housing critiqued schematic designs in class. The project culminated with a formal presentation of each team's design.

Students were challenged early in the project to develop good team relations. After some initial difficulties and coaching on building team skills, two of the four teams established good team rapport and functioned very well. The other two teams continued to struggle to overcome their difficulties. The teams that developed good teamwork produced superior projects. Problems experienced by team members included establishing a common language and understanding of concepts across disciplines, feeling that their perspective was not validated by

other team members, finding/scheduling time to meet away from class, dividing responsibilities, handling difficult members, and making group decisions.

While the outcome of this collaboration was somewhat mixed, we feel it was a worthwhile undertaking and hope to utilize the concept in the future. Changes that would improve the project include scheduling the collaboration later in the semester to first present adequate background and theory on the needs of the special populations, clearly describing the project in course description catalogs so students have appropriate expectations, shortening the number of weeks students collaborate on the project, and significantly changing the roles assigned to group members.

For example, roles could be redefined where housing students serve as the client administrator or facility manager on the project. Groups would then work together on program materials and development of the project concept. Upon completion of the concept, groups would meet for weekly critiques where housing students would provide feedback and approve process drawings; critique space planning and adjacencies; and consult on materials, finishes, and furniture selections from the perspective of facility maintenance and management. With these modifications in place, a collaborative project between interior design and housing students will serve to provide a valuable educational experience for all participants.

THE ESSENCE OF AGING IN PLACE FOR UNMARRIED ELDERLY WOMEN OF DIVERSE BACKGROUNDS: DOING PHENOMENOLOGY

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Introduction

This phenomenological research in progress reports findings from five unmarried elderly women of diverse backgrounds and their experience of aging in place.[1] While research has revealed differences between and among elderly women of different races and ethnicities, the essential structure of aging in place has not been defined. Initial findings of this study reveal an essential structure of aging in place based on the experiences of the first five participants. This information will be used to inform development of a residential satisfaction survey that will be distributed to a larger randomized sample in subsequent research.

Literature Review

Aging in place is a complex phenomenon encompassing the physical structure or residential setting (home and property) and surrounding environment (neighborhood and community). It also includes the psychological structure of the person and her relationship to place. Aging in place is an important research issue because successful aging in place provides continuity across the lifespan. Continuity contributes to a sense of well-being and satisfaction with life (Lawton, 1986; Fogel, 1992; Atchley, 1994). It is important to understand how women experience this phenomenon because 50.9 percent of the population was female in the 2000 United States Census. While this was down from 51.3 percent in 1990, women increasingly outnumber men among the elderly population (Smith & Spraggins, 2001).

Unmarried women represent a significant segment of the elderly population. Social Security population figures show that in 2000, 60.5 percent of women 65 and over were single, widowed, or divorced. In the age range of 65 to 74 years, 46.1 percent of the women were single, widowed, or divorced. In the age range 75 years and older, 74.0 percent of women were single, widowed, or divorced (Hobbs, 1996). Depending on the age range of elderly women that are unmarried, an estimated four to five percent are never-married, four to nine percent are divorced, and 32 to 77 percent are widowed (Siegel, 1996).

Research on aging in place has focused on Caucasian, married couples who acquired housing after World War II. Research confirms the ability of Caucasian married couples to remain independent and age in place depends on financial stability, health status, and availability of support systems (Atchley, 1994). Exploratory research on aging in place indicated that the experience for unmarried, elderly women of diverse backgrounds was not unlike the experiences of Caucasian married couples (Chicoine, 1996). While the ability to remain independent and/or live alone depends on financial stability, health

[1] The completed study will include a total of 15 participants.

status, and the availability of support systems, these factors vary by race and ethnicity (Choi, 1991).

Of these factors, financial stability may be the most important because financial stability often provides access to quality health care and other supportive services. Financial stability is greater for married couples than for unmarried individuals. In 1989, elderly women, most of whom lived alone[2], experienced a poverty rate of 14 percent compared to a poverty rate for elderly married couples of 6 percent (Goldstein & Damon, 1993). This is not expected to change. The Urban Institute projects income for married couples will increase by 57 percent for the period 1990-2010 and 50 percent for the period 2010-2030. In contrast, unmarried women's incomes will rise by 35 percent in the period between 1990 and 2010 and 59 percent between 2010 and 2030. This differential is significant because the increase in income for unmarried women begins at a level that is 61 percent lower than the level for married couples (Siegel, 1996).

Elderly women also experience a higher poverty rate than elderly men. While the poverty rate for women is 14 percent; the poverty rate for men is 8 percent (Goldstein & Damon, 1993). While poverty rates for people who are elderly have dropped in recent decades, subsets within the elderly population experience higher rates of poverty (Siegel, 1996). Elderly blacks and Hispanics/Latinos experience higher rates than elderly whites (http://www.census.gov/hhes/poverty/histpov/ hstpov2.html).

The Census Bureau has projected that by 2020, the segment of the population aged 65 and older will have grown by 55 percent from 1998 (AARP, 2000). For the next three decades, the elderly population will continue to grow. In 2030, the segment of the population between 65 and 74 years of age is projected to peak at 38 million (Goldstein & Damon, 1993). As people who are elderly increase in numbers, there is a growing need to understand this segment of the population and the physical and psychological phenomena of aging in place.

Methodology

A phenomenological approach was chosen to understand the underlying structure of the aging in place experiences of 10 to 15 elderly unmarried women of diverse backgrounds living in 11 inner-city neighborhoods in a Midwestern city of 250,000, which is involved in a significant revitalization project that will occur over a 20-year period. The women are appropriate for this study because they have been identified by expert referrals[3] as women who are typical and representative of women who successfully age in place, are unmarried, elderly, and are of diverse cultural and ethnic backgrounds.

Analysis of data is ongoing and inductive in order to identify emergent themes, patterns, and questions. Coding and matrices are used for comparison

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[2] As women age, they are more likely to be widowed and live alone. In 1990, an estimated 31 percent of people who were elderly lived alone; four-fifths were women (Siegel, 1996).

[3] Expert referrals are professionals associated with the 11 inner-city organizations, neighborhood associations, churches, and social service agencies.

across interviews and interview summaries to retain the context of the data. The findings are validated by: a) triangulating methods, b) checking for alternative explanations and negative evidence, c) discussion of findings with the women, d) comparison of findings with existing theory. These methods enable the researcher to deal with the major validity threats to any conclusions, bias in the selection of women, and self-report bias for both. The findings may be applied to a broader population because of the methodological validations utilized in the research.

Implications

By researching the essence of the aging in place experience for unmarried elderly women of diverse backgrounds, the researcher is anticipating knowledge gained will inform development of a residential satisfaction survey that is responsive to the needs of this population. By combining a phenomenological approach with a residential satisfaction survey, the researcher is hopeful a holistic picture of aging in place will emerge. The knowledge gained will contribute to the existing body of knowledge on aging in place.

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TEACHING HOUSING ON THE INTERNET

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Introduction

Our introductory housing course, Housing and Consumer Issues, is taught as either a total web course or as a hybrid web course (web-assisted class). The content of the "two courses" are identical; only the delivery differs. We, the authors, use four general objectives to guide the content and activities in the course (see below). Listed as a University diversity course, many of the topics covered, such as housing choices, low-income housing, fair housing, gentrification, naturally address U.S. diversity and no attempt is made to emphasize specific issues as diversity issues.

Course Objectives: In this housing course, you will have the opportunity:

1. to learn about housing environments and to integrate conceptual and technical knowledge regarding current housing issues,
2. to learn critical thinking skills to assess housing problems and to gain familiarity with techniques used in the field of housing,
3. to broaden your views and to examine your opinions about diversity issues, and
4. to practice career skills by participating in web activities and collaborative learning.

We were asked to make this course a total web course to assist current high school teachers in the state who wanted to fulfill the housing requirement for Family and Consumer Science licensure. Because there is no textbook available for the class, the content of the course motivated us to develop the hybrid web course as well as the total web course using several Internet sites to present course content. A small course pack that includes AAHE teaching modules is also used for both courses. Videos, slides, guest speakers, and class discussions are used to deliver content in the classroom for the hybrid web course. Most visual and auditory materials used in the classroom are not posted for the web because we want the students to come to class. Weekly assignments are posted each Friday before the next week of study begins. We hold regular office hours for on-campus students and hold virtual office hours via WebCT e-mail for students in both courses.

Quizzes: The three-credit hybrid web course which meets in class on Monday and Wednesday for 50-minute periods has a web quiz on Friday. The total web course follows a similar content schedule on-line but the students do not meet face-to-face. Both courses have the on-line quiz on Friday that allows students to enter the quiz once during a seven hour window and complete the 20 minute open "book" quiz at a location of their choice. Quiz questions are complex and encourage students to keep up-to-date.

Homework: We also use the WebCT quiz tool for the same eight homework assignments in both courses. Some homework assignments require students to

post paragraphs that require grading and some homework assignments are structured for automatic grading. The homework provides opportunities to practice and apply relevant concepts and skills. For example, homework 4 is a problem-solving situation about housing availability and affordability in which students access web sites to find information and then adapt the information to the situation. The students answer specific questions and give advise for the "client." The homework assignments on pre-qualifying and mortgages require the use of on-line calculators. The technology in the quiz tool is diverse enough to allow for several types of homework. No papers cross hands and the grading is quite fast. A student's work and grades are kept confidential through this electronic transfer method.

The hybrid web course of 70 students and the total web course of 25 students are organized around learning groups of five students to provide interaction and collaboration on a meaningful level. Each group in both courses has their own discussion board. Each group in the total web course is expected to discuss weekly questions about reading assignments. In the total web course, graded discussion participation takes the place of the hybrid web course classroom activities.

Projects: The first project uses the WebCT student homepage tool. The project requires students to describe a childhood residence, their current residence and their dream home. Students are also encouraged to include a photo of themselves on their homepage. The photo helps the students in the total web course meet each other.

The second project is a group project that displays and describes home architecture. The project involves students photographing houses, attaching photo files to postings in their group's discussion board, and discussing which pictures to include in their project reports. When finished, they attach their report to a posting in the project 2 public discussion board. These reports are converted to PDF format and are linked to a Project 2 icon on the home page for easier student access because some groups are inexperienced with image manipulation and produce large report files that are a burden for others to download. The reports become content for the course and the final exam contains ten photos selected from the reports for identification-based questions.

The quiz tool is also used for project management. The students enter a "quiz" set up for each project and type that they have finished the project. We view their projects on line, call up the student's statement of submission in the quiz tool, and enter a grade and comments. Students can see comments about their projects and the grades are automatically entered into the WebCT grade book.

Summary

With eight homeworks, 11 quizzes, and two projects on the web, the students are busy and their grades and teacher comments give ample opportunities for them to evaluate their learning. In the hybrid web course, the midterm and final exams are given in the classroom. In the total web course, on-campus students

take exams on campus and distance students take exams that are mailed to volunteer proctors who in turn administer the exams to the students.

We encourage students to evaluate course activities informally during the semester through WebCT e-mails. Several students eagerly point out problems and offer suggestions about the web sites and course web activities. At the end of the course, students fill out a survey provided through the WebCT quiz tool about their experiences and learning in the course. Results of the survey indicate that the students like the flexibility the web brings to the course, especially the on-line quizzes and homework, and many of the students are intrigued by the variety of web sites about housing.

View the course on line. The easiest way to reach the ISU WebCT login page, is to go to the ISU home page, http://www.iastate.edu/ , find the index near the top of the page and select **W**, then select **WebCT** from the second screen. This will take you to the login-in request page. Continue clicking and enter the following ID and password; ID=w.HDFS239guest, password=guest.

CIVIC ENGAGEMENT IN ACTION: IMPLEMENTING COMMUNITY-BASED SERVICE LEARNING IN HOUSING STUDIES

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According to the educational philosophy of John Dewey, learning occurs when knowledge is directly linked to experience (Dewey, 1990; Harkavy & Benson, 1998). By linking what goes on in the classroom directly to real world experience, Community-based Service Learning (CBSL) implements Dewey's pedagogical theory (Ehrlich, 1996). In CBSL projects, students work directly with community organizations and the projects they undertake are guided by community needs (Cantor, 1997). Classroom activities are reciprocally linked to CBSL projects and time for reflection is an integrated aspect of the classroom activities in CBSL courses (Cooper, 1998). An overreaching goal of CBSL is to provide students with a relevant education that promotes the civic involvement critical to maintaining democratic institutions (Magrath, 1998; Small & Bogenschneider, 1998).

The purpose of this paper is to examine and analyze the implementation of CBSL projects in housing courses. The paper is organized into five main sections. In the first, I explain the pedagogical bases for CBSL, which are based on the experiential learning philosophy of John Dewey. Next, I describe a CBSL project carried out in a rural town; a project that provided the town with a walking tour guide to historic homes and businesses. Third, I provide an account of an CBSL-based project that was conducted by an course on housing and community development at a research university in the context of a large metropolitan setting. In this set of CBSL projects, students engaged in a variety of activities from providing a guide on how ameliorate basement flooding to a tenant's rights handbook. Fourth, I examine and analyze student responses to the CBSL projects. These findings indicate that the majority of the students found that CBSL significantly contributed to their learning experience. Last, I conclude by offering some suggestions as to how CBSL projects can be effectively designed and carried out. Most important are early planning and maintaining good communications between the teacher, students, and community organization.

Why Implement Community-based Service Learning?

Increased interest in CBSL approaches is fueled by a concern that declining levels of political and civic involvement are undermining the viability of democratic institutions. In particular, the findings of Robert Putnam (Putnam, 1995) in his widely read book "Bowling Alone" indicated that citizen participation in civic activities such as voting and in voluntary organizations such as bowling leagues have fallen precipitously since 1970. For educators the finding that the drop-off in political and civic involvement are most marked among young people is of great concern. In response to the declines in civic participation, CBSL is intended to reinvigorate the linkages between young people and the institutions that serve the broader community (Wade 2000).

CBSL offers many benefits to students, faculty, the community and the university. Through direct community involvement, students gain valuable experience in dealing with real world problems (Reardon, 1998). At the same time, community organizations gain assistance in meeting the needs of their constituencies (Patrick, 1998). By engaging with the broader community, faculty develop a better understanding of the many challenges faced in the real world that lies beyond the classroom (Zlotowski, 1998). In addition, CBSL links the university to the community and strengthens the bonds between the university and the broader body politic (Small & Bogenschneider, 1998).

Evaluation of the CBSL Projects

Student evaluations pertaining to the CBSL projects revealed a number of important concerns. One of the most significant issues that emerged is the challenge faced by students in trying to meet both the course requirements and the needs of the community organization. One-third of the students stated that they had difficulties in meeting these conflicting demands. These responses point out the need to carefully coordinate classroom activities with the CBSL projects. It is also incumbent to maintain a high level of communication between instructors and community staff.

The need for the instructor to provide more feedback on the content and outcomes of the CBSL project also became evident as 44.4 percent of the students felt that additional feedback would have been helpful. This problem arose mainly because the CBSL projects were due the last week of the semester and it was therefore not possible for me to provide feedback prior to the end of the term. One way to address this challenge would be to have intermediate goals and deadlines that would allow for feedback throughout the semester. The need for continuous feedback also points out the need to constantly monitor the CBSL process. During typically busy semesters this may be difficult. Once again, advance planning is needed.

Despite these issues, the majority of the students felt that CBSL added to their learning experience. When asked how much they learned by participating in CBSL, 44.4 percent stated that they had learned “a lot” and 5.6 percent stated that CBSL had “greatly” enhanced their learning experience. Most encouraging was the finding that 68.8 percent of the students stated that they would be willing to take another course with a CBSL component. This is perhaps the best indicator of how the students viewed the CBSL experience.

Implementing CBSL projects in housing courses takes a great deal of planning and is quite time consuming. CBSL also requires that the instructor give up a measure of control, shifting responsibility to students and staff at community organizations. Despite these caveats, I have found my involvement in CBSL to be extremely worthwhile. My greatest reward however, is to witness how the energy and enthusiasm of the students is activated by their community experience. As one of the participants noted, “The one thing that really stands out to me…was being able to interact with real citizens of a community. It was a real eye opening experience to see a community interact first hand rather than

read about it in a book." Although the challenges of implementing CBSL are many, the rewards are great. I highly recommend this technique.

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FINANCIAL PROFILE OF FIRST TIME HOME BUYERS IN NORTHERN UTAH

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Introduction

Utah State University Extension, in coordination with the Housing and Financial Counseling Center (HFCC) have provided First Time Homebuyer Workshops (FTHB) to Northern Utah residents for over four years. It has been observed by workshop organizers that many first time home buyers are stretching their resources to the maximum to get their mortgage loans, and as a result, many homeowners are experiencing financial instability. As a result of these observations and literature review, the purpose of this study is to identify the benefits of the workshops, identify approaches used by workshop participants to finding and purchasing a home, identify types of mortgage loans used by new homeowners, and describe the risk of financial instability among new homeowners as measured by a financial stability index.

Literature Review

Claims that homeownership is beneficial to both owners and society are extensive in housing research (Garman & Forgue, 1991; Lindamood & Hanna, 1979; Rohe & Stegman, 1994a; Rohe & Stegman, 1994b; Rohe & Steward, 1996; Stone, 1993; White & Schollaert, 1993). Home equity, for example, is the primary source of wealth for the majority of households in the United States. In 1997, 40% of households owned stock compared to 66% who owned homes (Meeks, 1998).

Garman and Forgue (1991) claim that some of the personal financial benefits of buying a home are the following: (1) it provides an incentive for the owner to save in an asset that grows in value; (2) it improves the credit rating of the owner; (3) it allows a tax benefit through deductions for mortgage interest and real estate property taxes; and (4) it gives the owner the freedom to remodel and make home improvements.

Despite the benefits of homeownership, Lindamood and Hanna (1979) argue that homeownership has several disadvantages. Some families have difficulty budgeting for repairs, maintenance, and home improvements. When the family's income is just enough to make monthly payments they have no extra money for maintenance or repairs. A large expense, like a new furnace, may put the family in financial crisis and cause them to lose their home. As Eggers and Burke (1996) point out, homeownership involves high transaction costs and exposes families to the risk of default.

Methods and Procedures

Sample selection and procedures: The initial sample was 307 participants. The return rate was approximately 60% (n = 186). Eighty one surveys were excluded from the sample because participants had not yet purchased a home. The actual sample size for the analysis was n = 105. Generally, the sample was comprised of young, married couples (86%) with an average of 2-4 children who

lived in Northern Utah. Eighty eight of the sample was white and 8% Hispanic. Their median income was $2812.5 (SD= $1028.3).

Measures:

Evaluation of the workshop was measured with a set of items using a 4-point rating scale ranging from “not at all useful” (1) to “very useful (4). This evaluating instrument was used to assess how relevant the workshop information was in the actual homebuying process. Participants were also asked whether they attended the workshop to qualify for a mortgage program or to get a discount on home mortgage insurance.

Approaches to find and purchase a home: The first and second measures included questions asking reasons why homebuyers chose to work with a certain lender, or with a realtor; how many loan officers and realtors they contacted before buying their home.

Types of mortgage loans used by new homeowners. Participants were asked what type of mortgage loans they used in the purchase of their homes (conventional or non-conventional), what was the mortgage interest rate, and percentage of downpayment.

Financial stability index was developed to determine indicators of home buyers financial stability. Based on literature review, the index included measures of mortgage debt-to-income ratio, current equity ratio, and current savings. For the development of this index, standardized scores were calculated for each component before they were combined into a single scale. Alpha reliability for this index was .7359 (see formulas in appendix).

Results

Evaluation of workshops: Eighty-eight percent of the participants reported that information gained at the workshop was very and somewhat useful in the actual buying process. Sixty five percent of the participants attended the workshop to participate in a mortgage program or to obtain a grant that will help them with closing costs.

Approaches to finding and purchasing a home. About half (45%) of the participants contacted one lender, and 8% contacted four. On average, home buyers contacted two loan officers (?= 1.99). The primary reasons first time home buyers chose a specific loan officer was because the loan officer was recommended (57%) and charged lower fees (13%). Most of the participants (65%) used the service of a Realtor, with 11% using 2 Realtors , and 13.4% using more than 3 Realtors. Pearson correlation (r = 2.7, p< .05) showed that the higher the income, the more likely home buyers will use a Realtor.

Type of mortgage loan: The majority of the participants obtained a non-conventional loan (76.2%), and only 19.2% got a conventional loan. To explain the skewed results in non-conventional loan programs among first time homebuyers, logistic regression were used. Results showed that interest rate, the lack of getting government assistance, and the size of downpayment increased the likelihood of receiving a conventional loan. An income variable was also included in the logistic regression equation, but it was not statistically significant at the .05 level. The model predicts that for every additional thousand

dollars included in the downpayment the likelihood of obtaining a conventional loan increased by a factor of 1.3.

Financial stability index: the financial standing index ranged from -3.72 to 4.23. To better understand the homeowners' score in the financial stability index, consider the following examples. A homeowner with a negative index score of -.3.72 has no savings, only 1% equity in their home, and is paying 44% of his monthly income in housing. On the other hand, a homeowner with an index score of 3.20 has some savings, 7% equity in their home and is paying only 22% of his income in mortgage. Based on this index, 66% of first time home buyers scored negatively.

Conclusions and Implications

In the analyses of this sample, several patterns were evident. The majority of first time home owners were satisfied with the information gained at the workshop. On average, they contacted two loan officers, and received some kind of help for closing costs. They were more likely to obtain non-conventional loans, and more than half were experiencing some kind of financial strain at least in the short term financial stability as measured by the index. One major implication of the result of this study is the fact that first time home buyers are applying up to 50% of their income to their regular mortgage payments and have no savings to afford maintenance, emergencies and/or repair costs on their new homes. Another important implication is the need to study the role of loan officers in the process of providing mortgage financing and financial advice to first time home buyers. People are now qualifying for loans that would be well out of their reach a few years ago. This situation leaves borrowers very vulnerable to a sudden drop in income or job loss and the potential to make foreclosure rates higher. One contribution of this study is that it could be used as ground base work to develop post-purchase housing counseling where clients can develop good financial management skills to prevent mortgage default and foreclosure. Findings are important because this information provides the trainers a better understanding of workshop participants.

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HOUSING BOOTH AT THE "REALITY STORE": FOSTERING COLLABORATION BETWEEN THE UNIVERSITY AND PUBLIC SCHOOLS

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Reality Store is a national project of the Business and Professional Women's Club, creating opportunities for students to experience "reality" for just a few hours. Housing faculty and students at Ball State University participated in the event by developing and hosting a housing booth for the Reality Store held for the 160 eighth graders at Yorktown Middle School. Participating in such an event provided benefits for all parties involved.

Reality Store Concept

Prior to the Reality Store event, 8th graders researched various careers, keeping in mind their own individual interests and abilities, as well as the amount of education needed, salary, work environment and mobility requirements. Eventually the students narrowed down their choices, selecting a profession.

Students were provided with a checkbook showing a deposit equivalent to the average monthly salary for a person age 25-28 in the chosen profession. Preliminary instruction in check writing, budgeting, and record keeping was also provided to the students.

On the day of the event, the students came to the gym in groups of 25-40. Their first stop was the Family Booth, where they roll the dice to select their household makeup. Options include single, living alone; single, with a roommate; single or divorced, with one or more children; and married, with one or more children.

The next booth is Uncle Sam, where students deduct income taxes from their monthly paycheck. For those students selecting professions that require more than a four-year degree, their next stop was to make a monthly payment on their student loan. All students proceed through 20 or more booths, making decisions about housing, transportation, food, clothing, childcare, and entertainment.

Continuing to simulate reality, students also visited the Chance booth, where a variety of situations, both positive and negative, occur. Some students received a bonus on their paycheck or received an inheritance. Other students were sued or added an additional family member. Those who selected home ownership or purchased a car might have to pay for a major repair. Students are not allowed to take out a loan or use a credit card, but can add a part-time job to increase their monthly income.

Preparing for the Housing Booth

Prior to the Reality Store event, materials to be used at the Housing Booth were developed. Such materials included:

- *Deciding to Rent or Own Your Home* - describing the advantages and disadvantages of each housing tenure status.
- Photographs, descriptions, and costs of rental housing available in the area. Accompanying this handout was *Costs of Rental Housing*, which

outlined the income needed for each unit type, as well as the occupancy standards.

- Photographs, descriptions, and costs of housing available for purchase in the area. Accompanying this handout was *Costs for Housing Purchases,* which outlined the income needed to purchase each housing type.

Implementing the Housing Booth

University housing faculty and members of the student organization of housing majors staffed the Housing Booth. Representatives of two local real estate agencies also participated in the Housing Booth. At times, only 2-3 people were needed to staff the booth. At other times, all 10 staffers were busy assisting 8th graders with their housing decisions.

Housing decisions made by the 8th graders surprised many of the booth workers. Some of the students were very astute in their decisions. One young man was fully aware of the meaning of "equity" and was intent on purchasing a home instead of renting. Another student, a young woman planning to be a model, understood that she would be moving around a lot, so decided to rent an apartment rather than purchasing a house. Others selected low-cost housing because they had not yet visited the Transportation Booth, but had already decided to purchase an expensive car. Such students were aware that they could not afford both expensive housing and expensive transportation.

Most of the students were not as well informed, but instead made their housing decisions based on a variety of other factors. Because some of the apartments also included a variety of recreational facilities, such options became very popular among the 8th graders. However, they were quite disappointed to find out these apartments were not furnished, required the resident to pay for utilities, and that renters insurance was also recommended. Some students selecting home ownership did so because their parents were homeowners, so "it must be the right thing to do."

The Housing Booth was the fourth booth in the series of 20 or more stations to be visited. Those purchasing homes were also required to visit the Tax Assessor Booth and the Insurance Booth. All students had to visit the Utilities booths and the Furnishings Booth to accompany their housing decisions.

Many students re-visited the housing booth, obtaining a less expensive option after realizing the cost of the other items they had to purchase. Others chose to obtain a part-time job to supplement their income, in an effort to afford their original expensive housing choice.

Conclusion

The university's participation in the Reality Store created benefits for all involved. For the 8th graders, they received realistic housing information in an interactive format. Such information would not be as well received if delivered in a classroom lecture format.

For the college students, they were able to use their academic training to provide a service to the community. In addition, University faculty and students

collaborating with public school teachers, administrators, and parent volunteers eased the barrier that sometimes exists between these two educational systems.

As a result of the positive outcome of this experience, Ball State University housing faculty and students will continue to be involved in the Reality Store at Yorktown Middle School. Plans are also being made to be involved in similar events at other schools in the area.

DESIGN AND MANAGEMENT ISSUES IN ASSISTED LIVING FACILITIES

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Introduction

The term "assisted living facility" has evolved in the 1990s as the preferred name of facilities that offer supportive care for older adults. The Housing and Community Development Act of 1992 defined an assisted-living facility as one that a) is licensed and regulated by the state, b) makes available to residents supportive services to assist the residents in carrying out activities of daily living, and c) provides separate dwelling units for residents each of which may contain a full kitchen and bathroom, and which includes common rooms or other facilities appropriate for the provision of supportive services to the residents of the facility. (Gordon, 1998).

Past research that has examined several assisted living facilities has provided more information on specific areas such as residential appearance (Reigner, 1994) and social spaces (Zavotka & Teaford, 1996). Further research that investigates both overall design and management issues is needed to further encourage and refine this housing option for older adults. Moreover, because most assisted living facilities are located in urban/suburban areas and over 25% of those over age 65 live in non-metropolitan areas, there is a need to examine assisted living options for rural areas.

Methodology

The objective for this study was to determine what assisted living professionals perceived as the major design and management issues facing the industry. Obtained information would be used to construct survey and observation instruments that would be used to assess assisted living facilities. Information to address this objective was obtained from two sources. First, telephone interviews were conducted with development and management professionals, agency and organization heads. Their names were obtained from a Legislative Housing Study Commission staff member, who had previously led a task force on assisted living. A letter was sent to the nominees describing the purpose of the interview and the main questions that would be asked. A research assistant contacted the nominees and arranged a time for a conference call. A researcher and a research assistant made the calls with one person asking questions and the other recording notes on the conversation. The two questions asked during the interview were: What do you think are the key design issues in assisted living facilities today? and What do you think are the key management issues facing the assisted living industry today? Interviewees were also asked to nominate assisted living facilities that they thought were outstanding in one or more of the following areas: staffing, personal care, maintenance and upkeep, security, resident relations, food service, recreational activities, affordability, transportation, design of personal and public spaces. Each interview lasted approximately 30 minutes. Twenty interviews were completed.

The second source of information was an unplanned encounter that presented itself when the researchers were invited by one of the interviewees to present a program at a meeting of assisted living professionals. The presentation included information on the current study and asked the audience members to discuss design and management issues. Notes were made of this discussion. Audience members could also complete a form that asked them to name three design issues and three management issues in assisted living today. Thirty individuals completed the forms.

All forms were examined to determine issues relevant to the objective.

Findings

Telephone interviews were conducted with 14 professionals in the assisted living industry, including individuals working in government agencies, not-for-profits and conventional assisted living facilities, the majority of whom were administrators and executives within the industry itself. The top five design issues reported by these professionals were accessibility and planning for aging-in-place, providing aesthetically pleasing environments as well as a home-like environment, and providing for the personal possessions of residents and resident privacy. Overwhelmingly the major management concern was issues related to hiring and retention of staff, such as salaries, high turn-over rates and determining which mixture of benefits was most likely to result in the highest staff retention rates. Also, industry professionals were concerned with issues related to resident care, such as nursing care plans, medication distribution systems and training.

A similar survey of a group of managers and owners of adult homes in Virginia revealed that their top three design considerations were providing access to all areas of their facilities to persons using mobility aides, aesthetic considerations within the facility itself and attempting to provide more amenities for their residents. Their two main management concerns were attracting and retaining staff, which was closely followed by issues related to cost and financial considerations. Most of these facilities were small, ranging in size from five to 101 residents and more than 83% were in rural areas or small towns.

Additionally, an issue that continued to be raised by numerous respondents was Virginia’s lack of financial support for residents of assisted living facilities. Auxiliary grants in Virginia, for example, are much lower than in neighboring states such as North Carolina.

Discussion

A comparison of the two groups, one representing the larger more urban facilities and the other representing the smaller more rural ones, shows similarities in issues especially in the areas of providing pleasing environments and staff retention issues.

Although smaller-scaled developments can offer appropriate care and living arrangements for residents, the costs to manage and operate the facilities may not be economically viable. Therefore because of low profits developers avoid

building in rural areas. Information from this study has been used to identify five facilities that will be examined in depth in the next phase of the study.

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HMONG HOUSING NEEDS AND ASPIRATIONS

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Following the Vietnam war in the 1970's, thousands of Hmong refugees relocated to the United States, with the city of Saint Paul in Minnesota hosting one of the largest concentrations. Being nomadic farmers without a written language, Hmong refugees were unprepared to deal with the challenges of their new life, such as obtaining language and work skills. After their dislocation, the Hmong elders found themselves dependent on the youth for language translations and cultural integration; the men witnessed their roles reversed as women entered the work force; and the youth did not know whose world to belong to, their parents' or their own.

Housing provision has been included along with language training and economic/social integration among the factors deemed most efficient in successfully helping refugees resettle (Zetter, 1985). The literature suggests that providing refugees with a place to call 'home' and with a house that fosters a sense of continuity between the past, the present, and the future could ease the refugees' resettlement process, increasing their chances for a successful adaptation. On the other hand, re-housing refugees in housing that is disrespectful to their housing needs has been found to accentuate the refugees' dependence on assistance, extending that need to future generations (Hirschon & Thakurdesai, 1979). Along these lines, improving housing conditions was found to position the identity of children of refugees toward higher aspirations in life (Hadjiyanni, 2002).

Drawing from research conducted through a third-level architecture studio class at the University of Minnesota, this paper uncovers the architectural particularities that if incorporated in the housing of Hmong families could help foster in its users a sense of the Hmong identity. Adopting an interdisciplinary perspective that combined anthropological/sociological research with architectural design, the 13 students in the class interviewed ten Hmong community members and used the results to inform the design of a house for a Hmong family. Questions asked during the interviews included descriptions of their housing in Laos, their ideal housing conditions, and their current housing conditions. In addition to the interviews, photographs of the various rooms and plans of the current housing were collected. With the Hmong youth assimilating to the mainstream American culture faster than their parents, the crucial question this research had to answer revolved around how *Hmong* and/or how *American* this house should be. Identifying the elements that defined what it means to be *Hmong* and what it means to be *Hmong in America* was an instrumental aspect of the process of designing this house.

The findings support that the interviewees' current housing limited their ability to engage in vital cultural traditions. The Hmong identity revolves around the central themes of *community* and *celebrations,* each of these unable to exist without the other—as the Hmong people say, "the Hmong are like the rice, we stick together." Celebrations include spirit callings engaged to help in healing a

diseased person, births, weddings, and funerals. Having to take place in the house, some celebrations include dozens of community members and are followed by an elaborate feast. Cooking for large numbers of people along with providing them with a place to eat are essential programmatic aspects of a Hmong house. A standard American kitchen, for example, limits the type of foods that can be prepared because of space limitations (in Hmong households, it is typical for 6 people to help cook) while the spices used in cooking generate smells that are uncomfortable to family members. Being constrained in what they could cook indoors, interviewees resorted to cooking outside or in the basement, which is neither safe nor comfortable in the frigid Minnesota winters. In similar vein, a standard American living room often does not allow for a long table around which at least 40 men can eat during celebrations. Moreover, Hmong social relations dictate that everyone must be invited to the celebrations, including the children. This norm was often challenged by the lack of a large open social area as well as the concern that neighbors might be annoyed.

On the other hand, the findings support the globalization of housing aspirations. A typical traditional Hmong house in Laos consisted of a one-room bamboo structure with an earth floor and a detached kitchen. Sleeping took place on a wooden platform on the floor and it was common for four or five people to share a platform. In contrast to the traditional houses, Hmong interviewees aspired for a house that resembles the two-story, single-family detached middle-class American suburban house with a bedroom for two children of the same sex, at least two bathrooms, a garage, and a basement (Altman & Chemers, 1980). Gathering around the fireplace to share stories is another way that architectural elements of a typical American house could help preserve the Hmong tradition and history--being a people without a written language, Hmong elders are masters of the oral tradition and use stories to teach children of the past, such as their life in Laos and their traumatic exodus experience.

In conclusion, the research findings support that if the house of a Hmong family in America was to foster a sense of belonging to the Hmong community along with smoothing the assimilation to the American culture, certain Hmong cultural prerequisites had to be incorporated in a typical America house. Reaching a balance would transform the house into a bridge that connects the two identities, the Hmong and the American identities.

Future implications of this study relate to two issues. First, the study pointed up the stresses that living in an unsuitable house can impose on one's self-identity, cultural definition, and family relations. The paper urges for further studies focused on identifying the housing needs of various immigrant groups. Second, the study testifies to the importance of incorporating research in the architecture studio classroom--the proposed solutions to the design problem of a Hmong house in America would have not reached the same level of refinement without the feedback from Hmong community members.

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THE UTAH HOUSE: IDEAS FOR UNIVERSAL DESIGN, ENERGY EFFICIENCY AND HEALTHY INDOOR ENVIRONMENTS

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Introduction

The Utah House (UH) is a demonstration house and learning center that allows visitors to see universal design, energy efficiency, and healthy indoor environments being incorporated into a residential home. The UH was designed and built in order to demonstrate, educate, and empower the public about new ways of building homes and creating landscapes.

Relevance

Universal design, energy efficiency, and healthy indoor environments are important topics for housing educators. Universal design is the design of products or environments that are useable by people of all ages and abilities. This type of design respects human diversity and promotes inclusion of all people in all activities of life. According to American Association for Retired Persons (AARP), there is an urgent need to educate consumers and professionals about universal design (Harper, 2000). Many individuals would like to use universal design concepts in their own homes, but are unaware of how these concepts can be integrated into a home. The Utah House demonstrates many universal design ideas that are easily integrated into new construction.

Energy efficiency is also a very important topic for housing educators. At a time of escalating utility costs, consumers are looking for answers to high energy costs and the energy crisis. America's 81 million buildings (homes and commercial buildings) consume roughly $220 billion worth of energy and contribute almost 8 percent of the world's carbon emissions. Buildings in the US consume enough energy annually to provide a month's worth of energy use for the entire world. By reducing local energy consumption, efficient homes can also reduce air pollution and improve their local environments. In residential homes, a 50 percent reduction in energy use is relatively easy to achieve, and 90 percent reductions are possible with good design. Just by saving one unit of electricity inside a building saves having to burn three or four units of fuel, often coal, at a power plant. In addition, reducing the average house's energy use by 80 percent will reduce its CO^2 emission by almost 90,000 pounds over its 30-year lifetime (Barnett & Browning, 1995).

One way to reduce the demand for energy is to increase the efficiency of buildings through the use energy-efficient technologies. Energy savings can be significant when using practical, cost-effective technologies and ideas that improve the thermal integrity of a building. The Utah House demonstrates energy-efficient design, materials, products, and new technologies. The house saves 50% of the energy over a similar sized home.

Healthy indoor environments is also an important topic for housing educators. Especially because many consumers are concerned about how environmental factors in their homes can affect their health and the health of their families.

According to the American Lung Association (2000), elements within homes have been increasingly recognized as a threat to personal health. The Environmental Protection Agency (1995) lists poor indoor air quality as the fourth largest environmental threat to our country. It is well documented that generally indoor air pollution is worse than outdoor air pollution. Since most Americans spend 90% of their time in an enclosed environment, they are breathing polluted air, which has been linked to certain healthy problems. The UH will serve to educate its visitors about indoor air quality issues and demonstrate techniques to create healthy indoor environments. Some of the healthy homes demonstrations found at the UH will be the use of building materials with low volatile organic chemicals (VOC's), mechanical systems and filters that scrub the indoor air, appropriate ventilation systems, natural ventilation, natural lighting, and nontoxic materials as a means of preventing exposure to hazardous gasses.

Purpose of Presentation

The purpose of this presentation is to provide housing educators with information and examples of how universal design, healthy indoor air, and energy efficiency have been integrated into a demonstration house.

Objectives

To foster an appreciation of using demonstrations as a teaching strategy.

- To increase knowledge and understanding of universal design, energy efficiency, and healthy indoor air environments.
- To show examples of how universal design, energy efficiency, and healthy indoor environments have been integrated into residential housing.

Methods

A variety of teaching methods will be used in the Utah House project, such as demonstrations, newsletters, newspaper articles, satellite program, television program, workshops and trainings. However, for this presentation, examples of universal design, energy efficiency, and healthy indoor air environment demonstrations found in UH will be presented.

Summary

Demonstrations are an excellent teaching strategy for increasing understanding of a particular product or technology. As a result of UH demonstrations, the general public will become more familiar with the benefits of universal design, energy efficiency, and healthy indoor environments used in housing. Consumers, builders, and architects will be more likely to adopt energy-efficient construction techniques because they can actually see the product in a real house.

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KIDS ON THE STREET: FACILITATORS AND BARRIERS FOR KIDS AND COMMUNITIES

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Many disenfranchised young people enter life on the street to escape situations that they perceive as desperate. Some are pushed from their homes, and others are pulled to the street (Duffy & Morrow, 1997; Schneider, 1997). Results of this study in Winnipeg, MB contribute to a better understanding of how street youth live, where they live and why they engage in this lifestyle. This information can be useful for communities or professionals wanting to assist "homeless" street youth and to address issues associated with young people "living" on the street. Additionally, the paper reports on the lessons learned when involving the community under study in the research process and suggests how community-based participatory research might be used effectively by researchers to better understand housing issues among other vulnerable populations.

Street life presents serious problems, putting the well being of young people at enormous risk and stressing the community at large. For instance, a 1990 study in Winnipeg found that most street-involved youth spent time couch surfing (sleeping with friends), one-third frequently slept on the street and one-third regularly went without food. Most youths in that study engaged in sexual activity, often trading sex for shelter. Many of them spent considerable time on the streets panhandling or congregating in groups. One-quarter were intravenous drug users who often needed medical help but did not seek it and two-thirds were involved with the police (Social Planning Council, 1990). Many of these activities disturb community members, often resulting in them feeling uncomfortable with or fearful of these youth.

Research about street kids is diverse. It includes life stories, interviews with stakeholders, attempts at quantifying the problems and reviews of services offered. However, much of the work is dated and almost none of it involves research with street-involved youth. Our study was a modest attempt at working with street-involved youth to develop a better understanding of the issues as they see them.

The principals of community-based participatory research guided the study. Participatory research is an applied form of research with roots in psychology, sociology, feminist studies and nursing. It stresses the importance of involving the community under study in the research process (Seymour-Rolls & Hughes, 2000; Simonson & Bushaw, 1993). Participatory research contributes to the practical concerns of people and to the goals of social science through joint collaboration with a mutually shared framework (Masters, 2000). This approach embraces the idea that all stakeholders can contribute to the construction of knowledge and social change.

A fundamental requirement by the funding agency for this research was the pairing of university researchers with a community organization. The partnering agency for this study was Operation Go Home (OGH). The mandate of OGH is to assist youth that are not living in a safe and stable environment. The agency

delivers a variety of services including outreach, counseling, food bank and housing assistance. The research team consisted of two university researchers, two staff members from OGH, a graduate student and an undergraduate student as research assistants and four street-experienced youth as research interns. The goals for phase one were to build relationships, and develop an effective research team, methodology and learning environment. Phase two involved in-depth interviews with approximately 25 street-involved youth.

In analyzing the data, several themes were explored. The theme "how youth tell their stories" suggests that these young people positioned themselves more often as survivors or travelers than victims. They were very present-oriented and seldom engaged in dreaming about the future. A second theme, "reasons for leaving home", identifies disputes with parents over expectations for behavior as a frequent reason for leaving. Several participants described being pushed from their home by parents. The theme "managing on the street" suggests that many young people spent time couch-surfing (staying with friends) but most experienced some time without any place to stay. Street friends, drugs and food banks played an important role during this time. The theme "interaction with existing services" suggests most youth disliked rules and regulations and avoided most service-providing agencies. On the topic of "health issues" it seems that street youth perceived themselves as healthy for the most part. However, several participants referred to learning disabilities, mental health issues, violent encounters including being stabbed and shot and the health effects from drug use. The theme "preferred services and service-delivery" suggests a need for innovative and nonjudgmental services, minimal rules and an approach that respects street youth while assisting them in meeting their needs. Finally, the theme "fitting-in with the community" suggests the need for understanding and tolerance on both sides and a solution to the dearth of acceptable housing resources for street-involved youth.

At the end of this project, we expected that university researchers and students would have developed skills and understanding by partnering with community members, agency capacity would be enhanced, students and street-experienced youth would have developed knowledge and skills together, the team would have generated information about street-involved youth that could affect kids and communities and the decision-making capacity of service-providers and policy makers. As this project wraps up, it is clear that some of our expectations were met, some of our expectations were unrealistic and much learning came from the unexpected.[0]

[0] This research was funded by a grant from the Winnipeg Inner-City Research Alliance affiliated with the Institute of Urban Studies at the University of Winnipeg through funds provided by the Social Sciences and Humanities Research Council of Canada and Canada Mortgage and Housing Corporation .

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HOUSING SATISFACTION AMONG KOREAN AMERICAN ELDERS

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Rationale

Korean Americans are one of the fastest growing ethnic populations in the United States. The number of Korean Americans has increased from 797,304 in 1990 to 1,076,872 in 2000 (U.S. Bureau of the Census, 2002). Between 1980 and 1990, the number of Korean Americans aged 65 and over increased from 8,614 to 35, 247 representing a 309 percent increase (U.S. Bureau of the Census, 1990). The U.S. immigration of Koreans and family reunification, combined with aging among immigrants who came to the U.S. in the 1960s and 1970s, increased the number of Korean American elders significantly (Moon, Lubben, & Valentine, 1998).

Korean American elders are different compared to other ethnic and minority groups. Korean elders are recent immigrants to the U.S., and they are more likely than other groups to be sponsored by their adult children (U.S. Department of Justice, 1990). As a result, many Korean American elders have aged in Korea and face multiple adjustment problems, such as language barriers, cultural differences, lack of employment opportunities, and unfamiliarity with living conditions and social service systems (Kiefer et al., 1985; Koh & Bell, 1987; Moon & Pearl, 1991). Due to such limited social and economic resources, the immigrant ethnic minority elders are known to experience "triple jeopardy," which is compounded by aging. By virtue of being ethnic minorities, they are subject to lower socioeconomic status, education and language barriers, immigrant status, and discrimination on the part of the dominant society (Yoo & Sung, 1997).

Despite such differences and the rapidly growing number of Korean Americans, they have not received appropriate attention. While research on inculturalization, cultural identification, and family conflicts for minority elders have increased, studies focusing on specific ethnic minorities are rare. When the population size of an ethnic group is small and social status of the ethnic group is not high (i.e., Korean Americans), very little research has been conducted (Kang & Kang, 1995). Empirical research in this area is greatly needed.

Purpose

The purpose of this study is to analyze what Korean American elders' housing needs are and how they perceive their residential environment. In order to help analyze different housing needs among Korean American elders, the participants were compared based on the duration at current housing, shorter than 8years vs. longer than 8years. Eight years is the time when many Korean American elders move to somewhere else.

The following research hypotheses were tested.

1) There is no relationship between the selected measures of satisfaction with housing (i.e., size, privacy, floor plan, accessibility, privacy, maintenance, housing cost, and

attachment) and the duration at current housing among Korean American elders.

2) There is no relationship between the selected measures of satisfaction with neighborhood and community (i.e., physical appearance of neighborhood, location, safety, crime, similarity and closeness to neighbors, and utilization and accessibility to community services) and the duration at current housing among Korean American elders.

Methods

The main research methodology in this study was a self-administered questionnaire survey. Based on the previous research (Brown, 1995; Lawton, 1980; Taylor, 1993; Weidemann & Anderson, 1985), the questionnaire used in this study consisted of three parts: (1) demographic characteristics, (2) housing characteristics, and (3) neighborhood and community characteristics.

The questionnaire included five-point scales, checklists, and blanks to be filled in. These items concern a number of domains that are important to the residential housing satisfaction. Both physical and social attributes of residential environment were included in the survey form.

The sample was selected from 2002-2003 Korean Directory of Minnesota. This directory is the only comprehensive listing of Korean people in Minnesota. There are 1,120 entries, and phone contact was considered to find out the age of households. All the people on the list were contacted by a telephone call from the researcher. In the initial telephone contact, the participants were asked if their age was 55 or over and if they were interested in participating in the study. For those who agreed to participate in the study, a mail survey form was sent. After the initial mailing, 57 survey forms were received out of 150, for a 38 percent response rate and 55 were used for this study.

Results and Conclusions

Descriptive statistics were computed on the demographic variables for the respondents. The average duration at current housing was between 10 years and 11 years. About 36 percent of the sample lives in single-family housing compared to 59 percent for multi-family housing residents. The median age was 70 and the average length of residency in the U. S. was about 21 years. Over two thirds (68.2%) of the sample was women and about 60 percent lived alone. Majority of the sample (65%) didn't have any part-time or full-time jobs.

To test the null hypotheses, t-tests were conducted. As results of t-tests, some factors were significant in different groups. In the analysis of the selected measures of satisfaction with housing, only room size was significant. For those who lived longer than 8 years, the mean of satisfaction level with room size was higher. In the analysis of selected measures of satisfaction with neighborhood and community, several variables such as similarity of neighbors, safety, closeness to neighbors, utilization of community services, and accessibility to community services were significant.

Many selected neighborhood and community characteristics were significantly related to the duration at current housing among Korean American elders. Thus, services reflecting diverse needs for minority elders should be considered at the community level.

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PRACTICAL APPLICATION OF CONDUCTING HISTORICAL FIELD RESEARCH IN AFRICA & THE CARIBBEAN Error! Bookmark not defined.

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Purpose

The purpose of this presentation is to discuss the practical application of conducting research outside the boundaries of the United States. The focus of the presentation is (1) to share first-hand experiences in conducting research outside the United States; (2) utilization of interior and exterior space; (3) to identify housing architectural styles found in various sites; and (4) to identify cross-cultural influences represented in the housing styles.

First-hand Experience

Living and working within a culture is an important consideration if the researcher is going to understand and gain a true perspective of a particular culture. We cannot know the relationship between the architecture and social organization without knowing how that specific culture lived in those spaces. If I know nothing of a culture and am placed in it architectural remains, the walls will tell me nothing (Donley-Reid, 1994, p. 14). One of the site locations that the researcher stayed in was the village of Wusuta located in the Northern Volta Region of Ghana, West Africa. This region of Ghana was settled by the Northern Ewes. Farming is their main economic activity. Every Ewe settlement village or town in the Northern Volta Region consists of clans which are the largest residential units of people interrelated by ancestry and marriage (Gavua, 2000, p. 48). The other site location where the researcher lived was on the island of St. Thomas (U.S.V.I.). This island was formally part of the Danish West Indies. The Danish people brought the enslaved people from the Northern Volta Region of Ghana to the Danish West Indies. The ? Big Yards? which are/were located on St. Thomas is where the free colored craftsmen lived.

Research Questions

Research questions to be considered are as follows: What determines the arrangement of buildings in the compounds and the 'Big Yards'? Is there a symbolic way that the compounds/'Big Yards' are arranged? Are social relationships, or geometric order, a major determinant in the placement of buildings? How are interior and exterior spaces used?

Arrangement of buildings

After interviewing tribal Ewe leaders, there appears to be no symbolic way that the compounds are arranged. Layout and design of the compounds has been influenced by family/ethnic group tradition. The arrangement of the 'Big Yard' is determined by the layout of the streets and the city blocks. The families who lived in the Big Yard were not necessarily related. The long row houses of the Big Yard and the compound houses were built in a rectangular pattern around a common large open space. Designs of both the compound and the Big

Yard have been influenced by availability of building materials, skill of laborers, prevailing winds, climate and land available.

Social relationships/utilization of space

Social relationships are key elements in the layout of the internal/exterior space of the compound and the 'Big Yard.' Both societies, African and Caribbean, function as high-context cultures, a theory developed by Edward T. Hall (Hall, 1976). In high-context cultures, moving in harmony with others and with nature is reflected in the social interaction that takes place in both living areas (compound & Big Yard). Other characteristics of the Africans and African/Caribbean societies are strong personal bonds, bending of individual interests for the sake of relationships, and group needs are put before individual needs (Bennett 1999). Influences on the use of exterior and interior space will be discussed in the presentation.

Architectural Features: A Cultural Comparison

As a result of field research the following architectural characteristics were noted between the Big Yard of the Danish West Indies and the Africa compounds studied in the Volta Region of Ghana.

Housing Characteristics/Styles

	Big Yards (Danish West Indies)	Compound (Ghana, West Africa)
Walls:	shingles (mostly) & lap board exposed studs inside mortise & tendon construction	daub (traditional); some have daub with plaster over walls
Roof:	galvanized metal	thatch made of fan palms (traditional); now thatch or galvanized metal
Roof Style:	hip	hip & some hip with gable
Ceilings:	exposed rafters	exposed rafters
Floors:	wood (pitched pine)	compressed red clay (traditional) now clay & wood
Foundations:	rubble	rubble
Windows:	wooden shutters	open or wooden shutters
Doors:	wooden shutters	open or wooden shutters
Shape of Building:	rectangular	rectangular

Implications and Conclusions

What are the implications for housing professionals? The results of historical field research of house can provide a unique way to better understand families and cultures. It provides an effective means for understanding the day-to-day patterns of people. For example, how do people use space? The interior space of both the compound and Big Yard are used mainly for sleeping and storage. What is the meaning of a particular space? How a space is designed and used reflects the socio-cultural norms of a particular society. It can give insight to the economic structure of a given group (Skoll, 1962-63). A group's house style is closely linked to the cultural behavior and symbolic systems of a given society. An example of this can be seen in the African compounds of Ghana. The study of African compounds does provide a unique way to better understand families and cultures from a global perspective.

Application of this information is important to our profession. If we have a better understanding of families from different historical and cultural perspectives, then perhaps we can meet those families' needs better. We need to be able to define family architecture in terms of a given culture. When we study housing, we are in essence studying the make-up of the family. For example, the traditional African compound is based on a highly organized hierarchal social order of the extended family. A culture's architecture is an intimate reflection of the families' beliefs and attitudes, (Anthony, Autumn, 1976, p.6). The application of historical field research as related to housing provides an effective means for understanding the day-to-day patterns of people, how people use space, and the meaning of a particular space (Jackson, 1997).

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A HISTORICAL VIEW OF COOKSTOVES AND RANGES LISTED IN THE SEARS ROEBUCK CATALOG AND SALES CIRCULARS, 1895-2002

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Introduction

Recently, Whirlpool unveiled its newest, most technologically advanced range, the Polara. This appliance, which looks like a range, can cook *and* chill food. The Polara can chill a bottle wine while food is being prepared on the cooktop, or it can be programmed to keep the food cool until it is time to cook a dish (Beatty, 2002). An appliance as complex as the Polara seems almost too futuristic to imagine and it will be many years before it is found in the average American household. Highly technological advances in household appliances do not seem so futuristic when we stop and look at the history of household cookstoves and ranges--from the old wood cookstove to the highly complex, Polara. This look back through history might raise several questions, such as: Was an appliance that we consider "standard" today, once considered "very advanced"? What types of cookstoves/ranges were considered "top of the line" in the early 1900's or in the 1960's? When did electric ranges become prevalent in the average American household? How much did they cost? This research seeks to address these questions.

Purpose

The purpose of this research was to investigate the functional design, availability, and price consideration of cookstoves/ranges listed in the Sears Roebuck Catalog from 1895 to 1992 (the last year Sears Roebuck published their catalog) and ranges listed in Sears Roebuck newspaper sales circulars from 1993 to 2002. The Sears Roebuck catalogs and sales circulars were chosen for this analysis as they are a record of economic and technological household advancements made in the United States in the past 100 years. Chamberlin (1939) states about the Sears Roebuck catalog: "Not only does it show a style was popular during certain years, but the space devoted to it shows exactly how popular it was, for the space has always been allocated on the basis of sales."

Methodology

Data were recorded from each of the Spring-Summer issues of the Sears Roebuck catalogs from 1895 to 1992 and from newspaper sales circulars from various spring issues of 1993 to 2002 newspapers. The Spring-Summer issues were chosen as it was believed to be the issue when new annual models were introduced. The number of models, pages devoted to cookstoves/ranges and prices were recorded.

Results and Discussion

Wood and coal cookstoves were first introduced in the 1895 issue of Sears Roebuck, with nine models ranging in price from $6.25 to $35.25. In 1896, nine

models of gas (gasoline, natural or bottled gas) and oil stoves were introduced that cost between $2.63 and $30.83. One electric stove model was introduced in 1926 for $41.00, but it was not until the 1950's that the number of models of electric ranges substantially increased and edged out the wood, coal and oil ranges. The last oil stove was removed from the catalog in 1967 and the wood stove was removed the following year. After World War II, many new features were added to the gas and electric ranges. The number of gas models advertised was slightly more than the electric since its introduction in 1926, but in 1969 there were more electric models advertised than gas and that trend continues today. In the 1970's and 1980's, the upright model of the electric range was introduced that featured an oven above and below the surface units, some with microwave ovens.

Since 1895 there has been an almost constant increase in the prices of all cookstoves and ranges each year. Generally, prices tended to fall prior to World War I, during the Depression and prior to World War II. In addition, when a new technologically advanced feature was introduced, this would cause a rise in the price of the most expensive model and the following year, a basic model would be advertised at a much lower price. These prices changes can be partially attributed to technological advances and this trend continues today.

Conclusions

Major improvements, changes in design, added convenience features, labor saving devices and price changes in the cookstove/range can be noted through a survey of the Sears Roebuck catalog and sales circulars from 1895 to 2002. By using the Sears Roebuck catalog as a historical tracking device of technological advances, an insight as to what type of cookstove/range was in the typical American home over the last 100 years was possible.

The research will be presented in a poster format, clearly stating major results from the study and pictorial representations from the Sears Roebuck catalogs and circulars.

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The authors would like to thank Nancy E. Fouche' and Susan Harris for their contributions to this research.

TESSIE AGAN AWARD WINNER

HOME ENVIRONMENTS AND ALLERGEN AVOIDANCE PRACTICES IN A HOT, HUMID CLIMATE

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The purpose of the study was to examine home conditions, housing satisfactions, and allergen avoidance practices of people with allergic rhinitis, focusing on female patients who lived in an urban area in a hot, humid climate. The Morris and Winter theory of housing adjustment provides a theoretical base for this study. Nine hypotheses were tested to investigate interrelationships among home conditions, housing satisfaction in terms of health issues, allergen avoidance practices, and age. A sample of 41 female allergy patients aged 20 to 77 years completed a screening questionnaire and an in-depth survey questionnaire. The researcher visited their dwellings to conduct home observations and to take photos.

Dust mite allergens were reported as the most common allergy triggers. Presence of cockroaches, presence of furry pets outdoors, molds in bathrooms, and molds in kitchens were the most common problematic home conditions. Open shelves, bookcases, drapes, horizontal blinds, and foam rubber pillows were the most common allergy related items found in respondents' bedrooms. Concerning health issues, the majority of the respondents were satisfied with their homes. Allergen avoidance practices were not followed regularly, particularly, using allergen-proof pillowcases and sheets, washing bedding in hot water, wearing a particle mask when vacuuming, using an exhaust fan, an air cleaner, a dehumidifier and cockroach traps. The respondents who received suggestions from doctors were more likely to follow allergen avoidance practices than those who did not receive suggestions.

The result shows a significant negative relationship between problematic home conditions and housing satisfaction in terms of health issues. A significant negative relationship between age and allergen avoidance practices was found. Older sufferers were less likely to use allergen-proof products. They also lived in older homes that were more likely to have allergy related conditions. The most common obstacles that prevented respondents from improving their homes in order to avoid allergens were cost of products, emotional attachment to pets, not having time to improve homes, and procrastination. Based on the results, design recommendations, home maintenance recommendations, and lifestyle practice recommendations can be developed.

LIMITED RESOURCE HOUSEHOLDS AND INDOOR AIR QUALITY

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Introduction

Indoor air pollutants do not discriminate on the basis of socio-economic status, but resources to abate them do. Disproportionate exposures to these toxicants in limited resource households have been observed for reasons that are likely related to housing quality and socioeconomic status. Chi and Laquatra (1990) observed that homes in rural areas of New York State with high levels of radon gas are more likely to be inhabited by low income families than by those with adequate resources to mitigate. Reasons for this observation were likely to be the age of these homes and their high number of structural deficiencies which are known radon pathways, including foundation cracks and dirt basement floors. Farr and Dolbeare (1996) reported high levels of lead contamination in homes and apartments occupied by low income households; and Tsongas (1995) observed high levels of carbon monoxide produced by ovens in dwelling units of this population.

Methods

In the current study, a two-stage random sampling procedure was used to obtain a representative sample of households in all 24 nonmetropolitan counties in New York State. The counties were grouped based on their similarity to six housing characteristics and were classified with a hierarchical cluster analysis using average linkage methods (Johnson and Wichern, 2002). One county was randomly sampled from each cluster.

To arrive at a sample of approximately 350 households, weighted random sampling based on population was conducted in each county. The final sample size was n=328. Telephone surveys of the 328 were conducted with an adult head of household to determine demographic and housing characteristics. Each household was given the opportunity to have air quality tests conducted; and 132 households agreed to this. A technician visited the 132 houses during the heating season of 2000-2001 to conduct these tests. Demographic profiles of households in the sample are presented in Table 1.

Table 1. Demographic characteristics of the households in the sample

Characteristic	Minimum	Maximum	Mean	Std. Deviation
Age of household head	22	86	53.61	14.25
Education level	Grade school	Post graduate	Technical or vocational school	---
Household income	< $5,000	> $50,000	$23,900	$9,750.05
Number of children	0	3	.58	.91

Findings

Radon levels were tested with activated carbon canisters in the lowest living area of the house. Carbon monoxide levels were tested with a Bacharach® sample draw carbon monoxide analyzer for 10-15 minutes in the central living area of the houses; within five feet of the central heating system; and in the oven vent at oven start-up and when the oven reached 350°F. The technician made visual tests for asbestos and basement mold. Surface dust sampling, using a gauze pad moistened with distilled water, was used to test for lead on the floor beneath windows. Tables 2 and 3 show results of these tests.

Table 2. Test results

Pollutant	Maximum Exposure Level*	Minimum Observed	Maximum Observed	Mean	Std. Dev.	N
Radon	4 pCi/L	.03 pCi/L	19.70 pCi/L	1.64	2.75	114
Lead	40 ug/ft^2	.04 ug/ft	659.40 ug/ft^2	16.87	70.95	125
CO, central heating	9 ppm	0 ppm	14 ppm	.70	2.36	96
CO, oven start-up spike	100 ppm	0 ppm	1544 ppm	185.75	341.83	126
CO, at oven temperature	25 ppm	0 ppm	213 ppm	18.04	32.2	46
CO, living/family room	9 ppm	0 ppm	14 ppm	.39	1.64	127

*Maximum exposure levels are from the following sources: Radon - U.S. Environmental Protection Agency; Lead - U.S. Environmental Protection Agency; CO in living space - U.S. Environmental Protection Agency; CO oven start-up spike and CO at oven temperature - Tsongas (1995).

Table 3. Visual identification results

Pollutant	Affirmative	Negative	N
Asbestos	20	107	127
Basement mold	11	102	113

Radon levels were regressed on income, the presence of mold in the basement, county, and whether a kitchen exhaust fan was ducted to the outdoors. The presence of mold was used as a proxy for general condition of the basement, county as a location indicator, and exhaust fan as a house depressurization indicator. Results from the radon regression are presented in Table 4.

Table 4. Regression of radon levels

Variable	Coefficient	Std. Error	Std Beta	t	p
Constant	7.054	2.351		3.001	.005
Income	-.581	.228	-.394	-2.555	.015
Mold	-1.388	1.555	-.138	-.893	.378
County	-.003	.298	.020	.126	.900
Fan	-.585	.701	-.132	.835	.409

R^2= .167

The significant and negative relationship between household income and radon is likely due to lower quality housing among lower income groups and housing deficiencies that create radon pathways. General structural condition of the homes was rated by the technician and was seen to have a significant and negative relationship with income (r= -.27, p=.004). To avoid collinearity problems, this variable was not included in the regression. Regressions with carbon monoxide and lead levels, using independent variables related to age and condition of the house, did not show this relationship. This may be due to the small number of homes (7) with lead in floor dust above the U.S. Environmental Protection Agency's maximum allowable level of 40 ug/ft^2. However, a significant and negative correlation between income and carbon monoxide level at oven temperature was observed (r= -.402; p=.01).

Conclusions

The findings reported in this paper contribute to the growing discussion about indoor air quality in limited resource households. Health officials and policy makers agree that indoor air pollutants pose serious health risks. But the fact that pollutant mitigation in privately owned homes remains a personal responsibility creates a policy dilemma. Rural areas of New York State have been characterized for years as being in a state of economic decline, which has negative impacts on household income and housing quality (Ziebarth, Prochaska-Cue, and Shrewsbury, 1997). For low income households, resources for pollutant abatement are nonexistent. A companion study currently underway at Cornell University is examining the effectiveness of teaching this population, through peer educators, practical strategies to minimize their risks of exposure to indoor air pollutants. This model may prove to be useful at addressing issues raised by this study.

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PRACTITIONER-FRIENDLY RESEARCH FINDINGS: THE INCEPTION AND DEVELOPMENT OF INFORMEDESIGN-- A CLEARINGHOUSE FOR DESIGN AND HUMAN BEHAVIOR RESEARCH

Caren S. Martin, Denise A. Guerin & Lou Bunker-Hellmich
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Development on a groundbreaking endeavor that will revolutionize the way interior designers create solutions is currently underway. InformeDesign, the only centralized clearinghouse for design and human behavior research will be launched in Fall, 2002 as an on-line Internet Web site. It is a collaboration between the University of Minnesota and the American Society of Interior Designers (ASID). The purpose of this presentation is to describe the mission, objectives, and deliverables of InformeDesign.

Abstract knowledge is developed through research that adds to the body of knowledge of a profession. To enhance and grow interior design's body of knowledge, information sharing between practitioners, researchers, educators, code officials, clients, and industry partners must be more encompassing and continuous. The mission of InformeDesign is to facilitate interior designers' use of current, research-based information as a decision-making tool in the design process, thereby integrating research and practice, improving the quality of design solutions, and enhancing the public's health, safety, and welfare.

InformeDesign's mission will be achieved through the identification, evaluation, interpretation, and dissemination of research-based design criteria in a way that is free and accessible to all. Specifically, InformeDesign's objectives are to:

- Identify and gather research that pertains to the design of the built environment.
- Evaluate the quality and appropriateness of the research.
- Interpret applicable research into design criteria.
- Develop a searchable database of research-based design criteria.
- Disseminate research findings in a practitioner-friendly way for use in the creation of research-based design solutions.
- Develop venues for communication to facilitate sharing of information between all entities and individuals involved with the design of the built environment and/or the study of human behavior in the built environment.
- Educate all parties regarding the important role, use, and application of research.
- Facilitate the identification, development, and funding of research regarding design and human behavior.

The cornerstone of InformeDesign is a searchable database that powers the retrieval of research summaries that contain interpreted research-based design criteria through full-text and keyword searches. Additional research-related deliverables of the site are a monthly newsletter; calendar of research events with hyperlinks to the originators; a speakers and trainers bureau; glossary of

terms; and a multitude of communication linkages, such as threaded discussions and postings of readers' commentaries.

ASID is the founding sponsor of InformeDesign, providing a $1.18 million grant for funding through September 30, 2005 in response to a proposal by co-principal investigators Denise A. Guerin, Ph.D., and Caren S. Martin, Ph.D. Additional funds will come from ASID Industry Partners and architectural and design firms. Beginning late 2003, planning will take place to examine an extension of the original funding period under the direction of InformeDesign's Advisory Board.

The Advisory Board is being assembled to advise on goals, strategic direction, potential research topics, and the operation of InformeDesign. Leaders and visionaries from the design community and Industry Partners are being nominated for this prestigious board.

InformeDesign is also working in consultation with a Technical Review Board (TRB) made up of design and human behavior researchers and interior design practitioners. The TRB collaborates with InformeDesign to ensure that the content that populates the Web site supports the goals and objectives of InformeDesign. The TRB members are responsible for reviewing InformeDesign's protocols and processes regarding the selection of sources and literature, the content of other deliverables, and feedback regarding the navigation of the Web site.

With guidance from the TRB it was determined that for the first active year of the Web site, only literature from refereed journals will be summarized. Currently, we are reviewing literature from 1995 to the present day.

InformeDesign has implemented three approaches to selecting appropriate journals. First, a search was undertaken using the University of Minnesota library system's *Lumina: Digital Library Gateway* to identify sources that include research on issues about the design of the built and natural environments and their effect on human behavior. The source list generated from this search is meant to be inclusive and support the far-reaching practice of design professionals. Second, many authors' reference lists present additional sources appropriate for inclusion. Third, InformeDesign welcomes suggestions for appropriate additions to the source list from researchers and practitioners.

There are two distinct protocols for searching for literature appropriate for inclusion in the searchable database. By-hand, in-person searches are conducted of bound journals and original literature collected from the library system. The other method is an electronic search using *Lumina* search engines and indexes. Currently, hand searches are preferable, as often the topics pertinent to interior designers are not typically identified as keywords by the author or publisher, and therefore using a keyword search bypasses much useful literature. However, in cases where the sheer quantity of literature precludes a hand-search, an electronic keyword search is appropriate.

Literature is deemed suitable for inclusion based on its usefulness to the audiences that will frequent the Web site, primarily interior designers and architects. Literature included for review must relate to some aspect of human behavior and the design of the built environment; provide knowledge that informs

future design decisions; provide knowledge that supports or enhances life, health, safety, and welfare; and represents primary research.

InformeDesign will be an important source of transformed knowledge. When reading and analyzing the original literature, InformeDesign staff members identify findings, consider their implications, review the research methods and limitations of the study, communicate design criteria identified by the authors, and transform key concepts from the research into additional research-based design criteria.

InformeDesign will give interior designers and related professionals access to research never before available in practitioner-friendly language. It will benefit clients, industry, educators, students, researchers, designers in related fields, code officials, legislators, and the public at large. Housing educators and students can access this database for their research on the built environment and human behavior; educators can also become contributors to the content of the Web site. In the end, all users of InformeDesign's Web site will become more informed design decision-makers.

HOUSING CHOICES AND CONNECTIONS

Joan R. McFadden
Ball State University

A housing choice requires a decision-making process that utilizes many factors. Cost, space, and proximity to some desirable resource are some of the factors that often influence the housing decision. What percent of the population moves in any one year, or at a specific time in their lives, such as at retirement, has also been the subject of much research. Lifestyle changes that are concomitant with a housing change are the focus of this housing research.

Since the housing market is one of the important stimulators of the national economy, factors that influence a move are important to community development for both economic, community building and community connectedness reasons. In the context of this research, community building is defined as understanding and promoting community capacity, while connectedness is defined as bringing the local communities into contact with the wider society. The continued value of the "age in place" syndrome that has been so prevalent in the past will be reviewed.

Review of Related Literature

The notion of community capacity building has been addressed in a broad range of contemporary community development efforts and activities (Chaskin, 2001). Network structures connecting governments, the private sector, and nonprofit organizations have become increasingly common as one means of community building (Mandell, 2001). Substantial effort and funds have been invested in trying to get a larger audience to buy into the community building concepts (Olney, 2001). According to Francisco, Fawcett, Schultz, Berkowitz, et.al. (2001), even modern technology like an internet-based support system has been used to promote and build community capacity. This capacity building endeavor has been undertaken in a variety of socioeconomic communities, according to Tria (1999) including impoverished ones described by Cohen and Phillips (1997).

Garbarine (2000) discussed the challenge of attracting and retaining middle-income households in cities. She reported on a project undertaken by the state of New Jersey to enlist public colleges and universities as partners in this endeavor. With large land holdings, these employers were urged to develop incentives to encourage their faculty and staff to become residents of the community. One of these incentives was an appropriation by the State legislature that would make $10,000 available in down-payment assistance to full-time faculty or staff members from the participating colleges and universities. The faculty and staff participants in this program could use the money to buy one- and two-family homes as well as condominiums, priced up to $240,000, in designated areas.

Along with the potential positive outcomes of the promotion of community connectedness, comes the potential for exploitation by the unscrupulous. Some evidence exists as brought forth in reviews by both Gudorf (1999) and

Rabrenovic (2000) of John F. Freie's 1947 classic, *Counterfeit Community: The Exploitation of Our Longings for Connectedness*.

To pursue answers to question related to community connectedness as one of the factors weighed by individuals and families who have recently moved, residents of a new condominium complex were asked why they chose this new housing option, what factors had influenced their decision to move, and what lifestyle changes, including community connections, have resulted from the move.

Purpose

The purpose of this study was to determine why residents of a new condominium complex had decided to move to this housing complex and what lifestyle changes and connections had resulted from the move.

Objectives

There were two primary objectives in this study. The first was to determine the factors that were the most important in the decision to move to the new condominium. The second objective was to identify lifestyle changes that resulted from the move.

Methodology

Residents were invited to participate by completing a questionnaire. The questions on the survey were open ended; no response choices were provided. A follow-up interview was scheduled and conducted if invited by the resident. All of the residents in the currently completed 80-unit complex were invited to participate.

Results

Residents of 66 units, or 83% of the residents participated. Follow-up interviews occurred with three participants who wished to explain a response s/he made to one of the questions on the survey. Of the residents who participated, 76% are retired, while 24% are employed; 63% are married; of the 37% who are single, 12% are widowed, 10% are divorced, and 15% have never married. The mean age of the residents who responded to the age question, is 67 years.

Results: Factors that influenced the decision to move included two types, housing related reasons and personal reasons. Table 1 presents the most frequently cited responses.

Table 1. Reasons residents of condominium complex chose this housing option.

Housing Reasons	Frequency	Percent
No exterior maintenance	64	97%
Contemporary, accessible housing design	52	79%
Cost reasonable	48	73%
Reasonable condominium fees	35	53%

Personal Reasons	Frequency	Percent
Travel without need for lawn care or snow removal	60	91%
More time to pursue personal goals	43	65%
Security	23	35%
Close proximity to previous residence	21	32%
Population density minimal	14	21%

Housing related reasons were explained as follows:

1. Contemporary, accessible housing design
2. Cost of condominium similar to or less than value of previous home
3. No exterior maintenance required (exterior structure maintained; snow removal; lawn care; leaf removal; and shrub trimming and maintenance are provided.)
4. Reasonable condominium fees

Personal choice reasons were explained thusly:

5. Small (one or two person) families
6. Security (gated community)
7. Close proximity to previous residence.
8. Time to use as they pleased
9. Extended travel is easily possible without the need to plans for lawn care or snow removal

Open ended questions asked residents who participated in this study to identify lifestyle changes they have made since the move to the condominium. The two most frequently cited responses were more contact with my neighbors and participation in the Condominium Homeowners Association's activities. This participation brings with it new friendships and closer association with other residents. This is manifestation of a greater sense of community.

The survey included a paragraph that briefly described community capacity building and it then ask the respondents to indicate if they were familiar with the concept. If so, how had they learned or used the concept and what did they think of the condominium complex's potential to develop the capacity to serve the community in a variety of ways. Most of the respondents indicated that they were not familiar with the concept of community capacity building, but from the description included with the survey they thought the residents of the condominium complex had the potential to develop substantial capacity.

Conclusions and Implications

Studies in the 1970s reported as few as five percent of the population moves at retirement (Newman, 1979) and studies in the early 2000s reported as many as 20% of the population moves at retirement, but research is inadequate to say with certainty that the number of movers will continue to increase. This study of movers was undertaken to determine what factors related to the new housing, motivated their move; and, what lifestyle changes have resulted from the move.

Results showed that the move to new housing had caused changes in their lifestyle to more group and neighbor activities, without the drudgery work in the

yard or exterior housing maintenance. They had increased their connectedness with their neighbors through functions organized by residents in the community and held at the clubhouse.

Most of the respondents indicated that they were not familiar with the concept of community capacity building, but from the description included with the survey they thought their condominium complex had the potential to develop substantial capacity. Examples of community service cited by respondents included: service at the food pantry; driving meals-on- wheels, Red-Cross volunteer, and children's literacy assistance.

This condominium community would be an ideal place to explore (or perhaps experiment with) ways to build capacity and observe the outcome. Would the residents reach a maximum level of commitment and cease to volunteer beyond this level of participation? Or, would the capacity grow and continue to develop with new residents quickly pulled in to participate in these group valued commitments? Other studies indicate that the leadership within the group and the dynamics within the group have an important impact on the outcome.

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THROUGH A CHILD'S EYES: COMMUNITY MAPPING IN NORTHEAST DETROIT

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Introduction

The children of today will one day be entrusted with the nation's economic, political, and social institutions, and with the continued vitality of their society. This is a critical issue for all children but urban children, in particular, face many barriers as they prepare for this role amid accelerating change. Urban children often live in communities that record high rates of poverty and crime, poor housing conditions, overcrowded schools, and negative health issues such as increased incidences of lead-based paint poisoning. Families need assistance in finding supportive activities and resources that will enhance the well being of their children. At the same time, policy makers need to receive information from the standpoint of children and their parents/guardians so they can develop an agenda focusing on these all-important children's issues.

This project focuses on the northeast sector of Detroit, a densely populated area that records high rates of children's poverty, crime, and negative health issues such as high instances of lead-based paint poisoning; poor housing conditions; high percentage of single-parent families; no recreational facilities; and overcrowded schools. The investigation deviates from what has been done in the past by building a community profile from a child's perspective. The first step in this process was to construct a comprehensive information base that included collecting and mapping various demographic data reported on children and families. Second, representatives from community agencies/organizations were interviewed regarding their perceptions of community in regard to children and families. Third, focus groups comprised of youth ages 10 – 14 were conducted that asked a series of questions addressing safety, housing, social, physical, health, recreation, and community development issues. Finally, youth were given cameras and asked to take photographs highlighting the positive and negative factors of their neighborhood.

Data and Method

This investigation is the first step of what will be a larger study focusing on various neighborhoods throughout the City of Detroit. Quantitative data were gathered to build a comprehensive information base. These data included, but were not limited to, poverty rates of children, single heads of household, educational attainment, density, rates of automobile ownership, percentage of children participating in free/reduced school meals, immunization rates, lead poisoning rates, infant/child mortality statistics, and housing information. Once this base was in place, representatives from community agencies/organizations, faith-based institutions, and neighborhood associations were interviewed as to their perceptions of neighborhood and community.

The Front Porch, a community-based organization working with children on the northeast side of Detroit, recruited focus group participants. Youth ages 10 –

14 years participated in the discussion and were asked to address a number of issues. These included safety (can you leave your bike outside without it getting stolen?), health (how often do you see the doctor and dentist?), social (do grown-ups care about kids in this neighborhood?), recreation (is there a place around here you can play a game of football on grass?) and general topics (if you were the mayor, what would you do to this neighborhood?). The youth continue to participate in other ways, for example, speaking at a "Kids' Speak out" sponsored by the Mayor of Detroit. Qualitative data are gathered at these presentations to supplement that collected during the focus groups.

The youth also administered surveys to their parents/guardians. Samples of questions asked of parents/guardians included why they had selected to live in this neighborhood, what they liked and disliked about the area, what about the neighborhood would they change for their children, what safety issues needed to be addressed, the social context of their neighborhood (how many people they knew, who they could turn to for help, etc.), what recreational facilities were available for their children and their perception of the neighborhood in general.

Finally, the youth were given disposable cameras to take photographs of their neighborhood. Once developed, they were given the opportunity to discuss each photo and to explain what it represented.

Preliminary Findings

Nine youth participated in the focus groups, conducted interviews of their parents/guardians, and took photographs of their neighborhood. Preliminary responses indicate the following:

Adults

- Their street is quiet and the homes are well-kept
- At the same time, they reported hearing shooting and witnessing violence
- They would like to reduce traffic flow because of concern for children playing in the street
- They generally feel safe in the neighborhood but not walking around at night
- They want recreational resources for their children (parks, access to swimming pools, and basketball courts, green space, etc).

Youth

- Are concerned about the number of abandoned cars and the trash in the neighborhood
- Want access to more recreational facilities and suggested strategies to obtain these resources
- Feel generally safe in their neighborhood but were able to recount witnessing violence, including gun violence
- Have a clear understanding of safety zones in their neighborhoods and respect the boundaries set by their parents/guardians
- Are concerned about the number of stray dogs, "Wilma" in particular

As work continues on this project, a profile will be developed that outlines the demographic characteristics of the area, the community institutions in place, and the sense of community as expressed by the youth and their parents/guardians. Strategies for change and improvement as outlined by participants will be incorporated into the profile. Finally, a short issue brief will be developed with input from the youth. The report will be forwarded to the Mayor and City Council as part of the call to action outlined by a new administration seeking information about community development from neighborhood residents.

HOUSING POLICY:
WHEN SPECIAL NEEDS AUDIENCES TALK ABOUT HOUSING

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Rationale and Purpose

The opinion polls, commissioned by the National Housing Institute and other developments, led in part to the 1990 Cranston-Gonzalez Housing Affordability Act. While this Act reinforced "providing decent, safe and affordable housing for every American family" established in the National Housing Goal set by Congress in 1949, the role of the Federal Government changed with the state governments passing on federal funds to localities and monitoring local compliance with program requirements. How have these changes and resulting policies and regulations played out at the local level?

According to Ziebarth, Prochaska-Cue and Shrewsbury (1995, p 3), "housing policy failed to address the differences among small communities and the ways in which local characteristics impact the coordination and implementation of housing policies." They concluded "it is of critical importance that policy decisions be informed by research-based information conducted at the community level" (Ziebarth, et. al., 1995, p.19). Their work focused on small towns and the impact of federal housing policies in local situations. This work focuses on the impact of housing policies and regulations on members of special needs audiences at the local level.

The purpose of this research is to identify ways in which federal, state and local housing and service related policies and regulations influence special needs audiences and the housing available to them at the local level. The 18 focus groups, structured according to qualitative research design (Creswell, 1998, Mertens, 1998), involved two-hour interviews with 201 representatives of nine special needs audiences and then with housing and service related providers who worked with at one of the audiences. The nine audiences were persons who were Native American Indian; migrant workers; homeless and near homeless; physically, mentally and developmentally disabled; older; had HIV/AIDS or took part in Temporary Assistance to Needy Families (TANF).

Methodology and Procedures

Snowball sampling was used to select members of 13 of the focus groups and convenience samples used for 5 focus groups. The mean group size was 11.1 with 73 males (36%) and 128 females (64%). The nine sites were selected according to the Department Economic Development Service Areas.

The 651 pages of data were analyzed using open, axial, and selective coding. The axial coding resulted in themes. The selective coding helped identify 30 core and subsidiary categories. Initial policy issues were reviewed in each category of data and summarized.

A second method of data analysis used further defined underlying policy issues. The *Non-numerical Unstructured Data Indexing, Searching and Theorizing Program* connects codes to develop higher-order classifications and

categories (Mertens, 1998). This program allowed testing of initial results to either confirm or discard categories and assertions.

The final housing and service categories selected included: regulatory, housing and service programs, communication/coordination, adequate safe conditions, market and availability, affordability, educational needs, location/transportation, and health related programs. The categories were further analyzed using NUD*IST to identify any housing policy and regulatory issues at the local, state and federal levels and how the policies and regulations played out for participants.

Preliminary Results

Various housing policies and regulations were identified as inhibiting the participants in securing decent, safe, affordable and appropriate housing. A brief discussion and examples follow.

For some participants, policies and regulations related to <u>income</u> limitations and savings served as a barrier to obtaining individual apartments, and to saving down payments or security deposits to move to different housing. Participants who were developmentally disabled felt they were "penalized by the lost of Medicaid eligibility when we start working." The Social Security procedures result in failure to withhold payments in a timely manner. The result often is the disabled have to back pay the SS to the date of employment and "they can't afford to live."

<u>Market rates</u> were identified as an issue. For example, "The Fair Market Rates are way too low for XXX County. It's even hard to find trailer houses – the lot rent is $175 per month."

<u>Housing code</u> enforcement varied. Codes appeared to be unevenly enforced. One illustration is: "Larger agencies get held to more stringent compliance (ADA compliance) than the smaller ones. Any building we've done has to go through major inspections and all drawings have to go through before any of this is approved out." Another illustration is: "They don't have to have anybody come in and inspect it because the owner's technically doing the remodel and that can involve a lot of the rental properties. So it's a matter of the codes, if it's a reconstruction, there's a different code than for new construction."

Regulations affected the <u>structural modifications</u> in their housing. "Sometimes laws are restrictive. . . . it would have been more cost effective to doze off the laundry room, build a little addition and been done with it. It would have been way cheaper, way quicker. And we still don't have a solution."

<u>Health related services</u> are an issue for these participants. "…with home health not being able to go as many places as they once could because of regulations. . . . I often wonder how much need there is that's not being met."

<u>Location and transportation</u> impact where an individual may be able to live. "The antiquated laws on transportation and how public transportation is accessed are like squares… there needs to be major changes in the laws . . ." Another indicated that "chore providers can take them to doctors offices and to drugstores but not to buy underwear and you have to travel so many miles or be

gone more than one hour in order for the chore provider to be paid. These regulations are disincentives."

In addition to other concerns, participants indicated overall concern with housing policies and regulations. "Sometimes the laws prohibit, instead of helping, they are prohibiting programs." "There are disincentives for the individual that cut them out of opportunities for appropriate housing." "It's a self-fulfilling prophecy. Because once you get in the circle, it's hard to get out . . . then you have no assistance at all and therefore it affects your housing."

Conclusions and Implications

The regulations and policies meant to assist in solving housing problems and issues sometimes led to unintended consequences and serendipitous outcomes that served as a barrier to resolving housing problems and to obtaining the housing or services needed by some participants. The policy or regulation meant to be a solution to achieve safe, secure affordable housing may be in conflict with or inhibit other policies and regulations.

Given the volume of housing regulations and policies, it may be well advised to pilot test policies with special needs audiences prior to full implementation and to conduct follow-up evaluation.

Focus groups data represent only the persons participating in that focus group and cannot be applied to the population in general. Further research using a random sample of special needs participant is needed focusing on the impact of specific housing and service policies and regulations.

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RESIDENTIAL DESIGN AND HOUSING RESEARCH: RECOMMENDATIONS FROM THE VIRGINIA TECH KITCHEN STUDY

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Residential designers have a unique task: designing a stage for people's lives. The successful designer must know how the space will be used, who will use it, and what they will have in the space. In addition, the residential designer must understand the emotional aspect of the living space.

A home is an intimate and personal space. Unfortunately, many residential designers do not have the luxury of designing for a specific client. The designer, therefore, needs to access a variety of information sources to understand the requirements for residential spaces. One source is housing research that investigates how people use residential space, what they keep in those spaces, and their dreams and desires for the design of their home.

The Center for Real Life Kitchen Design at Virginia Tech recently completed a major housing study focusing on kitchens. The kitchen is well recognized, in housing literature as well as the popular press, as the center of household activity, and is a critical area of concern for residential designers. The Virginia Tech kitchen study, with support from the National Kitchen and Bath Association (NKBA), was a comprehensive examination of American households to determine what kitchens in today's homes are like and what activities are being carried out in them. Results of the study are now being used to evaluate the design standards used in the kitchen industry[1]. The focus of this paper will be a summary of the recommendations from the study, which are a call for rethinking some of the current practice and guidelines for kitchen design.

Description of Study

The kitchen research was a multi-stage study.

- A content analysis of articles (n=104) in shelter magazines (n=19) was used to gather information about kitchens and to aid in the design of subsequent stages of the study.
- A comprehensive personal interview was conducted with a purposive sample (n=78) selected to reflect diversity based on household type, size, and age. The interview asked about the participant's household, food preparation and shopping patterns, as well as storage, counter space, and appliances in their present kitchen.
- The same interview sample participated in a videotaped cooking activity, using three different kitchens in the Center for Real Life Kitchen Design and preparing five different menus. Videotapes were analyzed for kitchen use patterns.
- A national telephone survey (n=630, 54.5% response, 95% level of confidence with a $\pm$3.9% error) investigated patterns of kitchen use and adequacy of storage and design.

The demographic characteristics of both samples were similar. About three-fourths of the respondents were female, homeowners, and living in single-family homes. Most respondents were 30 to 60 years old. The majority lived in small

households (less than four people), with families and adult couples being the most common type.

Findings

Detailed findings of the study have been presented to both the kitchen industry (Emmel, Beamish, & Parrott, 2001) and academia (Parrott, Emmel, & Beamish, 2001)[2] and are under review for publication. Among the key findings are:

- Participants reported cooking on a regular and frequent basis; about three-fourths of participants cooked five or more times per week.
- One person typically was responsible for the cooking, although other people were often in the kitchen at the same time. Many activities, including social, household management, and recreation, occurred in the kitchen.
- Single households consistently used their kitchens less than other household types. Few differences were found in households with elderly members.
- Counters were used for storage, including four or more small appliances.
- Many cooks had trouble reaching into upper cabinets, or bending to reach items in lower cabinets
- Better, more accessible, and more efficient storage was a commonly expressed need.

<u>Design Recommendations</u>

A comprehensive review of the data led to a series of recommendations for the design of kitchens and for updating current kitchen industry design standards.

- Kitchens need to offer flexibility to adapt to different users. Different types of households and cooks have differing needs for space, storage, and layout.
- The conventional arrangement of base and wall cabinets is not adequately meeting many people's needs for quantity and accessibility of storage. Reach and access to cabinets is a problem. Creative solutions are needed that incorporate: 1) alternatives to wall cabinets; 2) use of pantry (tall cabinet) storage; 3) storage organizing devices; and 4) greater use of the space between countertops and wall cabinets.
- The amount and arrangement of counter space needs to be evaluated. In particular, there is a need for two preparation areas with water sources in kitchens, even for one cook. Adequate counter space adjacent to both the primary sink and microwave is needed for food preparation. The number and variety of items stored on kitchen counters needs to be considered in planning total space.
- There is often more than one person in the kitchen. If two people are cooking, separate preparation areas and water sources are needed. In many households, especially with children, larger preparation areas are needed to accommodate a teacher/student model of cooking.

- Additional people in the kitchen may be engaged in non-food activities. Many of these activities require seating space.
- The microwave oven is a major cooking appliance and its placement needs careful consideration. In many households, it should be the cooking center point in the work triangle.
- Placement and accessibility of the trash needs to be deliberately planned, and near the primary sink appears the most efficient. Collection space for recyclables is a separate function.
- Multiple and/or flexible counter heights is desirable, with careful consideration as to functional placement.

Conclusion

Guidelines for kitchen design should reflect how people want to use their kitchens. The kitchen is a place for serious and frequent cooking as well as many other household activities. People keep many items in their kitchen and want a spacious, well-designed, efficient, and functional space. The findings and recommendations from this study offer the residential designer a wealth of information and ideas to design a kitchen space that is supportive of the desired lifestyle of many Americans.

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Footnotes

[1] The current kitchen industry design standards are detailed in: Cheever, E. M. (1992). *Kitchen planning and safety standards: Kitchen industry technical manuals, Volume 4.* Hackettstown, NJ: National Kitchen and Bath Association.

[2] A publication, *Someone's In the Kitchen…* is available from the Center for Real Life Kitchen Design, and reports a summary of the full study. For further information, contact the Center at CKRLD@vt.edu.

THE STATE OF WORKFORCE HOUSING IN GEORGIA: METHODOLOGY AND FINDINGS

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Introduction

Economic development has been a major topic of concern, especially in states with predominately rural populations. One of the major barriers has been thought to be the lack of affordable housing for the workforce being recruited. However, there is often a lack of primary data or models to support these assumptions. This paper presents a methodology for the study of workforce housing in Georgia. Housing professionals can play a crucial role in finding out what the important indicators are at the state and local levels and be active members of the policymaking process.

Primary data were collected from three groups of people: discussions at 12 Town Hall meetings open to the public, an online survey of the Georgia Economic Developers Association (GEDA) designed to assess opinions regarding the importance of the supply of workforce housing to industry location and/or expansion decisions, and a survey of employees in three selected industries designed to assess the impact of housing availability on employment and commuting decisions. This research coupled with secondary data formed the methods for the study.

Findings

All of the components of the study suggest that there is a significant resource mismatch in what is commonly referred to as workforce housing in rural Georgia. These findings are significant because as previous researchers have noted, housing can both be a result of increased economic vitality and a producer of economic growth (Strauss & Toney, 2000-2001). Typically, economic development plans have usually focused success on simply increasing the number of jobs created, rather than taking a more holistic approach to community development (Carroll & Stanfield, 2001). At the Town Hall meetings, participants indicated that a large percentage of teachers and upper management employed by industry do not reside in the county of their employment. The infrastructure and land needed in many communities to support housing development or redevelopment does not exist or is inadequate. Additionally, because profit margins are low and the market size is limited, developers have insufficient incentives to build workforce housing. Though manufactured housing is and will continue to be an important part of the affordable housing equation in rural Georgia, there was some resistance to adding manufactured housing units locally. One-half of participants in the Town Hall meetings believed their community lacked a supply of affordable, quality housing sufficient to attract new industry. The meeting participants also suggested that the most critical housing needs in their communities were: an increase in the supply of starter single-

family homes; an increase in the supply of rental housing units; an increase in the supply of housing suitable for elderly persons; and an increase in the quality of existing housing. The most commonly suggested ways the state could help with the housing problem were to provide incentives to builders and developers to build affordable housing, provide education and outreach to community leaders and officials as well as to homebuyers and to provide financial assistance to homebuyers.

Employee surveys revealed that the annual household incomes of employees from all three companies were at or below the state median income. One-half of the employees surveyed reported a total annual income of less than $24,000. Employees working for companies offering the lowest wages commuted the farthest to their place of employment and the majority of employees drive their own cars to work while the highest paid employees were more likely to own their own homes than to rent and preferred single-family detached housing. Surprisingly, employees expressed a higher than expected level of dissatisfaction with their housing. Traditionally, housing satisfaction studies have found that most people say they are satisfied with their housing regardless of the true condition of the structure. Thirty-five percent of employees from the first company surveyed, 24% of employees from the second company, and 9% of the employees from the third company reported that they were not satisfied with their present housing situation. It is important to note, however, that the workforce of the third company had a high proportion of recent immigrants who have very poor housing experiences and therefore lower expectations. In general, employees were very mobile as 24% of all employees surveyed planned to move within the next year. However, an overwhelming percentage (86%) of surveyed workers indicated that they had no knowledge of housing-related government assistance programs.

Members of the Georgia Economic Developers Association (GEDA) also had definite opinions regarding workforce housing in the state. Forty percent indicated that workforce housing was a major selling point for attracting new industry to their community, 28% said that it would have little effect in attracting new industry and 24% said it will be a major roadblock. The most commonly cited barrier in the development of workforce housing was the availability of creditworthy homebuyers, though the cost and availability of land were seen as both a barrier and an incentive by many respondents. Almost 65% of respondents said there were not enough single-family houses for rent in their community. The supply of starter homes was also seen as inadequate and more than 40% of survey respondents said the supply of migrant housing, adaptive reuse, and duplexes and multi-family complexes were lacking. Overall, the top three incentives that GEDA members thought could promote workforce housing in their community were loan guarantees/payment assistance, providing for streets or sewers for developments, and public grants and donated land.

Summary

This paper shows how researchers from one state developed a methodology using primary and secondary data to study workforce housing. This project has

given housing researchers increased visability with policy makers and local officials. One outstanding finding was the overall lack of knowledge of existing government housing programs. How can these programs help people in need if they do not know they exist? Housing professionals can play an important role in continuing to educate consumers, local officials and intermediaries about what is presently available. Housing educators can have a valuable place at the table.

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DESIGN INTERVENTIONS IN A NURSING HOME:
DO THEY MAKE A DIFFERENCE IN THIS HOUSING OPTION?

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As the last housing option for frail elderly, nursing homes are notorious for being dreaded places. Hence, researchers must ask, can design interventions induce desirable outcomes in residents with dementia, their families and staff? A research study was conducted before and after a substantial renovation project at a midwestern nursing home. This nursing home promised a unique opportunity for a comprehensive, systematic study of how design interventions affect residents.

The project offered several strengths. First, because members of the research team served as consultants in the design process, their design objectives and concepts served as hypotheses were tested in a post-occupancy evaluation to better understand how the various users actually responded to what was designed. Second, despite the relocation of some residents and staff to the new environment, other residents and staff remained in the existing setting, although some residents changed rooms in the existing units. This provided a comparison of those residents who did and did not experience the new environmental changes, which would facilitate the identification of the environmental impact. Third, the project focused on both aggregate-level and individual-level outcomes of the environmental intervention, whereas prior studies had not analyzed individual-level change in detail (Lemke and Moos, 1989).

The renovation consisted of two phases. During phase one, the addition of a new wing of 20 units on two floors changed the traditional double-loaded corridor nursing home to the footprint of a "T" formation. (See floor plans.) After completion of this phase, residents were moved to the new wing. Phase two consisted of renovation to the existing facility. Renovations included:

- New space planning and finishes; carpet replaced vinyl composition tile
- New parabolic louvered lighting fixtures with improved CRI
- Central dining room was replaced with smaller "households" dining and activity rooms
- Central nurses' station was replaced with an aviary; nurses' office space was incorporated in each household

Methods

Utilizing an interdisciplinary approach (Achenbaum, 1995), the team included researchers from the health sciences, social and behavioral sciences, and design. They assessed individual resident and family outcomes in two groups. As a pre-test and post-test, 20 residents assigned to the new wings (Treatment Group) were compared both pre- and post- relocation with 20 residents remaining in the existing units (Control Group). The pre-construction data provided a baseline for assessing some of the individual outcomes.

The Professional Environmental Assessment Protocol (PEAP), based on eight attributes of environmental experience and verified by its developers at the University of Wisconsin-Milwaukee (Wiseman, et. al, 1996), was used to conduct focused evaluation of the facility before and after environmental modifications. The PEAP was administered by a design researcher on site.

A second method, behavioral mapping, addressed questions: how were the spaces utilized? How many people used them? Who were the users? What were the patterns of activities? The different spaces included the nurses' station area, activity room, dining room, kitchen, and hallways. User groups included residents, staff and administrators. The behavioral mapping study, which involved direct observations of spaces in a systematic way, was the primary method to gather data to answer the research questions that pertained to the physical environment of the facility.

Results

PEAP scores were:

Environmental Attribute	Pre-Renovate Score	Post-Renovate Score
Maximize Awareness and Orientation	3	5
Maximize Safety and Security	3	4
Provision of Privacy	3	5
Regulation of Stimulation	3	4
Quality of Stimulation	3	4
Support Functional Abilities	2	3
Opportunities of Personal Control	2	3
Continuity of Self	2	3
Facilitation of Social Contact	3	5

The newly constructed cluster scored higher in all eight dimensions of the instrument compared with the scores of the facility before renovation. The dimensions of *maximize awareness and orientation, provision of privacy,* and *facilitation of social contact* had the highest variation in the pre- and post-renovation PEAP scores. Score difference in the *privacy* dimension can be explained by the fact that the majority of the residents' rooms in the new cluster were single-occupancy, whereas the majority of the residents' rooms in the pre-renovation facility were double occupancy. The score difference in *facilitation of social contact* can be attributed to the cluster floor layout that allowed direct visual and physical access to the activity area from the residents' rooms. This centrality of the living area and adjacent dining area also impacted the two-point variation in the PEAP dimension of *maximize awareness and orientation*. Residents' rooms surround the new common living/activity space in each cluster. This arrangement increases the potential of utilization by the residents compared with the location of the activity space before the renovation, which was far from the residents' rooms.

Behavioral mapping results of post renovation data indicated that the number of residents who were using the first floor activity space declined, as they were

spending more time in the new common living/activity spaces within the new clusters on both floors. Post-renovation activities were offered in the large activity room as well as the activity spaces in the clusters. Active engagement was slightly increased in the new cluster activity spaces.

Mapping indicated preferences and use patterns in the smaller less-institutionalized dining rooms. There were fewer incidents of disruptive and agitated behaviors in the new dining areas than in the larger dining space that served the residents prior to the renovation. The number of residents that were served in the new dining spaces was 8-10 compared with the 25-30 residents who had their meals in the large pre-renovated dining area. Staff had more sustained conversations with residents in the new dining spaces.

Conclusions

Multiple activity spaces on both floors were utilized much more by residents due to their ease of access compared to the large activity space on the first floor. Although active engagement in planned activities in the new cluster common spaces had slightly increased, residents spent a significant amount of time in null behavior in these spaces due to lack of adequate planned programs specifically designed for these areas.

A "ripple affect" from physical interventions was evident. Not only did the transition during renovations create difficulties in caring for residents, the study also confirmed that physical changes to nursing homes required organizational changes regarding staffing and staff training. To fully take advantage of design innovations, management and staff training need to follow. De-centralized activity spaces require additional activity staff to conduct the range of activities that are suitable for the newly designed common living/activity areas.

Acknowledgement: Research funded by Extendicare Foundation, Inc. Milwaukee, WI. Impact of Design Interventions in a Nursing Home on Residents with Dementia and the Margaret Mangel Research Catalyst Fund. College of Human Environmental Sciences. Impact of Design Interventions in Nursing Home on Residents with Dementia, their Families, and Staff.

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ARCHITECTURE AND DESIGN OF A HISTORIC MINING TOWN

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Purpose

The purpose of this poster is to describe the architecture and design of a historic mining town. St. Elmo is located in the mountains of Colorado at an elevation of 10,012 feet. It has a rich mining history, beginning with the discovery of silver in 1875. Mining produced nearly a billion dollars over the years, fueling a boom economy during the 1880s and a peak population of 2,000 (Bailey, 1985). Mining continued through the 1920s, when the railroad pulled up tracks and the town was almost completely vacated (Merrifield & Kelly, 1992).

Methodology

A case study research approach using field observation was utilized (McTavish & Loether, 2002). The researchers studied the town during 1994-2002, visiting once or twice each summer. The buildings of the town were photographed and analyzed based on architecture and design criteria. Since case studies use data from all sources, town documents, newspapers, and photographs from the Denver Public Library's Western History Department were obtained to establish historical trends. Informants with long-term ties to the community were identified and interviewed. These informants also provided the researchers with several personal, unpublished photographs.

Results

With the rush of miners into St. Elmo in 1880, the town took shape in just a matter of months. Within a year the town had a smelter and concentrator, three hotels, five restaurants, several stores, a surveyor's office, a number of saloons, and two banks. Numerous cabins also appeared (Bamford & Tremblay, 2000).

Construction and architecture in St. Elmo were dictated according to local traditions and conditions. Many of the initial inhabitants were from the United Kingdom and brought with them knowledge of the use of native materials. Stone foundations came later while wood was most often used for the entire structure. Interior walls were frequently insulated by sawdust and stuffed newspaper. The indigenous character of St. Elmo architecture varied from building to building.

From the standpoint of architectural history, St. Elmo was built using different methods of construction. The town experienced several types of architectural development that roughly paralleled the phases of mining success and failure (Abbott, Leonard, & McComb, 1994). As late as 1877 there were canvas tents, pine-covered dugouts, and earth-roofed huts at the mine sites. These were followed by unsophisticated cabins built of the most plentiful materials to be found—spruce logs. The shingles were usually "shakes" made by splitting logs. This development stage reflected the exploratory nature of mining until 1880, as there was negligible income to be spent in the town.

Another early type of St. Elmo's construction development perhaps was the result of experience. After a winter that saw some roofs collapse from snow depths as great as four feet, builders increased roof pitches. Occasionally, corrugated sheet metal was added which allowed the snow to slide off even easier. Miners quickly learned that cabins on southern slopes caught winter sunshine for warmth and melting. Many of the later cabins revealed a surprising understanding of materials and construction. The designs varied widely with porches, asymmetrical window placements, and roof configurations.

As time passed, some of the early log structures of St. Elmo—crude and often drafty—were boarded over with siding. Still other structures remained log, but false fronts were added to make them look more impressive. One example apparently began as a log residence, and then was expanded into a frame saloon and restaurant. In St. Elmo as in other mining communities, false fronts gave a citified and grand look to the raw frontier surroundings (Greever, 1963).

A further type of construction came with the arrival of steam sawmills, which could convert logs into flat boards. Flat lumber was easier to use and the inventive miners thought of many types of applications. Importantly, it gave a new dimension to the structures and appearance of St. Elmo. However, the first buildings to use the roughsawn lumber were not wholly refined and many used corner-post construction in which large timbers were placed at the corners as vertical supports, with flat slabs nailed to horizontal connectors (Southworth, 1997).

The most refined buildings of St. Elmo included the more sophisticated balloon-framed stores and homes, built in the 1880s at the peak of mining production. Such structures used vertical boards (studs) attached at both the foundation and roof plates to support the walls. Main Street began to show new clapboard-sided stores and homes that displayed a neat, precise appearance. In 1880 one could observe slabsided buildings adjacent to those with clapboard siding as the transformation continued. Beams, rafters, and studding had replaced the log walls. For the most part, the architecture of St. Elmo and camps like it was simple, straightforward and functional.

Techniques of construction also influenced the architecture of St. Elmo. The first buildings were shaped with crosscut saws, axes, adzes, and planes, and usually were built by the owners. The tools and techniques were used to modify the materials at hand. The appearances of the buildings began to change through the availability of new materials and techniques. The sawmill and the fact that one builder, Fred W. Brush, was responsible for much of the commercial district gave St. Elmo's Main Street a sense of continuity and permanence.

Conclusion

Today there is a wealth of well-preserved architecture at the site, ranging from crude log cabins built before prosperity to the more refined structures constructed during the booming 1880s. The bust cycle of the early 1900s is noticeable in that almost no buildings were constructed at that time. The ruins of what many refer to as a "ghost town" remind one of a generation of miners and builders who created functional, imaginative, and historically significant structures

which are peculiar to mining regions. St. Elmo was designated as a National Historic District in 1979 (Colorado Historic Preservation Office, 1979) and there are currently thirty members of the St. Elmo Property Owners Association.

Several homes in St. Elmo have already been restored by their owners, reflecting a boom in tourism. A few of the original one-room log cabins still survive, and other early unpainted buildings have taken on an attractive orange-brown patina in the hundred and twenty years or so since they were constructed. The plans for St. Elmo's future include careful restoration and preservation to provide the public an opportunity to observe a historically significant bonanza mining town. The better structures are to be painstakingly restored (a grant to restore the Town Hall was recently awarded by the State Historical Fund). The buildings of St. Elmo mirror an important era in the history of architectural development on the American western frontier.

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**BIG IDEAS FROM SMALLER COMMUNITIES:
CITIZEN PARTICIPATION IN MIXED-USE REDEVELOPMENT**

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Good affordable housing ideas come from many places. Smaller communities often are the vanguards of new ideas and innovative practices. The purpose of this presentation is to share suggestions for avoiding citizen resistance to affordable housing development. This presentation is an opportunity to hear a local community leader's practical approach to planning a mixed-use redevelopment project. This project illustrates how communities can involve citizens and provide effective, high-quality project planning.

Falcon Heights is an inner-ring suburb sandwiched between Minneapolis and St. Paul. The fully developed city of approximately 5,500 people is best known for being the site of the State Fairgrounds and the St. Paul Campus of the University of Minnesota. In recent years, the pressure to provide affordable housing throughout the Metropolitan Area increased. The city and many of its neighboring communities are struggling to meet the housing demand.

At the same time, Falcon Heights is faced with pockets of deteriorating retail areas, aging strip malls, and an out-of-date image. Lacking a defined city center, the city is dissected by state and county highways and spreads out in a number of distinct residential neighborhoods. The majority of the city's housing stock was developed following World War II with some residential areas built in the 1970's and 1980s. The most recent development consists of large new owner-occupied townhomes are tucked in behind a major thoroughfare.

The mayor and city staffs' vision was to new urban center. A lively pedestrian-friendly retail corner would be created that would incorporate additional housing to accommodate the changing demographic profile of the city. The concept included affordable apartments, townhomes for families, and assisted living units for senior citizens. Initial plans called for the demolition of a deteriorating buildings and construction of a mixed-use development consisting of both residential units and retail businesses. Citizen involvement was to occur from the beginning providing input into the way the project would look and how the process would occur. While the development of mixed-use and mixed-income housing is common, involving residents in the process from the beginning is unique.

The shopping center was on the market for sale, and rather than reacting to a plan put forth by potential buyers, the city wanted to be proactive about redevelopment on the site, and work with residents and business owners to identify potential uses. Project goals were to prevent further deterioration and blight on the site, provide badly needed life cycle housing, and to ensure than any development is an amenity to the community.

Following input from the citizens and task force members, the city hired a consultant to determine the feasibility of the redevelopment project. Their report in April 2000 included analyses of current uses, estimated market value, base tax

value, zoning, land area and infrastructure capacity. Three development scenarios were modeled.

Residents and business owners were invited to a series of meetings in November and December in which general questions were posed about density, height of buildings, concerns about redevelopment and the outcomes they wished to see in a possible redevelopment scenario. In general, this input identified mixed-use development that included mixed-income, life cycle housing as the priority use of the site. In addition to housing the site would include service oriented retail and commercial businesses. Community residents asked for bakeries, coffee shops, dry cleaners, and other street-level, retail/service storefronts.

A series of three meetings in mid-July were held inviting residents to give suggestions on the design of the new development. The discussions covered topics of access, building design and aesthetics as well as site layout, parking, and traffic patterns. With the input provided by citizens and business owners, the city worked with a consultant to develop design guidelines. The guidelines were established to address residents and business owners concerns. These guidelines were on display at City Hall and then were used in the pre-request for proposals.

A small group of local professionals was invited to participate in a resource task force to provide information that would be useful in obtaining funding for the project. The task force also identified potential sources of grants and other funding for portions of the redevelopment project and developed strategies for accessing and utilizing these resources.

Pre-proposal requests were sent to over 50 developers in the Twin Cities Area in early April 2001. The requests specified that proposals meet the design guidelines that had been established earlier. Selection criteria for the developer included previous redevelopment experience, demonstrated ability to move from concept stage to construction completion in a timely manner, ability to partner with others, financial capability, and design creativity and flexibility.

The City Council interviewed four developers who presented proposals. Sherman Associates, Inc. was selected and approved as the developer. The process of negotiating a pre-development agreement began mid-June 2001.

The preliminary site plan includes retail and housing in a mixed-use arrangement. Life cycle housing is proposed with a potential for 185 new housing units on a site that currently has no housing. The housing would include apartments, senior rentals, and townhomes. The preliminary plan facilitates the use of public transit and incorporates bus shelters.

Unlike the current “strip mall” design with building set back from the street and a wide area of asphalt parking and roadway between the buildings and the street, the proposed plan calls for an urban design. Buildings are located close to the street with pedestrian-friendly walkways, trees, and gateways leading to an interior plaza and parking area. Buildings are highest (three to four-stories) on the main streets and step-down to townhomes with front porches creating a residential streetscape on the street linking the site to the residential neighborhood. A pedestrian link is planned to connect the site to the park

located a block away. The plans will be submitted to the Planning Commission for approval in November 2002.

One of the main concerns of local residents focused on the potential for increased traffic in the area. As a result, a number of traffic impact analyses were conducted. These studies were used to evaluate parking, curb-cut access to the site, and traffic flow patterns.

A Metropolitan Council Livable Community Demonstration Account Phase 1 Application was submitted requesting $1,300,000 to support the affordable housing component of the project and the construction of a transit shelter on the site. The request is based on estimated subsidies needed to achieve a goal of 20% of units available to household with incomes at 50% of median income or less. It was estimated that 20% of the 140 total units would be subsidized at a cost of 28 units @ $40,000 each ($1,120,00). The estimate cost of construction for the transit shelter was $60,000. While the proposal was not funded on the first attempt, it did receive strong support. A revised proposal has been submitted for the next funding round totaling $1,000,000 and Tax Increment Financing district for the project was also created in the summer of 2001.

Final planning review is anticipated the end of December. It is anticipated that groundbreaking will occur in June 2003 with construction taking approximately 18 months.

IF UNIVERSAL DESIGN IS SUCH A GOOD IDEA, WHY AREN'T MORE CONSUMERS BUYING IT? (AND WHAT HOUSING EDUCATORS CAN DO ABOUT IT.)

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As housing educators, we all believe that universal design is a good idea (Null & Cherry, 1996), yet we have not been very successful in getting consumers and builders to embrace this new approach to housing design. The purpose of this paper is to discuss five major mistakes we have made in our efforts to promote universal design. Examples of successful programming strategies, as well as visuals of universal design features and products, will be used during the presentation to illustrate each point.

1) We focus on the wrong audience. When we focus all of our attention on the benefits of universal design for older adults and for people with disabilities, we "turn off" the mass consumer market. Non-disabled individuals and families do not want to think about a house that will be better for them in the *future* when they become frail or disabled; they want a home that will be more convenient, comfortable, and attractive for them to enjoy *now*.

2) We forget the basics. We often overwhelm consumers with a huge list of possible universal design features that would be nice to have in a home. Yet, we fail to help them sort out essential versus non-essential universal design features (or those that could be easily added later without major remodeling).

3) We promote costly solutions. A motorized unit for the kitchen that allows the counters to go up and down to adjust for people of different heights is not a practical solution for most families. Although the technology works smoothly, the cost is prohibitive and builders don't see this as a product for mass distribution.

4) We confuse universal design and disability design. The bathtub with a door may seem like a universal design product that would make life easier for all users, but the supposed benefits of this tub do not have market appeal for non-disabled audiences. Most consumers would not want to spend extra money for an expensive tub that is not particularly attractive and takes extra time to operate when they can simply step over the edge of the tub when they want to get in and out. This design is not even a good idea for people with disabilities. Seated users will become chilled while they wait for the water to drain out before they can open the tub door to exit.

5) We don't market our information in the right places. The early efforts to promote universal design have often been done in partnership with disability-related organizations. Most families that are in the market for a new home do not wish to see themselves as candidates for living in the "barrier free home" that was constructed for residents of the rehabilitation unit at the local hospital.

What Housing Educators Can Do About It

Here are some successful strategies that have been used to promote universal design principles and products, based on 15 years of experience in educating consumers and professionals about universal design.

1) Refocus the target audience. We need to promote the benefits of universal design for *all* stages of family life—not just when people become old or disabled. A home with universal design features is more spacious and attractive, easier to maintain, safer for small children, more convenient for moving furniture, and "visitable" (Smith, 1998) by friends and neighbors of all ages and abilities.

2) Emphasize the essentials. Rather than prescribing an extensive list of every possible universal design feature, we need to start with the essential structural elements that determine whether an individual will be able to live independently in their own home after a serious illness or injury and would be costly to change later. Undertaking a major remodeling project after a health crisis occurs is an expensive and traumatic proposition. Essential universal design features include a no-step entrance, wider doors and hallways, a larger bathroom, and a place to eat, sleep, and bathe on the no-step level of their home (Yearns, 1997). Once the basics are in place, additional universal design features can be added as resources and interest permit. Mass production builders can keep costs down by focusing on the basics. Custom homebuilders might be persuaded to add the extras.

3) Promote low-cost options. Instead of high-tech gadgets and gizmos, show low-cost options that will benefit most users. For example, a lowered section of counter space to accommodate seated users can be incorporated into almost every kitchen at a very modest cost. This is an alternative to expensive controls that raise and lower the counters electronically. The United States Department of Housing and Urban Development (HUD) promotes "adaptable" designs for kitchens and bathrooms in multifamily housing. When a wheelchair user moves into a HUD unit, a section of base cabinets can be removed and the counter lowered on adjustable brackets, thus creating a desirable workspace for seated users. When non-disabled users become the next resident of the unit, the base cabinets can be reinstalled and counters returned to the traditional height for standing users at little or no cost (United States Department of Housing and Urban Development, 1987).

4) Make universal design solutions "invisible." Universal design features need to be "invisible" to appeal to a mass audience and should not stigmatize the user as frail or disabled. Wider doorways and spacious-sized bathrooms make a home more convenient for all users, but do not detract from the appearance of the home. Attractive, no-step entrances can be created without using a ramp (Yearns, 2000). Grab bars can be added when and where needed by a specific user—instead of during initial construction—if appropriate reinforcement is added under the drywall to allow easy installation in the future.

5) Use smarter marketing strategies. If we want to reach consumers with universal design information, we need to think about the events they will already be attending (Yearns & Huntoon, 1998). Shopping malls, fairs, expos, and home shows are good locations to reach a mass audience—without spending our own

money on publicity. But we must select our partners carefully. A model home with universal design features that is sponsored by a local hospital for a disability awareness week will appeal to a very different audience than one that is constructed by the local builders association for its annual parade of homes. Similarly, an article on universal design that appears in the newspaper supplement for the annual home improvement week will appeal to a wider audience than one that comes in the newsletter of a disability service organization. By helping our selected partners understand that universal design is better for everyone, not just people with disabilities, we will be multiplying our efforts to reach consumers with the same message.

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Prevention of Lead Poisoning through Education

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If parents were to learn new information about how to prevent lead poisoning, could it affect their daily lives so that their children would not become lead poisoned? This question arose out of the experiences of residents in an inner city Minneapolis neighborhood. The residents' neighbors were becoming homeless because their children had become lead poisoned. In accordance with state law, once a child's blood is tested, the result is reported to the city. This triggers a response by the city to identify the source of the lead that caused the poisoning. The housing unit is inspected and work orders are written to make the housing unit safe. Because most of the housing in this neighborhood is old and contains lead paint, and because the soil has been contaminated from leaded gasoline, the city inspectors' orders to clean up the housing frequently cost the owners more than they were able to spend. This led to housing units being condemned and families left to find alternative housing.

This research was designed to test education as a primary prevention strategy to keep children from becoming lead poisoned and to avoid the medical and housing consequences of lead poisoning. Over 600 caregivers (mostly mothers) with infant children were recruited from the neighborhood and were randomly assigned to either a "basic" (control) or "intensive" (intervention) education group. All participants received basic educational materials translated into their own language from the state Department of Health on lead poisoning prevention. The participants in the intensive group also met with a peer teacher for up to three years – about every three weeks for the first year, and every three months for the next two years. The peer teachers were of the same ethnicity/culture as the participants representing African American, Native American, Caucasian, Hispanic, Hmong, Cambodian, Lao, and multiple race. The peer teacher provided 20 in-home education sessions during the first year on household cleaning, hygiene, use of water, home repairs and remodeling, the outside environment, and nutritional guidelines for the prevention of lead poisoning. Sessions appropriate to the child's development were presented every three months during the final two years.

Three outcome measures were identified. Participants' knowledge about lead was measured by a written test taken five times during the project. Lead levels in the environment were obtained by an initial lead inspection of the home and the soil, and compared with results of dust samples taken every six months, thereafter. Blood tests of the children were taken every four months to measure their lead levels. It was hypothesized that participants who received intensive education with a peer teacher would do better on the knowledge test, have lower lead dust levels in the home, and their children would have lower blood lead levels than participants who were in the basic group.

The knowledge test asked questions about sources of lead in the home, how children become lead poisoned, how to reduce the risk of lead poisoning, foods

that help to reduce the absorption of lead, and how to test for presence of lead. There was no difference in the scores between the intensive group and the basic group at the beginning of the caregivers' participation in the project. However, after one year in the project, the intensive group scored significantly higher than the basic group and maintained this difference for the duration of the project, although the scores for both groups improved over time.

Participants had their home tested completely for lead at the beginning of the project. The test included samples of the soil around the home, drinking water, dust on the floor, dust on window sills, dust on window wells, and interior paint samples if paint was peeling. Each time a participant moved, the new dwelling was tested. The results of these tests, reported as the percentage of dwellings that exceeded the state standards are shown in Table 1 and there was no difference in the environmental exposure to lead between the intensive group and the basic group. Comparisons of the first inspection with follow-up tests of lead dust every six months were planned. However, during the project, we experienced two factors that made this comparison difficult. First, participants moved more frequently than we had anticipated. The number of moves ranged from zero (no moves) to six during the time the participants were with the project, a mean of 1.3 moves. This occurred with both the intensive and basic groups. Because of the many moves, it was difficult to use follow-up dust level tests as a way to know if intensive participants implemented the cleaning techniques. Second, we have only a limited number of follow-up dust lead results. The lead inspector had a difficult time scheduling with the participants to visit the dwelling to do the follow-up tests. Thus, we cannot link the increase in participants' education in the intensive group directly to lower lead dust levels in the home.

The most important findings of this project were related to the actual tests for blood lead in the children (Table 2). The results generally indicate that the project was successful in keeping children from becoming lead poisoned, with one major exception. The maximum "safe" level for lead in the blood is 10 micrograms per deciliter. A higher percent of participants who were in the intensive group (81%) had children with blood lead levels below 10 than participants in the basic group (74%). Also, only 15% of the participants' children in the intensive group had lead levels between 10 and 20 micrograms per deciliter, compared to 24% of the participants' children in the basic group. However, at the uppermost level, over 20 micrograms per deciliter, 4% of the children of participants in the intensive group compared to only 2% of the children of participants in the basic group had levels at this range. This result means that the education model was not entirely effective as a prevention strategy.

In summary, the project did result in positive outcomes in the fight to end childhood lead poisoning. Through intensive peer education, participants learned more about lead poisoning prevention, and more of their children kept their blood lead levels in the "safe" range. This occurred even though most of the children lived in lead contaminated dwellings. Also, the knowledge gained by the caregivers will be applicable to any dwelling they live in. Because education was not entirely successful in eliminating lead poisoning, it is important for

communities to work on remediation of lead contamination in housing simultaneously with educating residents on how to prevent lead poisoning.

Table 1. Percent of housing units that exceeded the state lead standards and levels of contamination

	Percent of Inspections That Exceeded the State Standards and Levels of Contamination (maximum level permitted in parentheses)					
	Soil (100 ppm)	**Peeling paint** (5000 ppm)	**Floor** (80 ug/ft^2)	**Window sill** (300 ug/ft^2)	**Window well** (500 ug/ft^2)	**Drinking water** (15 ug/L)
Intensive education group						
Percent	76%	67%	3%	40%	75%	4%
Median	230	43825	25	235	4069	5
Range	0-5870	30-466450	10-251	12-26028	31-268861	0-101
Basic education group						
Percent	65%	68%	10%	39%	70%	4%
Median	160	32280	24	184	2348	5
Range	10-21250	0-454750	7-5000	13-40515	0-309076	5-65

Table 2. Results of Blood Lead Levels in Children* (ug/dL equals micrograms per deciliter)

	0 to 9 ug/dL *(acceptable level)*	**10 to 14 ug/dL**	**15 to 19 ug/dL**	**20 ug/dL and more**
Intensive education group (total children = 184)	150 81%	18 10%	9 5%	7 4%
Basic education group (total children = 194)	143 74%	32 16%	15 8%	4 2%

*This comparison includes all of the children whose blood lead was 10ug/dL and above, and the children whose blood lead was always below 10ug/dL but had at least 3 blood tests done, including 2 between the child's 1st and 2nd birthdays.

Special thanks to the families of the the Phillips Community who care so deeply about the futures of their children and generously gave their time, sometimes for several years, in support of the data collection phase of this project. The U of M investigators participating in this project will forever do our work differently thanks to the thoughtful and tenacious teachings and leadership of the current resident members of the Phillips Neighborhood Healthy Housing Collaborative (PNHHC), as well as past members. We also express our tremendous gratitude to the community staff members, many of whom also served on the PNHHC, for their excellent work and dedication to the research. The work of the PNHHC and its contributions to the research could not have been accomplished without the tireless efforts of its staff over the years.

EMPLOYER INVOLVEMENT IN AFFORDABLE HOUSING

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For many communities, successful economic development has brought not only new jobs, but also a number of unintended consequences and a shortage of affordable housing is one. As employment opportunities expand, available affordable housing for the growing workforce is in short supply. This is particularly the case in rural areas and smaller communities where, during the past decade, new construction has languished. The purpose of this study is to identify the ways in which rural employers are involved in addressing local housing needs.

The shortage of affordable workforce housing across the nation remains a serious problem. The Minnesota Housing Finance Agency estimates that in the next five years the state will need at least 6,000 for sale homes and 18,500 apartments beyond that which the private sector alone or public/private partnerships can deliver (Hadley, 2000).

As employers struggle to attract and retain a sufficient labor force, community leaders also recognize that housing is directly linked to economic well-being. When existing housing is unavailable or unaffordable to meet the demands of a growing workforce new construction is essential. However, developing new affordable housing can be difficult. Construction costs often result in housing prices beyond what is affordable to workers' incomes. Obtaining subsidies to bring the cost of construction in line with affordability requires experienced developers. As a result, construction of affordable housing is a lengthy process and the time lag between when housing is needed, and when it can be supplied, is problematic. In spite of the challenges, for-profit developers, non-profit organizations, and local governments are collaborating to address the need for more affordable housing.

The private employment sector is responding to the situation as well. Employers are voicing their concerns about affordable housing. In a few highly publicized cases, private sector employers have made major financial and/or in-kind contributions to housing development projects (Pill 2000).

State and local policy makers are also becoming more involved in providing subsidies for affordable housing development. However, given tight public budgets, state and local governments look to leverage their funding though the involvement of private sector employers. For example, the Minnesota Housing Finance Agency established a policy giving priority to development proposals that include employers' cash contributions. Yet, very little is known about the motivation, interest, or involvement of non-metropolitan employers in providing housing assistance. If public policies require the direct involvement of the private sector in the provision of housing, it is essential that factors contributing to and limiting involvement by employers be better understood.

This study addresses focuses on nonmetropolitan employer's involvement in affordable housing development. Using a statewide survey supplemented by in-depth interviews, information is being gathered regarding the extent of employer

involvement in housing assistance. The study findings are directed toward enhancing policies that effectively encourage employer involvement in facilitating affordable housing development.

Study Procedures

A survey was mailed to a random sample of 250 firms identified by Reference USA, a subscription database. The sample was selected from the 856 firms located in nonmetropolitan Minnesota counties employing 100 or more workers. The initial mailing resulted in 37 returned survey forms for a 14.8% response rate; eight surveys were returned with incorrect addresses. The low response rate is typical for surveys to business firms. The study protocol calls for a reminder card and second mailing to be sent to non-respondents in an effort to increase the response rate. In addition to the survey, in-depth interviews are being conducted to provide examples of employer assisted housing activities conducted by rural businesses.

Findings

Responding companies, on average employ 340 people in the local site. Eight of the responding firms were manufacturing companies, 10 provided medical services, Hourly starting wages ranged from $5.15-$16.00 with an average starting wage of $852/hour. Average range for salaried employees was between $33,987 and $105,303. The responding companies reported average gross revenue of $35,902,124.

Overall, firms find attracting and retaining workers somewhat difficult. Over half of the firms (22 out of 37) reported attracting qualified workers to be very difficult or somewhat difficult. Retention of workers was reported to be difficult or very difficult for 13 of the 37 responding firms. In addition attracting managers was perceived as difficult or very difficult for 17 of the responding firms. Housing was a contributing factor in the successful recruiting and retention of employees. Twenty-two firms reported that some affordable housing was available in the community or nearby area; nine felt that there was a lack of affordable housing and in five cases; affordable housing is a serious problem for the area.

The survey solicited specific information on housing assistance provided by companies. Six firms reported providing relocation assistance for salaried employees, two firms ill assist employees arrange meetings with local realtors, and one firm assists employees identify lower-rate interest mortgages. Five of the thirty-seven firms provide information on housing in the community for all employees.

In a few instances, firms broadly support housing in the community. Seven companies reported contributing to housing related charities such as Habitat for Humanity, one has purchased Low Income Housing Tax Credits, two have contributed funds into a local housing development fund, and two firms have participated in public-private housing ventures.

Conclusions

While these findings are preliminary, some general trends are emerging. First, few firms are actively involved in providing housing assistance for their employees even though they see housing as a need in their communities. Second, employer provided housing assistance is often limited to management employees even though blue-collar workers may have more difficulties obtaining affordable housing. Third, the findings indicate that approximate 5% of employers are involved in public-private housing ventures. If this is accurate, approximately 40 firms in rural Minnesota are actively involved in the provision of housing in their communities. As economic conditions shift, employers' interest in housing varies with their labor force needs. Policy makers must recognize this shift and acknowledge the limited interest by employers. Policies offering priority to projects with direct employer involvement may need to include incentives, such as tax abatements, to encourage private sector participation.

***Acknowledgements*:** The author wishes to thank the Center for Rural Policy and Development, Minnesota State University-Mankato for partial funding of this research and Daniel Kruse, Project Assistant, for his work on the project.

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