An investigation of the relationships between quality of life and residential environments among rural families

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An investigation of the relationships between quality of life and residential environments among rural families

by

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For the Major Program
TABLE OF CONTENTS

LIST OF TABLES iv

LIST OF FIGURES v

ACKNOWLEDGMENTS vi

ABSTRACT viii

CHAPTER 1. GENERAL INTRODUCTION 1
   Importance of this Study 1
   Dissertation Organization 7
   References 8

Chapter 2. LITERATURE REVIEW 12
   Theoretical Approaches 13
   Quality of Community Life: Community Satisfaction 19
   Housing Problems and Children’s Quality of Life 27
   Conclusions 34
   References 35

CHAPTER 3. EXPLAINING COMMUNITY SATISFACTION AMONG RURAL RESIDENTS: AN INTEGRATED MODEL 42
   Abstract 42
   Introduction 42
   Conceptual Model: An Integrated Model of Community Satisfaction 43
   Methodology 48
   Results 53
   Discussion and Conclusions 57
   References 62

CHAPTER 4. CHILDREN’S HOUSING ENVIRONMENTS: WELFARE FAMILIES IN IOWA 65
   Abstract 65
   Introduction 65
   Poor Housing and Poor Children 69
   Methods 75
   Results 81
   Discussion: Rural Housing Conditions and Children’s Development 91
   Conclusions: The Critical Role of Housing Subsidies and Community Support 93
   Future Research Directions 96
   References 97

CHAPTER 5. CONCLUSIONS 103
LIST OF TABLES

First Manuscript
Table 1. Correlation Matrix of the Community Satisfaction Model (N=974) 50
Table 2. Measurement of Variables in the Community Satisfaction Model 51
Table 3. Decomposition Table of Community Satisfaction Model (Standardized Solution) 56

Second Manuscript
Table 1. Characteristics of Families Interviewed 79
Table 2. Community Characteristics, 1990 and 2000 80
Table 3. Housing Characteristics of Families Interviewed 83
LIST OF FIGURES

First Manuscript

Figure 1. Structure Equation Model for Community Satisfaction with Standardized Coefficients 54
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This dissertation is comprised of two manuscripts prepared for submission to academic journals. The articles relate broadly to quality of life and residential environments among rural families. The first manuscript is a quantitative study using rural household data from the Life in Iowa project. The second manuscript is a qualitative study using the data drawn from the 13 family interviews from the Family Well-being and Welfare Reform in Iowa Project. The general purpose of this research was to investigate the community and housing of rural families and the associated effects on quality of life.

The first article discusses the complex mechanisms involved in predicting community satisfaction among rural residents. The role of housing satisfaction and community attachment in predicting community satisfaction was of particular interest. A structural equation model (SEM) of community satisfaction was tested with mail survey data drawn from a randomly selected rural sample of 974 households. The results of this study confirmed the influences and mediating role of community attachment and housing satisfaction in predicting community satisfaction. Spillover effects were found on “lower levels of concerns” (e.g., satisfaction with local services, assessment of current housing condition) in perceived community satisfaction.

The second article focused on the strategies employed and the difficulties faced in the provision of safe, affordable and stable homes. This investigation depicts several dimensions of the circumstances of poor children that have not had much previous attention in the literature: serial housing inadequacy and chronic mobility. It employs mothers’ voices to convey the housing needs of children and suggests that families exchange one chronic
problem for another in repeated moves. Several families with children with disabilities reported severe housing deficiencies. This research provides initial evidence of the important role of housing in promoting the goals of family stability and economic self-sufficiency as well as the need to improve health and developmental outcomes for children living in poverty. Understanding the economic and psychological dimensions of the housing and community context in which rural families live is a precursor to revising housing and public assistance policy.
CHAPTER 1. INTRODUCTION

Importance of this Study

The rural landscape has changed dramatically over the last 20 years. According to the 2000 census, 20% of the total population of the United States lives in a rural area whereas rural counties comprise 75% of its total land mass. Rural families and the communities in which they live are often portrayed as family-centered, with strong intergenerational bonds, and as self-reliant, stable and cohesive. In this idyllic version, residents of rural places know one another, share a common pioneering heritage and help one another through “thick and thin.” However, this “rural way of life” has changed and in rural communities wherein today the population is increasingly diversified. Studies on rural families depict divergent experiences that raise questions about the quality of life in rural America for some families. For example, the number of single-parent households living in rural communities has increased as it has nationwide. The structure of rural families has become increasingly similar to that of metropolitan families. The average number of persons in a rural household is 3.02 persons, which is smaller than the average 3.17 persons of urban household (U.S. Bureau of the Census, 2000).

The Midwest in particular has undergone substantial economic restructuring over the last several decades. Local and state economies no longer rely on farming or small manufacturing plants, eroding the base of employment. During the last four decades, family farms in America diminished 60% nationally. Farm employment in the Midwest declined 7.9% during the 1990s compared with only a 2.1% decline nationwide; in 1990 farm employment represent 10.2% of total employment and only 8.1% by 1999. Retail stores have
been replaced by regional shopping centers and discount outlets. Population declines have threatened schools and other public services in some areas (Walzer, 2003; p.xiii).

The decline in farm employment has profoundly impacted surrounding small towns and contributed to widespread population out-migration. According to Lasley (1997), less than 10% of rural families earn their primary livelihood from farming which means an increasing number of commuting family members. Underemployment or jobs that pay low wages and lack benefits are prevalent in rural areas (Blank, 1997; Nelson, 2001). Although “in-town” jobs may have some merit such as short-distant commutes and lower child care costs, in general the lack of good paying jobs in rural communities perpetuates long-distance commutes. Families follow the jobs, or in looking to help make ends meet, move frequently which can result in chronic mobility. The young and educated people are more likely to move out of rural areas which may influence the ‘aging’ of some rural areas (Sofranko & Samy, 2003). The migration of the young and educated often also means the loss of tax dollars and a “political” will to support community infrastructure and services. Families with children suffer as funding for public services such as schools, transportation and libraries is reduced. For many rural children, commuting on a school bus over an hour is not uncommon because when local schools close they are replaced by regional schools that serve an entire county. For young families in rural communities and small towns, the quality and availability of public educational services is emerging as an important issue and challenge for local leadership (Benson, 2001; Southeast Center for Teaching Quality, 2003).

Some rural communities are experiencing rapid population growth as they are absorbed by expanding metropolitan centers, ex-urban growth, and/or because they serve as ‘bedroom communities’ in counties adjacent to metropolitan places (Tiggers & Fugitt, 2003).
These trends can result in increased demand for, but shortages in public services and housing resources which can create difficulties for young and lower-income families (Benson, 2001). Out-migration, increased commuting time to employment and regionalized commercial services, on the one hand, and suburban growth on the other, have profoundly influenced rural housing markets (Ziebarth, Prochaska-Cue, & Shrewsbury, 1997). As a result, several significant housing problems have emerged in rural America. Housing affordability in rural areas, for example, has been cited as a significant and increasingly problematic issue in small towns and rural places. In-migration, especially in small towns that are adjacent to growing metropolitan areas, has increased housing demand and raised property values (Ziebarth et al., 1997) which, in turn, raises the cost of housing. Furthermore, newer housing stock built for the “bedroom community” is often more expensive than existing housing. While expensive housing may serve urban areas, existing residents and low-income households often are unable to compete for this new housing (Sweaney et al., 2004).

Housing inadequacy – its physical quality – is another problem in rural communities. A study on Western counties revealed that poor housing conditions was the major problem experienced in communities where the good jobs had attracted in-migrants (Gober, McHugh, & Leclerc, 1993). Much of the existing housing stock in rural area is old housing – built before 1939 – that is often owned by the elderly. In addition to the inability of some elderly owners to maintain and afford housing upkeep, housing regulations within rural communities often discourage housing remodeling efforts by residents (Gober et al., 1993; Sweaney et al., 2004; Ziebarth, et al., 1997). Furthermore, one-in-five new homes in rural areas are manufactured or mobile homes. While manufactured housing is an important source of lower cost housing, according to Fitchen (1995), it can result in a high concentration of younger,
poorer, and less educated residents. The “trailer park” creates a type of rural ghetto that burdens both town residents and public officials (Fitchen, 1995).

The concentration of poverty is not uncommon in some rural counties with commercial farms or meat packing factories (Fennelly & Leitner, 2002). The poverty rate in rural America has always been higher proportionally than that of the metropolis: one-third of all welfare recipients live in rural areas whereas only one-fifth of the U.S. population lives in these non-metropolitan areas (U.S. Bureau of the Census, 2000; Walzer, 2003). Poor rural families striving to be economically self-sufficiency face many obstacles: fewer, unstable and low-wage jobs, long distances to services and employment opportunities, lack of public or private transportation and limited child care options (Auh, 2000; Whitner, Weber, & Duncan, 2002, as cited in Brown & Swanson, 2003). The shortage and poor quality of the rural housing stock can exacerbate the poor quality of life among low-income families.

Concerns for the health and well-being of low income families, especially those with children, are amplified by housing inadequacy in the community. The presence of high levels of lead in the blood of young children in rural areas, incidences of vermin and structurally unsound and dilapidated housing is problematic (Illinois State Dept. of Public Health, 2002). Beamish (1994) reported that low educational achievement among parents, low income and low-value housing were risk factors for housing inadequacy in rural settings. Furthermore, for poor rural households, housing costs represent a large share of their monthly expenditures and can precipitate housing instability. Housing instability, in turn, is a risk factor for decreasing children’s school achievement and increasing negative social behaviors (Colton, 1996; Popkin, Eiseman, & Cove, 2004).
Shifts in the rural family’s way of life and changes in the rural community context influence family well-being (Elder & Conger, 2000; Wickrama & Bryant, 2003). Consequently, in the research reported in the current study, it was hypothesized that community context and community resources impact family quality of life. Previous research studies revealed that changes in family structures (i.e., smaller size and more single parents) and changes in family finances due to economic restructuring have increased rural families’ reliance on community and public services. Housing and other community features such as public schools, government services, economic infrastructure, commercial services/facilities and social ties within a community shape perceived quality of life (Bruin & Cook, 1997; Filkins, Allen, & Cordes, 2000; Sirgy & Cornwell, 2002; Shin, 1980; Vrbka & Combs, 1993). Recent studies on community satisfaction (Filkins et al., 2000; Sirgy & Cornwell, 2002) revealed that various domains of community life influence individuals’ perceived quality of life. Furthermore, the notion that one’s life chances are affected by one’s community and its features, known as the “geography of opportunity,” has been examined and supported by previous research in several disciplinary arenas (Galster & Mikelson, 1995; Leventhal & Brooks-Gunn, 2000; Wickrama & Bryant, 2003). Home and the surrounding residential environment is where families rest and experience intimate relationships. Each of these, housing and the community, contribute to individual quality of life (Morris & Winter, 1978; Stone, 1993).

The general purpose of the current study was to investigate the community and housing of rural families and the associated effects on quality of life. Changes in rural places have resulted in significant challenges for family life. By focusing on community resources and housing, one can enhance the knowledge of quality of life among rural families. Several
of the issues investigated have not been examined fully previously. Although there is an emerging literature on family quality of life, only a few studies have included housing indicators (Bruin & Cook, 1997; Sirgy & Cornwell, 2002; Vrbka & Combs, 1993). The research reported in the current study included population samples of rural families of various socioeconomic status (Chapter 3) and rural families who have low incomes (Chapter 4). The difficulties of rural low-income families, in particular, have had limited previous research attention.

Both community satisfaction and housing satisfaction have been employed as measures of quality of life and quality of individual life (Fried, 1984; Sirgy & Cornwell, 2002; Toth & Brown, 2002). To gain a deeper understanding of the effects of housing and community on rural family well-being, both quantitative and qualitative approaches have much to offer. However, in the past it has been primarily quantitative analyses that have been employed to examine relationships between individual, family, and community characteristics and community satisfaction and quality of life (Bruin & Cook, 1997; Filkins, Allen, & Cordes, 2000; Sirgy & Cornwell, 2002; Shin, 1980). Another important aspect of the current study was that both quantitative and qualitative methods were used in explanations of quality of life among rural families. In the research presented in Chapter 3, quantitative analyses were used to test a structural equation model of the relationships between and among family socioeconomic characteristics, community social and human capital and housing and community satisfaction. Qualitative research, on the other hand, has enabled previous researchers to probe multiple levels of data (Brown et al., 2004). Furthermore, recently qualitative inquiry has been employed by researchers interested in welfare and low-income families (Auh, 2000; Cook, Crull, Fletcher, Hinnat-Bernard, &
Peterson, 2002). Therefore, in the research presented in Chapter 4, qualitative methodology was used to examine housing difficulties that poor children experience in rural settings. This portrayal was based on data in which welfare mothers revealed several themes about the importance of housing and community to family life and well being. Taken together, the findings present both a general model of community satisfaction of rural families and an assessment of the impact of the rural housing environment on children as seen through the eyes of low-income mothers.

**Dissertation Organization**

The organization of this dissertation was as follows: general literature review, first manuscript, second manuscript, and a general conclusion. A literature review was included as a separate chapter to provide an in-depth survey of literature on the quality of life in the community. The literature review includes an overview of the ecological theory of human development (Bronfenbrenner, 1993) and the spillover theory of quality of life (Sirgy, 2002) because they represent the theoretical underpinnings of the research reported in the manuscripts. As critical elements in quality of life research, previous literature devoted to housing and community satisfaction will then be described. The literature reviewed also details housing problems that are prevalent among rural and low-income families (i.e., housing affordability, crowding, and inadequacy). Finally, the specific adverse effects of housing problems on children’s quality of life are discussed.

This research is comprised of two articles that converge broadly around the concept of housing and community contexts of rural families. The first article applies a quantitative approach with a representative sample of rural households in Iowa. Over 970 rural people in
six rural Iowa counties responded to a mail survey, Life in Iowa, which explored residents’
view of community issues such as community leadership and vitality, housing need and
infrastructure, and social and community support and resources. The objective of the study
and analyses presented in this article was to test a model of residential satisfaction that fit the
representative sample. In the first article, the relationships between community satisfaction
and housing satisfaction, and social and human capital are identified. The model was
measured with multiple indicators to achieve convergent validity and to identify the causal
relationships among the selected constructs.

The second article is qualitative in nature and employed data collected from in-depth
interviews with 13 rural families that had received welfare benefits. Four interviews were
conducted over a two-year period with these families. Data from all four waves were
analyzed and themes were identified. The focus in this manuscript was on children’s housing
environments. The relationships among the themes are reported and the discussion includes
consideration of low-income children’s experiences, families’ quality of life, and public
policy implications.

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Russell Sage.


CHAPTER 2. LITERATURE REVIEW

Quality of life has been the focus of much research across many disciplines. “People are driven to preserve their lives, and having preserved them, they are driven to enhance their lives and to make the future better than the present” (Friedman, 1997, p. 4). Many different factors have been shown to contribute to quality of life. Seminal work by Smith in 1973 (as cited in Freidman, 1997) identified six broad categories of quality of life that were widely used at that time: (1) income, wealth, and employment; (2) the environment; (3) health; (4) education; (5) social disorganization (e.g., crime, alcoholism); and (6) alienation and political participation. Over time the working definition of quality of life has become more complex and expanded in scope. The research on quality of life and key concepts associated with improving and improved quality of life has been substantially extended to include multiple indicators and a myriad of factors. A recent forum on children and families suggested that evaluation of children’s well-being alone should include 25 key indicators ranging from housing and community to social environment and behavioral factors (Federal Interagency Forum on Child & Family Statistics (ChildStats), 2002). Furthermore, the contextual/environmental influences on quality of life have become increasingly important themes in current research (ChildStats, 2002; Elder & Conger, 2000; Jamieson, 2004; Leventhal & Brook-Gunn, 2000; Wickrama & Bryant, 2003). Recent theoretical approaches have emerged that support the importance of community context, including housing, to human developmental outcomes and to overall quality of life (Bartlett, 1997; Edin & Lein, 1997; Katz, King, & Liebman, 2001; Popkin, Eiseman, & Cove, 2004; Rubin, Erickson, Agustin, Cleary, Allen, & Cohen, 1996; Sard & Lubell, 2000).
**Theoretical Approaches**

Both ecological theory and spillover theory provide support for and understanding of the role of the near environment [housing and community] on individual well-being. Ecological perspectives on human development emphasize the life space and how an individual’s life can be influenced by everyday routine in the environment (Bronfenbrenner, 1993). Furthermore, the spillover theory recently introduced by Sirgy (2002) suggests that life domains such as the neighborhood or community can and do affect other life domains such as marital and/or employment satisfaction. Although Sirgy’s theoretical framework was less broad than Bronfenbrenner’s macro theory, like Bronfenbrenner Sirgy underscored the importance of the contextual environment for individuals and families.

**Bronfenbrenner’s Ecological Theory**

Bronfenbrenner (1993) used the term *microsystems* to explain the life spaces immediately surrounding us such as home, school, and peer groups from which an individual’s life precedes. *Mesosystem* refers to the linkage between two or more microsystems, and *exosystem* refers to the linkage between microsystems and more distant settings that more indirectly, rather than directly, influence individuals (Bronfenbrenner, 1993). Community or neighborhood plays an important role in social interaction and relationships with others by providing the contexts for life spaces such as the home, school or workplace. According to Bronfenbrenner (1993), research must be conducted on the individual’s perception of the environmental context rather than the environment’s objective characteristics. Other scholars concur. Campbell (1976), Flanagan (1978), and more recently Sirgy and Cornwell (2002) emphasized the importance of subjective measures of quality of
life. These scholars have pointed out that quality of life may be described more meaningfully when it is measured subjectively using the individual’s evaluation criteria rather than assessments by “objective” experts.

The influence of community contexts on families or individuals has been a major topic in psychology and sociology, only some of which have explicitly employed Bronfenbrenner’s theoretical approach (Garbarino & Kostenly, 1993; Keegan, 2001; Wickrama & Bryant, 2003). Recent research indicates that characteristics of the community (i.e., peer group, school, and other levels of ecological environments in the community) impinge on both parents (Garbarino & Kostenly, 1993) and children (Keegan, 2001; Wickrama & Bryant, 2003). Especially for older children, community influences are often beyond a family’s control yet clearly related to their individual well being, including socioemotional functioning (Keegan, 2001), depressive symptoms (Wickrama & Bryant, 2003), risk-taking attitudes (Kowaleski-Jones, 2000), behaviors (Kowaleski-Jones, 2000; Popkins et al., 2004), drug use (Hoffmann, 2002), and teen-pregnancy (Moore & Chase-Lansdale, 2001). In communities where deviant behavior is widespread, community influences on adolescent depressive symptoms is stronger than the parent-child relationship (Wickrama & Bryant, 2003). Furthermore, the community effect on the risk of drug use among both adolescents and jobless men increases if they reside in places with high proportions of unemployment (Hoffman, 2002). In contrast, perceived available resources in a community can buffer negative effects on individual well being. Regardless of poverty rates in the community, risk of teen pregnancy is reduced in places where working adults are present and are in girls’ social networks (Moore & Chase-Lansdale, 2001). Quality schools in
the community and residential stability decrease both adolescent risk-taking attitudes and
aggressive behavior regardless of the family’s situation (Kowaleski-Jones, 2000).

Although only a small number of studies have highlighted the unique aspects of
contextual influences on families, rather than on individual well being, the results have been
similar. Works such as those by Edin and Lein (1997), Holloway et al., (1997) have shown
how mothers from poor neighborhoods perceive their surroundings and patch together
available resources to survive. In both of these studies, housing and community –
environmental context – impinged on family outcomes.

Much of the previous research on quality of life and community context has
employed quantitative research methodology. It seems likely, however, that a qualitative
approach to investigating quality of life also can provide support for Bronfenbrenner’s
ecological model because it enables the researcher to probe the individual or family’s life
context in a holistic way. Recent qualitative studies of the effects of environmental context
on children and low-income families have been conducted by Bartlett (1997) and Cook et al.
(2002). Even in rural settings, Bartlett (1997) found that children may lack adequate outdoor
space to play. Parents’ concern for their children’s safety causes them to limit their time
spent in outdoor play which, in turn, negatively influences children’s behavior and language
development (Bartlett, 1997). Cook et al. (2002) also described families’ housing and
neighborhood concerns. Some families managed their housing costs by the use of informal
subsidies, help from extended families (Cook et al., 2002). Both Bartlett (1997) and Cook et
al. (2002) suggested that the lack of affordable housing, coupled with reductions in federal
government support for subsidized housing programs, negatively impact low-income
families. In these studies, the exosystem (housing subsidies) influenced the microsystem
housing availability and affordability). Instrumental support from kin or friends (mesosystem) was also important.

**Spillover Theory of Quality of Life**

While Bronfrenbrenner’s (1993) ecological theory serves as a macro-theoretical perspective in the study of quality of life, another useful micro-theory or theoretical explanation was introduced by Sirgy (2002) to explain the “psychological spillover” of satisfaction between and among life domains to predict quality of life. Sirgy explained horizontal spillover as the influence of satisfaction in one life domain on another life domain that is neither subordinated nor superordinated to it. Within the family, for example, marital satisfaction and job satisfaction are parallel life domains; neither is subordinate to the other. Horizontal spillover enables positive effects associated within a domain to reduce the negative valence of another domain, implying satisfaction with one setting (domain) can spillover to affect satisfaction with a domain perceived less positively. Sirgy developed several principals:

- Horizontal spillover is likely to occur when the individual is highly involved in two or more life domains and these domains overlap in time, place, people and/or activities.
- Horizontal spillover between two life domains is more likely to occur if the individual is emotionally involved in both domains than if s/he is not emotionally involved.
- Horizontal spillover is likely to occur if the individual uses skills learned in one life domain in the context of another domain.
- Horizontal spillover between two life domains is likely to occur if the individual feels cultural pressure arising from one of the domains (a high involvement domain) to be involved in the other domain. (pp. 77-88)

Previous research on quality of life has documented the spillover effect among microsystems or life domains, such as the workplace and the home (Belsky, 1984;
Greenberger, O’Neil, & Nagel, 1994; Rogers & May, 2003). The classic work of Belsky (1984) revealed the spillover of work and marital relations’ domains on the parent-child relation domain: parents’ satisfaction with work and marital quality were the most influential determinants of parenting. Greenberger, O’Neil and Nagel (1994) also revealed that satisfaction spillover occurred between work conditions and parenting. Parents who had challenging and stimulating jobs were more likely to use firm but flexible discipline of daughters in both self-reported and observational measures (Greenberger et al., 1994).

In a recent study, Rogers and May (2003) found mutual and long-term spillover effects between job satisfaction and marital satisfaction. In their study increases in marital satisfaction were significantly related to increases in job satisfaction and increases in marital discord were significantly related to decreases in job satisfaction.

Another form of spillover is evident in Sirgy’s model of quality of life. *Bottom-up Spillover* explains the influence of affect in subordinate domains (e.g., housing) on superordinate domains (e.g., overall life). According to Sirgy (2002), the individual’s evaluations of salient life events or repeated life activities influence satisfaction with the subordinate domain and the affect travels up the hierarchy of life domains. Sirgy (1992) developed several principles of bottom-up spillover:

- Subjective well being can be enhanced by making meaningful connections with positive life events—events that can be evaluated positively.
- Subjective well being can be enhanced by increasing the salience of positive life domains, decreasing the salience of negative domains, increasing positive affect in positive domains, and/or decreasing negative affect in negative domains.
- Subjective well being can be enhanced by evaluating abstract life domains, if these evaluations are anticipated to be positive. If the evaluations are anticipated to be negative, then the damage to subjective well being can be minimized by diverting the evaluation to concrete domains.
Subjective well being can be enhanced by evaluating life domains proximal to the self, if these evaluations are anticipated to be positive. (pp. 59-68)

Bottom-up spillover is evidenced in research in which family health, friendships, job and financial status, and marital relationships are impacted by community context (Arthur & Erickson, 1992; Elder & Conger, 2000: Sirgy & Cornwell, 2002). In a community with a lack of social organization, aggressive behaviors on the street are seen to spillover and social-behavioral problems are apparent in peer relations (i.e., gang-related violence) (Arthur & Erickson, 1992). Arthur and Erickson also revealed that a lack of supportive community structures (i.e., supervision by other adults) makes adolescents more vulnerable to problems in peer relationships. The community economic context (i.e., poor employment opportunity for residents or recent loss of income) causes economic stresses within the family that, in turn, lead to inefficient parenting (Elder & Conger, 2000). In sum, a lack of community resources and/or socially disadvantaged/disorganized communities adversely affects the quality of life of individuals and families.

Previous research has also shown that satisfaction with specific aspects of the community [subordinate domains] can determine overall community satisfaction and quality of life [superordinate] (Filkins, Allen, Cordes, 2000; Sirgy & Cornwell, 2002). In short, the spillover theoretical framework as elaborated by Sirgy (2002) is useful in explaining an integrated model of community satisfaction in which satisfaction with subdomains such as psychological well being (i.e, community attachment) and housing (affordability, adequacy, and satisfaction) predict community satisfaction.
Quality of Community Life: Community Satisfaction

Over the last several decades, rural communities in the U.S. have faced enormous changes in their landscape, economic structure, and population. It seems likely that these changes in the community have influenced individuals’ and families’ quality of community life. As a consequence, there has been a resurgence of interest in the quality of community life by both researchers and policymakers. Two dimensions of community life have been studied extensively in previous literature: housing and community satisfaction.

“Housing is the base from which people interact with and participate in their wider communities” (Jamieson, 2004, p. 78). There is evidence that how families and households are housed is an essential component of quality of life and a major influence on the health and well being of families, households and communities (Ernst, Meyer, & DePanfilis, 2004; Popkin, Eiseman, & Cove, 2004). Morris and Winter (1978) defined housing as a multi-level construct which fulfills the need for safety and rest for individuals, provides a place to rear children for families, and serves to reflect and reinforce norms and cultural values within the society. Other studies on housing also have stressed both its societal role (Coulton, Korbin, & Su, 1999; Parkes et al., 2002) and its personal or individual (Sirgy & Cornwell, 2002) meaning as a domain of quality of life.

Housing conditions within communities have been objectively measured (Estes, 2004; Fieldman, 1997; Jarosz & Williams, 2004) and used in research on community context (Drake & Pandey, 1996; Leventhal & Brook-Gunn, 2001), quality of life (Rohe & Stegman, 1994), and community vitality (Crull & Cook, 2001; Ziebarth et al., 1997). Housing availability and housing affordability, for example, were examined in research conducted in Hong Kong (Estes, 2004). A lack of available subsidized rental flats and housing costs that
are too large a share of total income was negatively related to community satisfaction (Estes, 2004). Often housing affordability appears in quality of life indices (ChildStats, 2003; Jarosz & Williams, 2004) because it is important to all segments of the population. One commonly used measure of housing affordability shows the proportion of households earning a median income that can afford the median priced home. An objective measure, this index of housing affordability has been used as a proxy for housing equity or opportunity among community residents.

Indices of this type often have been based on objective data drawn from aggregated community or state level statistics (Estes, 2004; Jarosz & Williams, 2004; Vrbca & Combs, 1993; Ziebarth et al., 1997). For example, Ziebarth and colleagues (1997) used vacancy ratios of rental units and owner-occupied units as availability measures and the portion of cost-burdened low-income renters or homeowners, those who are paying more than 30% of their income for housing, as an affordability measure. They revealed that the overall availability of housing in small communities was limited and affordability was one of greatest concerns for households regardless of community population growth or location. Community level research which objectively measures housing conditions has provided useful information for understanding community vitality (Crull & Cook, 2001), a community’s quality of housing (Vrbca & Combs, 1993), and quality of life (Estes, 2004; Jarosz & Williams, 2004).

Research typically includes an examination of both objective and subjective indicators to predict housing or community satisfaction (Crull, 1994; Parkes et al., 2002). Whereas the information from community level data, when objectively measured, are helpful for community leaders and policy makers to recognize strengths and/or weakness and to
advocate for political action, some scholars have pointed out the limitations of objective indicators based on aggregated, community-level statistics. Scholars such as Campbell (1976) and Calman (1984) have lamented that "quality of life can only be described and measured in individual terms, and depends on present life-style, past experience, hopes for the future, dreams and ambitions" (p. 124). They argued that quality of life is a subjective and multifaceted concept and, therefore, difficult to measure in its entirety. For many researchers the term "satisfaction" has been adopted as an umbrella concept for subjective well being or quality of life. Campbell (1976), Brief and Roberson (1989), and more recently Sirgy (2002) have all argued that the term "satisfaction" involves one's evaluation of salient life domains. A subjective evaluation of housing satisfaction is essential to understanding families' quality of life. Objective measures alone (i.e., affordability, crowding, expenditures) are inadequate.

The American Housing Survey in the U.S. and the Survey of England Housing in the U.K. represent national surveys on housing and include subjective indicators for both housing and neighborhood satisfaction. The American Housing Survey (AHS), a national, longitudinal survey on housing units and their current occupants, includes subjective measures of housing and neighborhood satisfaction ranging from 1 to 10 indicating the respondent’s evaluation on the current dwelling and the immediate neighborhood. However, ambiguity in the definition of neighborhood satisfaction was revealed by Barcus (2004). Barcus noted that, "Neighborhood is not defined by AHS; rather, respondents decide what is considered the ‘neighborhood’ and answer the question accordingly" (p. 649). Thus, for some people neighborhood is an exchangeable term for community.
Since the 1980s, a number of studies have used the AHS to better understand the housing needs of a variety of diverse groups of individuals and households (Barcus, 2004; Crull, 1994; Lu, 1997). With data drawn from the American Housing Survey, Crull (1994) explained subjective housing satisfaction with various demographic risk factors, environmental-objective components of housing and neighborhood satisfaction in nonmetropolitan communities in the United States. In Crull’s study, the objective measures of cost burden, crowding, and housing inadequacy were negatively related to housing satisfaction. Crull also found that housing satisfaction and neighborhood satisfaction were related. Other research with national data sets, such as the American Housing Survey (AHS) and the Survey of Housing in the U.K., also indicated that individuals’ appraisals of their community’s social infrastructure and their satisfaction with their housing were strong predictors of their evaluation of their neighborhoods (Barcus, 2004; Lu, 1999; Parkes et al., 2002).

Lu’s research (1999) revealed that an individual’s evaluation of his or her housing influenced his or her perception of the “whole desirability of the neighborhood.” Respondents who were least satisfied with their housing were least likely to be satisfied with their neighborhoods. Although residents in public housing were more likely to be satisfied with their housing than others in nonpublic housing units, they were less likely to be satisfied with their surroundings. Lu speculated that this dissatisfaction may be related to the lack of security in their neighborhoods.

Research by Parkes, Kearns, and Atkinson (2002) found a positive relationship between the subjective measure of housing satisfaction and neighborhood satisfaction: individuals who were less satisfied with their housing were three times more likely to be
dissatisfied with their neighborhoods. In the same study, individuals’ subjective appraisals of community features also influenced their neighborhood satisfaction. Rohe and Stegman (1994) conducted a comparison study of low-income families in Baltimore in which both objective and subjective housing indicators such as homeownership and ratings on housing quality significantly predicted self-esteem and life satisfaction. In the same study, a subjective measure of neighborhood satisfaction was included but its effect on life satisfaction was not significant (Rohe & Stegman, 1994).

Previous literature supports the notion that both objectively and/or subjectively rated housing characteristics, such as affordability, availability, and adequacy, affect housing satisfaction and further affect neighborhood and community satisfaction. In some studies the unit of analysis is the neighborhood, whereas in others it is the community or the neighborhood is interpreted to be the same as the community. Recently, Sirgy and Cornwell (2002) attempted to clarify the issue by suggesting that neighborhood satisfaction is a direct indicator of community satisfaction, and in their model, housing satisfaction influenced community satisfaction. In the following discussion, other determinants of community satisfaction are examined.

**Determinants of satisfaction with the community**

Satisfaction with the community has been linked to (1) individuals’ backgrounds—age, income, and residency history, and (2) community resources—its reserves of social, economic, and human capital. As discussed previously, evaluations of the community often are influenced by individuals’ subjective perceptions. These perceptions, in turn, depend on present-day life and past experiences as well as dreams and hopes for the future. Community
satisfaction is then, at least in part, a function of an individual’s socio-demographic and residential history.

**Individual characteristics**

Previous research has shown that individual characteristics such as age, education, income, and residence are related to community satisfaction. Older people, for example, are more likely to be satisfied with their community than younger people; similarly, they are more likely to be satisfied with local government services (Richmond et al., 2000), and more attached to their community (Benson, 2001). Older people also express more residential/neighborhood satisfaction (Lu, 1999) and, in turn, are more likely overall to be satisfied with their community (Filkins et al., 2000; Marans & Rodgers, 1975). Residential history affects community satisfaction (Benson, 2001; Brown, 1993; Filkins et al, 2000; Goudy, 1990; Richmond et al., 2000). The more years spent living in a community produces increases in community satisfaction and increases in affection for the community (Mesh & Manor, 1998).

While age and residual history are clearly related to community satisfaction, the relationship between an individual’s social status—education and income—and community satisfaction are less clear. Results have been mixed. For example, higher education and higher income have been shown to be related to higher levels of community satisfaction (Marans & Rodgers, 1975; Richmond et al., 2000). In other studies, these indicators are negatively related (Lu, 1999) or not significantly related to community satisfaction (Filkins et al., 2000). These differences may have been caused by different measures and/or different research contexts.
Community resources

Social capital – ties to networks and community organizations – has been shown to be a strong predictor of perceived community satisfaction in rural areas (Bruin & Cook, 1988; Filkins, Allen, & Cordes, 2000). In a study with rural Nebraskans, Filkins, Allen, and Cordes found that social attributes and human services within the community were strong predictors of community satisfaction. Despite different measures of social capital (i.e., acknowledging neighbors as friendly, having friends or relatives in the community, or trusting residents) studies have generally found that social capital increases community attachment (Liu et al., 1998; Mesh & Manor, 1998; Theodori & Luloff, 2001) and community satisfaction (Cook, 1988; Filkins et al., 2000; Shin, 1980; Sirgy & Cornwell, 2002). Only one study reviewed revealed that social capital did not predict community satisfaction (Brown, 1993).

Community economics appear to influence community satisfaction. Satisfaction with current employment opportunities (Brown, 1993) or community job security (Filkins et al., 2000) are positively related to community satisfaction. Commercial services and facilities are also predictors of community satisfaction in previous research (Cook, 1988; Pinkerton et al., 1995). In rural communities, the availability of nearby shops and facilities increases community satisfaction (Filkins et al., 2000; Vrbka & Combs, 1993) and, in turn, is a pull factor for migration (Barcus, 2004).

Local government services, including safety and police protection to street conditions or garbage collection, have been studied and related to community satisfaction. Safety (Cook, 1988; Parkes et al., 2002) and street conditions, (Parkes et al., 2002; Vrbka & Combs, 1993)
increase community satisfaction (Filkins et al., 2000; Shin, 1980). For example, Parkes et al. (2002) revealed that less crime, feeling secure, fewer problematic neighbors, and lower noise levels are related to more satisfaction with the community among respondents. In their study, housing satisfaction and social capital (i.e., friendliness, community spirit, and social and leisure activities) were significantly related to an individual’s community satisfaction levels (Parkes et al., 2002). The availability of parks or libraries (Cook, 1988; Vrbka & Combs, 1993) and public schools (Campbell et al., 1976; Filkins et al., 2000; Shin, 1980) has also been shown to increase community satisfaction.

In conclusion, the quality of community life – community satisfaction – has been and continues to be an important topic of research. Recent investigations have emphasized the importance of environmental or community context factors in predicting community satisfaction. Using multiple indicators can improve showing the dynamics of “how neighborhood features affect quality of life” (Sirgy & Cornwell, 2002). Although housing is an indicator of the quality of life, only a limited number of studies have been conducted that include the role of housing in quality of life. Furthermore, despite the prevalence of housing problems – affordability, availability, and adequacy – the serious social consequences have not been fully recognized either in research or among public policy makers. Housing’s role and influence on individuals’ well being, especially among children, is not yet understood. Only very recently has literature begun to emerge which suggests that housing problems can and do affect children’s quality of life. These studies are discussed in more detail in the following section.
Housing Problems and Children’s Quality of Life

“The affordable housing crisis affects far more people than some other social problems that get more media and political attention” (National Low Income Housing Coalition (NLIHC), 2004, p. 1). More than one-third of all people in the United States experience one or more housing problems such as high cost burden\(^1\), overcrowding\(^2\), or poor quality\(^3\) (AHS, 2005). The percentage of people with housing problems is much higher than the percentages of people without health insurance or without food security, which are the major focus of policy and public attention. Housing problems are more acute among low-income people, those earning less than the area median income (NLIHC, 2004). Of the total population of households with housing problems, 67% are defined as low income (less than 80% of the area median income) (NLIHC, 2004). Among low-income households with children, 80% reported housing problems in 2001 (Federal Interagency Forum on Child and Family Statistics [ChildStats], 2004). Children have become the largest group with low income and housing problems.

Children are considered most vulnerable to housing problems since: (1) they are not able to control their environment because their housing provisions are made by their parent(s); and (2) the adverse effects of housing problems have more immediate health implications as well as long-term consequences compared to adults. Housing problems impact children’s quality of life. Inadequate housing quality, overcrowding, excessive housing costs are conditions that may, in fact, be precursors to child maltreatment, illness,

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\(^1\) Housing expenditures are considered a burden if they exceed 30 percent or more of gross income.

\(^2\) By definition a housing unit is crowded if there is more than one person per room (excluding bathroom) residing in the unit.

\(^3\) Housing quality is defined as adequate or moderately or severely inadequate by the American Housing Survey.
failure to thrive, and poor developmental outcomes (DOCS4KIDS, 2001). Furthermore, unaffordable housing can also lead to housing instability and chronic mobility (Bartlett, 1997; Edin & Lein, 1997; Katz, King, & Liebman, 2001; Popkin, Eiseman, & Cove, 2004; Rubin, Erickson, Agustin, Cleary, Allen, & Cohen, 1996; Sard & Lubell, 2000).

**Unaffordable housing and children’s quality of life**

The most common housing difficulty among low-income families with children is cost burden. Current data reveal that 70% of these families had cost burdens and 39% have severe cost burdens; that is, they pay 50% or more of their income on housing expenditures (ChildStats, 2004). The economic constraints due to limited income and housing costs negatively affect resource distribution to children. As with households in general, housing that is not affordable exacerbates families’ economic strains and adversely influences their consumption of other basic necessities for their children (e.g., children’s food or clothing or child care) (Fisher et al., 2004; Taylor & Koblinsky, 1994). Consequently, among low-income families with children, it has been shown that high housing costs lead to inadequate nutrition and under development (Meyers et al., 1995, 1993). Compared to children from families who receive housing assistance, children from families on the waiting list were more frequently smaller and underweight (Meyers et al., 1995) and iron-deficit (Meyers et al., 1993). Due to the large share of housing cost in the family’s budget, they could not afford enough food even though they had food subsidies.

“Chronic mobility” is also common among extremely low-income families with children (Edin & Lein, 1997). Housing instability negatively influences children’s academic achievement and increases behavioral problems (Rubin et al., 1996). Rubin and colleagues
revealed that unstable housing correlates with children’s below average grade performance and repeating a grade in school. Especially among adolescent boys, moving into poor quality housing negatively affects academic performance and behavior (Popkin, Eiseman, & Cove, 2004). In contrast, housing vouchers for families with children bolsters stability in housing and successful transition from welfare to work for parents (Sard & Lubell, 2000). Children’s long-term outcomes are also improved in adulthood. Housing stability achieved through housing vouchers improves children’s chances of receiving a college education or full-time employment (Rubinowitz & Rosenbaum, 2000).

Positive effects of housing subsidies and community contexts on children’s quality of life have been clearly shown in research drawn from the Gautreaux Program data. The Gautreaux Program was initiated in 1994 by the U.S. Department of Housing and Urban Development to desegregate public housing. The “Moving to Opportunity Program” was enacted in five cities across the country. Children and youth from families living in inner-city public housing received vouchers to move into neighborhoods with lower poverty rates beyond the central city. Participants had high educational achievement and superior physical and mental health (Katz, King, & Liebman, 2001) compared to youth who did not move. Male youth also had fewer arrests for violent crimes compared to their counterparts (Ludwig, Duncan, & Hirschfield, 2001).

In contrast, when housing is unaffordable families can end up homeless (Fisher et al., 2004). In 2000, more than 5 million children were placed in out-of-home care and 30% of out-of-home placements were due to a lack of housing: the children could be reunited with their families if and when they had safe, affordable housing (Harburger, 2004). Harburger revealed that the housing subsidy program was a much more cost-effective program than
foster care. It was shown that it costs $2.76 billion per year to maintain the 30% of children in foster care with supportive services whereas it would cost $816 million per year to provide instead subsidized housing and services for them.

**Poor housing conditions and children’s quality of life**

Poor housing has been shown to relate to a high risk of children’s maltreatment (Ernst, Meyer, & DePanfilis, 2004; Martin & Walters, 1982), behavioral problems (Evans, Lercher, & Kofler, 2002; Popkin, Eiseman, & Cove, 2004) and poor physical development or health conditions (Campbell, Schwarz, Rich, & Dockery, 2003; Comey, 2004; DOC4KIDS, 2001; Simons, Butz, Egglestone, et al., 2005). Drake and Pandey (1996) studied the influences of neighborhood poverty on the types of child abuse reported using Child Protective Services data (CPS). Their study with 185 zip codes revealed that neighborhood poverty influences a high risk of child maltreatment whereas a proportion of home ownership or proportion of occupied units in the community are not significantly related to the risk of child maltreatment.

**Child maltreatment**

Research conducted with household/family data revealed significant relationships between housing and child maltreatment (Ernst, Meyer, & DePanfilis, 2004; Martine & Walters, 1982). Unsafe housing condition, such as the presence of rats or mice, dangerous physical condition of housing, and/or the loss of at least one essential utility, related significantly to children’s maltreatment (Ernst et al., 2004). Children living in unsafe housing conditions are less likely to have sufficient food, adequate personal hygiene and clean clothing. Crowding also is a significant predictor for child neglect or inadequate physical
care (Martine & Walters, 1982). An advocate organization for poor children (DOC4KIDS, 2001) reported that poorly maintained housing causes children’s injuries and death. For example missing radiator covers or insufficient insulation over pipes frequently lead to children’s burns. Parents living in poor housing conditions reported more frequent punitive measures are taken with children to minimize problems and injuries associated with playing in an unsafe environment (Pelton, 1994).

**Behavioral problems**

Children’s behavior is related to poor housing conditions. Children’s behavior is often indicative of their emotional well being or mental health; children under stress are more likely to act out (Leventhal & Brooks-Gunn, 2001). One epidemiological study on extremely low-income households with housing problems, such as crowding and inadequate physical conditions, revealed that more than 75% of the children from these households had one or more reported behavior problems (Popkin, Eiseman, & Cove, 2004). Another study conducted in Austria showed similar results (Evans, Lercher, & Kofler, 2002). In the study with 1,236 Austrian children, teachers reported more behavioral problems among children living in more crowding homes compared to those from less crowded homes. Residential density was also related to children’s psychological health: children from less crowded homes and with more space to play (i.e., private yard) showed better scores on a standardized self-report index of psychological health.

**Cognitive development**

Several investigations have shown that children’s cognitive development as well as psychological well being is impacted by their housing environment (Evans et al., 2001).
Evans, Saltzman, and Cooperman (2001) conducted a study with 277 children in rural upstate New York. In their study, housing condition was measured by examining child resources (i.e., toys, books), cleanliness/clutter, indoor climate conditions, privacy, hazards, and physical quality (i.e., heat broken down or stairs are loose or no handrails). After controlling for the household’s income, poor housing quality was significantly related to higher levels of psychological distress and to lower levels of persistence in solving puzzles among the children (Evans et al., 2001). Peterson, Maier, and Seligman (1993) also warned that housing inadequacy molds children’s negative attitudes such as learned helplessness. They explained that chronic exposure to adverse housing conditions over which one has little control can lead to a sense that one cannot alter one’s surroundings. The belief that one’s actions have little effect on the environment appears to be a central tenet of learned helplessness (Peterson, Maier, & Seligman, 1993).

**Respiratory illness**

Living in housing of poor quality can have serious repercussions for residents’ physical health, especially children (Comey, 2004). Dust mites from old carpeting, infestations of cockroaches, rats and mice, and inadequate heating and hot water are factors related to increased incidences of asthma and other respiratory disease among children (DOC4KIDS, 2001). For example, high levels of airborne mouse allergens can trigger children’s asthma and over time sensitivity is heightened (Simons, Butz, Egglestone, et al, 2005). In addition to airborne allergens, poor heating and hot water systems can increase the incidences of respiratory infection among young children which can develop into asthma (DOC4KIDS, 2001). For example, children living in distressed, severely inadequate public
housing were in worse physical health than other poor children in a national sample (Comey, 2004). They were more likely to be diagnosed with asthma: the prevalence of asthma among older HOPE VI (a HUD program for low income households) children was nearly twice the national average (Comey, 2004).

**Lead poisoning**

Toxins in house dust are a major hazard for children who spend more time at home than adults. Previous studies have shown that house dust contains lead, allergens and pesticides that are hazardous to children’s health. McCauley and colleagues (2001) studied children’s exposure to pesticides in migrant agricultural families in Oregon. They found that the largest number and highest concentrations of pesticides are found in household dust compared to air, soil and food. A study among low-income housing residents in Philadelphia found that lead contaminated house dust causes lead poisoning of children (Campbell, Schwarz, Rich, & Dockery, 2003). This investigation also revealed that free professional cleaning services significantly reduces the lead levels in children’s blood (Campbell et al., 2003).

Another common source of lead exposure for children is drinking water. Drinking water from contaminated wells or old faucets in old housing units in rural areas is also related to higher incidences of lead poisoning (Buchanan & Meyer, 2005; Shaffer, Kincaid, Endres, & Weitzman, 1996). For children living in rural areas, having parents who are migrant farm workers and living in old rental housing units are risk factors associated with increases in lead poisoning (Shaffer et al., 1996). Lead poisoning causes various health problems such as abdominal pain, anemia, nerve damage and even worse, brain damage (DOC4KIDS, 2001).
Overall it is very clear that poor housing threatens children’s quality of life. Housing cost burden, overcrowding and poor physical condition negatively affect children’s well being. Cost burden is prevalent in low income families with children and negatively affects resource distribution to children. The basic necessities for children are often sacrificed for housing cost, resulting in inadequate nutrition and under development among children from the families with severe cost burden. Cost burden also is related to housing instability, overcrowding and poor physical housing conditions. These housing problems then negatively influence children’s behaviors, cognitive development, academic achievement, and health conditions.

Conclusions

In current research on the quality of life, the contextual/environmental influences – housing and community – have become important themes. Two theoretical approaches which emphasize the effects of community context on human development and overall quality of life were reviewed: Bronfenbrenner’s Human Development Theory and Spillover Theories in the Quality of Life. In research on the quality of life, both perspectives emphasize the importance and usefulness of subjective measures in research on the quality of life.

As research on quality of life has evolved, the role of housing as a social and individual indicator of well being has received attention. In previous research, both objectively and/or subjectively rated housing characteristics affected housing satisfaction and community satisfaction. The subjective measure of the quality of community life – community satisfaction – appears to be useful and popular in research, although the definitions of community and neighborhood have not been clearly agreed upon among
scholars. Most of the previous research used a single indicator to measure community satisfaction. Recently multiple indicators to measure community satisfaction were adopted by a few scholars such as Sirgy and Cornwell (2002) and Theodori (2001). Community satisfaction was determined by individual characteristics such as age, income, education and residency, and by community resources such as social capital, community economics and local government services. However, the concept of community satisfaction has yet to be fully investigated. Current research, such as that conducted in the present study, undoubtedly will continue to employ more advanced analysis techniques than previous research to probe complex relationships between variables.

Housing problems are prevalent in society, yet not well recognized nor understood by public policy makers. The literature review revealed that low-income families with children have more frequent and chronic housing problems. A lack of affordable housing as well as overcrowding and/or poor housing conditions negatively influences various aspects of children’s development, causing physical, cognitive, and behavioral problems. Clearly, the influence of housing on childhood outcomes should receive more focused attention in future research efforts.

References


CHAPTER 3. EXPLAINING COMMUNITY SATISFACTION AMONG RURAL RESIDENTS: AN INTEGRATED MODEL

A paper to be submitted to the Journal of Social Indicators

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Abstract

The purpose of this research was to explore the relationships among housing satisfaction, community attachment and community satisfaction and the complex mechanisms involved in predicting community satisfaction among residents in rural communities. The role of housing satisfaction and community attachment in predicting community satisfaction was of particular interest. A structural equation model of community satisfaction was tested with mail survey data drawn from a randomly selected rural sample of 974 households. The results of this study confirmed the influences and mediating role of community attachment and housing satisfaction in predicting community satisfaction. “Spillover” effects from “lower levels of life concerns” (e.g., satisfaction with local services, assessment of current housing conditions) in perceived community satisfaction were found that support previous research (Sirgy & Cornwell, 2002, p. 127).

Introduction

Community and housing satisfaction continue to be important areas of research because of their impact on overall quality of life. Individual well-being is affected by satisfaction with specific life domains such as housing, family relationships and community features (Campbell, Converse, & Rodgers, 1976; Sirgy & Cornwell, 2002). Dissatisfaction with housing or community is related to increased levels of stress (Landale & Guest, 1985; Leventhal & Brook-Gunn, 2003) and may motivate subsequent decisions to relocate among...

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households (Landale & Guest, 1985; Lu, 1998; Speare, 1974). The market for housing is driven by families’ preference for and satisfaction with specific housing characteristics. The quality and affordability of available housing have been reported as major “pull” factors in mobility decisions (Barcus, 2004; Lu, 1998). In short, where people live and how they feel about the location is important to individuals and families.

At the community level, planners and policymakers want to know what makes a community attractive: what existing residents prefer, and what draws newcomers to the community. Community attachment and community satisfaction have been linked in previous literature (Fledman, 1990; Goudy, 1977; Mesh & Manor, 1998). However, surprisingly few attempts in previous research have been made to examine the relationship between community satisfaction and housing satisfaction (Maynard, Kelsey, Thee, & Fousekis, 1997; Sirgy & Cornwell, 2002). Furthermore, investigations have not been conducted to uncover the structural dynamics among the variables housing satisfaction, community attachment and community satisfaction in an integrated model. Thus, the purpose of this study was to fill that void. The research goals were to: (1) identify the relationships among housing satisfaction, community attachment, and community satisfaction; and (2) understand better the complex mechanisms involved in predicting community satisfaction as well as housing satisfaction and community attachment among residents in rural communities.

**Conceptual Model: An Integrated Model of Community Satisfaction**

The conceptual model in this study draws from previous studies that have examined the predictors of community satisfaction (Benson, 2001; Filkins, Allen, & Cordes, 2000; Shin, 1980; Vrbka & Combs, 1993), housing satisfaction (Bruin & Cook, 1998; Crull &
Cook, 2000; Parkes, Kearns, & Atkinson, 2002; Sweaney, Manley et al., 2004), and community attachment (Benson, 2001; Filkes et al., 2000; Fledman, 1990; Goudy, 1977, 1990; Liu, Ryan, Aurbah & Besser, 1998; Mesh & Manor, 1998). The logic of causality in the conceptual model is developed based on the theoretical framework of “spillover theory” (Sirgy & Cornwell, 2002; Sirgy, Rahtz, Cicic, & Underwood, 2000). Sirgy and Cornwell (2002) explained that, “satisfaction with neighborhood features (social, economic, physical) affects life satisfaction through a hierarchy-of-satisfaction – satisfaction with neighborhood features impacts neighborhood satisfaction, which in turn affects community satisfaction and housing satisfaction” (p. 79). The hypotheses inherent in the model, however, were not tested by previous researchers. The current investigation relies on this logic for the conceptual model: neighborhood features impact individuals’ psychological response (attachment) to their community and therefore impacts housing satisfaction: both of which (community attachment and housing satisfaction), affect community satisfaction.

**Housing and community satisfaction**

The previous literature is replete with examples of revitalization and economic development strategies that include attention to community housing needs (Benson, 2001; Sweaney et al., 2004). A recent report about rural community revitalization strategies suggests “tackling neglected and abandoned housing problems” (Parkes et al., 2002). Other research notes the impact of an aging housing stock, housing shortages, and affordability issues as critical barriers to economic development (Beamish, 1994; Benson, 2001; Crull & Cook, 2000; Sweaney et al., 2004; Ziebarth et al., 2000). Despite pervasive housing problems in rural communities, few investigations have been conducted on rural housing and its
relationship to community satisfaction. In previous research on community satisfaction, housing-related variables were included, such as physical conditions (Shin, 1980; Sirgy & Cornwell, 2002; Vrbka & Combs, 1993), housing value (Sirgy et al., 2000), tenure shifts (Barcus, 2004), and housing satisfaction (Crull, 1994). Related research has also indicated that dissatisfaction with inadequate housing is rated as an important reason for residential relocation, followed by housing cost, cost of living, and tenure shift (Maynard et al., 1997). In turn, housing satisfaction influenced neighborhood satisfaction (Lu, 1999), and neighborhood satisfaction was a direct indicator of community satisfaction (Sirgy & Cornwell, 2002).

**Community attachment and community satisfaction**

Length of residence is related to community attachment and community satisfaction (Benson, 2001; Filkes et al., 2001; Goudy, 1990). Residents who live more than ten years in a community are more likely to be emotionally attached to the community and express more community satisfaction than short-term residents. Similarly, individuals moving back to a community express stronger emotional attachment than new residents without histories in the community (Mesh & Manor, 1998). Nevertheless, the effects of length of residency on community satisfaction have been shown to diminish considerably when examined in a linear model with social capital variables (Benson, 2001; Filkins et al., 2000). Social capital is defined as social ties or social atmosphere, and has been shown to be a robust predictor of community attachment and community satisfaction. Social ties within a community vary according to the individual whereas social capital generally increases community attachment (Lu et al., 1998; Mesh & Manor, 1998; Theodori & Luloff, 2001). As people feel safe within
a community and acknowledge their neighbors as friendly, trustworthy, and supportive, they express greater community satisfaction (Cook, 1988; Filkins et al, 2000; Shin, 1980; Sirgy & Cornwell, 2002; Sirgy et al, 2000).

Community attachment and housing satisfaction

The linkage between housing satisfaction and community attachment has not been investigated. In this study, the current researchers hypothesized that that housing satisfaction is affected by community attachment based on the fact that community attachment is developed with personal investments (i.e., time, history, economic and social) in the community (Lu et al., 1998; Mesh & Manor, 1998; Theodori & Luloff, 2001) and, once these positive emotional bonds develop, toward a “place” – community attachment – influences the individuals’ appraisals of their housing. It was also hypothesized that those who express more community attachment may also be more satisfied with their housing or community.

Community economic conditions and community satisfaction

Community economic conditions, such as employment satisfaction (Brown, 1993; Filkins et al., 2000), and job security and job opportunities (Filkins et al., 2000), have been found to be important determinants of community satisfaction. Other economic features that have been shown to predict community satisfaction are the commercial services and facilities within a community. In rural communities previous investigations have shown that nearby commercial services strongly predict community satisfaction (Cook, 1998). For rural elderly with limited mobility, the availability of local shopping has also been related to community satisfaction (Hoppe, 1991; Pinkerton, Hassinger, & O’Brien, 1995). Overall, previous
research supports the notion that the availability of commercial services and facilities presents a strong “pull factor” for in-migration in rural communities (Barcus, 2004).

**Local government services and community satisfaction**

Local government services have also been shown to be related to community satisfaction. The availability of parks or libraries (Cook, 1988; Vrbka & Combs, 1993), and quality public schools (Campbell et al., 1976; Filkins et al., 2000; Shin, 1980) exhibit significant relationships with community satisfaction. However, the effects of government services on community satisfaction have varied according to previous research. Filkins et al. (2000) and Shin (1980) reported strong relationships between local government services and community satisfaction whereas Goudy (1977) and Richmond et al. (2000) failed to show similar relationships. Nevertheless, respondents from “rich” residential blocks were more satisfied with government services than were those from poorer blocks (Richmond et al., 2000), perhaps suggesting that services (e.g., sewage and garbage services) differ in quality according to household incomes.

The conceptual model tested in this investigation was based on the outcomes of previous research. The model used community satisfaction as the dependent variable, housing satisfaction (mediating) and community attachment (mediating) as endogenous variables, and length of residence, social capital, job opportunities, commercial services/facilities, and ratings on local government services as exogenous variables (predicting variables). Structure equation modeling (SEM) techniques were used to test the model. SEM techniques enable more sophisticated specification in the model of community satisfaction. This study assessed: (1) the dynamics among the variables including the
influences of both individual/household and community contexts on community satisfaction; (2) the mediating role of community attachment and housing satisfaction in predicting community satisfaction; and (3) the validity of the suggested model for the data. Multiple indicators were used to measure community attachment, housing satisfaction and community satisfaction in order to improve convergent and divergent validity in the measures. Most analytic methods in the past have not accounted for error resulting in limited explanatory power ($R^2$). By using multiple indicators and employing the SEM technique, this study included the error terms for a more precise analysis.

**Methodology**

**Data**

Data from the “Life in Iowa Project” were used to accomplish the research goals of this investigation. Data collection processes were reviewed and approved by the Iowa State University’s Human Subjects Committee. Following approval to conduct the study, data collection was completed in the spring of 2001 utilizing Dillman’s (1978) method of initial letter followed by the survey, then a postcard reminder to non-respondents followed with another copy of the survey. The sample consisted of 300 individuals randomly selected from each of seven counties in Iowa for a sample of 2,100. The seven counties were selected according to their geographic location and adjacency to metropolitan counties. The overall response rate was 67%. In this investigation only responses from nonmetropolitan counties were included in the data analysis; metropolitan counties and unknown counties were, resulting in a total sample of 974 responses.
The majority of respondents were Caucasian/White (98%), married (92%), and men (72%). Approximately 34% had a high school degree, and the majority had at least some college (53.6%). The majority of respondents were employed full time (80%); only 7% were retired. The median age of this sample was 47, which is similar to the state’s median age when adjusted for the age range of respondents, 21 to 94. One-third of the respondents reported $30,000-49,999 of total household income in 1999; 5% reported $50,000-69,000; 19.4% reported $15,000-29,000; and 12% reported $70,000-99,999. The median income of the sample was in the range of $30,000-49,999, whereas the midpoint of the state’s median income range in 1999 was $39,999 (U.S. Bureau of the Census, 2005).

**Data analysis and variable measurement**

To evaluate the relationships among housing satisfaction, community attachment and community satisfaction, and to test the effects of predictors on the three endogenous variables, structural equation modeling analyses (LISREL, ver. 8.5) were employed. Structural equation analyses enable researchers to: (1) test several specified causal relationships simultaneously; (2) postulate several alternative models, to identify a model that most appropriately explains the data; and (3) incorporate error terms into the analyses to account for problematic features of linear analysis such as autocorrelations, error variances of observed variables, or measurement errors (Joreskog, 1993). A correlation matrix was produced to examine the relationships between all observed variables (Table 1). Three latent constructs: housing satisfaction, community attachment and community satisfaction, were examined and then the overall measurement model with all indicators was tested (Table 2).
Table 1. Correlation Matrix of the Community Satisfaction Model (N=974)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Overall Community Satisfaction</td>
<td>1.00</td>
<td>0.4433**</td>
<td>0.5051**</td>
<td>0.2133**</td>
<td>0.1951**</td>
<td>0.4336**</td>
<td>0.4833**</td>
<td>0.0531</td>
<td>0.2077**</td>
</tr>
<tr>
<td>2. Overall satisfaction on government services</td>
<td>0.44</td>
<td>1.0000</td>
<td>0.4907**</td>
<td>0.1896**</td>
<td>0.1316**</td>
<td>0.2381**</td>
<td>0.2148**</td>
<td>0.0531</td>
<td>0.1544**</td>
</tr>
<tr>
<td>3. Overall satisfaction on services/ facilities</td>
<td>0.50</td>
<td>0.4907**</td>
<td>1.0000</td>
<td>0.2579**</td>
<td>0.1981**</td>
<td>0.3526**</td>
<td>0.3238**</td>
<td>0.1276**</td>
<td>0.2671**</td>
</tr>
<tr>
<td>4. Overall satisfaction on housing</td>
<td>0.21</td>
<td>0.1896**</td>
<td>0.2579**</td>
<td>1.0000</td>
<td>0.3761**</td>
<td>0.2462**</td>
<td>0.1993**</td>
<td>0.0425</td>
<td>0.1295**</td>
</tr>
<tr>
<td>5. Emotional attachment to current housing</td>
<td>0.19</td>
<td>0.1316**</td>
<td>0.1981**</td>
<td>0.3761**</td>
<td>1.0000</td>
<td>0.3615**</td>
<td>0.5617**</td>
<td>0.2148**</td>
<td>0.0242</td>
</tr>
<tr>
<td>6. Feel at home in your community</td>
<td>0.43</td>
<td>0.2381**</td>
<td>0.3526**</td>
<td>0.2462**</td>
<td>0.3615**</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Sorry to leave your community</td>
<td>0.48</td>
<td>0.2148**</td>
<td>0.3238**</td>
<td>0.1993**</td>
<td>0.3615**</td>
<td>0.5617**</td>
<td>1.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Length of residence in the current community</td>
<td>0.06</td>
<td>0.0531</td>
<td>0.1276**</td>
<td>0.0425</td>
<td>0.1633**</td>
<td>0.2283**</td>
<td>0.1804**</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>9. Current housing condition</td>
<td>0.09</td>
<td>0.0627</td>
<td>0.1277**</td>
<td>0.4311**</td>
<td>0.2539**</td>
<td>0.1511**</td>
<td>0.1043**</td>
<td>0.0142</td>
<td>1.0000</td>
</tr>
<tr>
<td>10. Community housing capital scale</td>
<td>0.21</td>
<td>0.1544**</td>
<td>0.2671**</td>
<td>0.1295**</td>
<td>0.0242</td>
<td>0.1087**</td>
<td>0.1230**</td>
<td>0.0000</td>
<td>0.0241</td>
</tr>
<tr>
<td>11. Employment opportunities scale</td>
<td>0.21</td>
<td>0.1416**</td>
<td>0.1756**</td>
<td>0.0546</td>
<td>0.0905**</td>
<td>0.0858**</td>
<td>0.1294**</td>
<td>0.0397</td>
<td>0.0582</td>
</tr>
<tr>
<td>12. Commercial services index</td>
<td>0.12</td>
<td>0.1944**</td>
<td>0.3087**</td>
<td>0.0230</td>
<td>0.0230</td>
<td>0.0844**</td>
<td>0.0802*</td>
<td>0.1149**</td>
<td>0.0066</td>
</tr>
<tr>
<td>13. Ratings on local government services scale</td>
<td>0.37</td>
<td>0.4928**</td>
<td>0.4975**</td>
<td>0.1876**</td>
<td>0.1794**</td>
<td>0.3041**</td>
<td>0.2556**</td>
<td>0.1758**</td>
<td>0.1221**</td>
</tr>
<tr>
<td>14. Social capital scale</td>
<td>0.45</td>
<td>0.3393**</td>
<td>0.4012**</td>
<td>0.1650**</td>
<td>0.1632**</td>
<td>0.3991**</td>
<td>0.3811**</td>
<td>0.0652*</td>
<td>0.0712*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variables</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Community housing capital Scale</td>
<td>1.00</td>
<td>0.1841**</td>
<td>0.0748*</td>
<td>0.2776**</td>
<td>0.1959**</td>
</tr>
<tr>
<td>11. Employment Opportunities Scale</td>
<td>0.18</td>
<td>1.0000</td>
<td>0.0434</td>
<td>0.1459**</td>
<td>0.1510**</td>
</tr>
<tr>
<td>12. Commercial Services Index</td>
<td>0.07</td>
<td>0.0434</td>
<td>1.0000</td>
<td>0.1924**</td>
<td>0.0784*</td>
</tr>
<tr>
<td>13. Ratings of local government services scale</td>
<td>0.28</td>
<td>0.1459**</td>
<td>0.1924**</td>
<td>1.0000</td>
<td>0.3424**</td>
</tr>
<tr>
<td>14. Social Capital Scale</td>
<td>0.19</td>
<td>0.1510**</td>
<td>0.0784*</td>
<td>0.3424**</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed)  * Correlation is significant at the 0.05 level (2-tailed)
<table>
<thead>
<tr>
<th>Latent Construct</th>
<th>Factor Loading</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>Item/Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Community Satisfaction</strong></td>
<td>1 (0.68)</td>
<td>-.775</td>
<td>.253</td>
<td>9 point measure of overall community satisfaction (CS1);</td>
</tr>
<tr>
<td>(Global)</td>
<td>0.93* (0.64; 16.96)</td>
<td>-.504</td>
<td>.105</td>
<td>overall satisfaction of government services (CS2);</td>
</tr>
<tr>
<td></td>
<td>1.11* (0.76; 19.43)</td>
<td>-.760</td>
<td>.260</td>
<td>overall satisfaction of services and facilities (CS3)</td>
</tr>
<tr>
<td><strong>Housing Satisfaction</strong></td>
<td>1 (0.70)</td>
<td>-1.42</td>
<td>1.88</td>
<td>9-point measure of overall housing satisfaction (HS1);</td>
</tr>
<tr>
<td></td>
<td>0.78* (0.55; 11.81)</td>
<td>- .876</td>
<td>.118</td>
<td>emotional attachment to current dwelling (HS2)</td>
</tr>
<tr>
<td><strong>Community Attachment</strong></td>
<td>1 (0.77)</td>
<td>-1.18</td>
<td>1.2</td>
<td>5 points ordinal measure / 1 (definitely no) – 5(4) (definitely: very sorry to</td>
</tr>
<tr>
<td></td>
<td>0.95* (0.73; 17.18)</td>
<td>-1.13</td>
<td>1.3</td>
<td>leave): feel “at home” in your community (CA1): sorry or pleased to</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>leave? (CA2)</td>
</tr>
<tr>
<td><strong>Validity test for latent constructs (Measurement Model)</strong></td>
<td></td>
<td></td>
<td></td>
<td>Goodness of fit index; $\chi^2 = 116.37$ df=11 (&lt;0.001); CN=218; GFI = .97</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AGFI = .92</td>
</tr>
<tr>
<td><strong>Exogenous Variable</strong></td>
<td><strong>Internal Consistency</strong></td>
<td>Skewness</td>
<td>Kurtosis</td>
<td>Item/Measure</td>
</tr>
<tr>
<td></td>
<td><strong>(p-value)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Scale’s Mean &amp; SD</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Length of Residence</strong></td>
<td>Mean: 24.83; SD: 15.18</td>
<td>.474</td>
<td>-.326</td>
<td>Continuous variable: years in current community</td>
</tr>
<tr>
<td><strong>Current Housing Condition</strong></td>
<td>Mean: 3.85; SD: .78</td>
<td>-.330</td>
<td>-.187</td>
<td>Ordinal 5 point measure, very poor (1) to excellent (5)</td>
</tr>
<tr>
<td><strong>Housing Capital Scale</strong></td>
<td>.74 (.000)</td>
<td>-.09</td>
<td>-.30</td>
<td>9-point measure ranging 1 (strongly agree) – 9 (strongly disagree): Has too</td>
</tr>
<tr>
<td></td>
<td>Mean: 5.53; SD: 1.74</td>
<td></td>
<td></td>
<td>much poor, dilapidated housing; Has too much vacant, abandoned housing;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Has too much old housing</td>
</tr>
<tr>
<td><strong>Employment Opportunity</strong></td>
<td>.81 (.000)</td>
<td>.812</td>
<td>-.165</td>
<td>9-point measure of strongly agree (1) – strongly disagree (9): too many</td>
</tr>
<tr>
<td><strong>Scale</strong></td>
<td>Mean: 3.18; SD: 1.85</td>
<td></td>
<td></td>
<td>low paying jobs; not enough new job opportunities this community: needs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>to attract jobs for skilled laborers and professionals</td>
</tr>
</tbody>
</table>
Table 2. (Continued)

<table>
<thead>
<tr>
<th>Exogenous Variable</th>
<th>Internal Consistency (p-value)</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>Item/Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Scale’s Mean &amp; SD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial Service Index</td>
<td>.7155 (0.00)</td>
<td>-1.23</td>
<td>1.52</td>
<td>Yes/No (1/0) and sum up of 12 services: medial services, dental services, drug stores items, hair cuts/care, hardware items, recreation, banking, gasoline for vehicle, dining, groceries shopping, clothing shopping, church.</td>
</tr>
<tr>
<td>Mean: 9.09; SD: 2.58</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ratings on Local Government Services Scale</td>
<td>.7983 (.000)</td>
<td>-.37</td>
<td>.62</td>
<td>4 point-ordinal measure; ranging 1 (poor) – 4 (very good):</td>
</tr>
<tr>
<td>Mean: 2.76; SD: .557</td>
<td></td>
<td></td>
<td></td>
<td>Sum divided by # of available services: police protection / Condition of Street/ Water / Fire protection / condition of parks / garbage collection / emergency response service</td>
</tr>
<tr>
<td>Social Capital Scale</td>
<td>.73 (.000)</td>
<td>-.18</td>
<td>-.128</td>
<td>9 point measure, ranging from Unfriendly (1) to friendly (9); indifferent (1) to supportive (9); boring (1) to exciting (9) and Not trusting (1) to trusting (9)</td>
</tr>
<tr>
<td>Mean: 5.52; SD: 1.51</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Validity test for predictors and latent constructs (Measurement Model 2)</td>
<td></td>
<td></td>
<td></td>
<td>Goodness of Fit Indices: $\chi^2 = 272.39$ df = 32 (&lt;0.001); CN = 192 : GFI = 0.96 : AGFI = 0.88</td>
</tr>
<tr>
<td>Validity test for Community Satisfaction Model (Nested and parsimonious Structural Equation Model)</td>
<td></td>
<td></td>
<td></td>
<td>Goodness of Fit Indices: $\chi^2 = 288.98$ df = 57 (&lt;0.001); CN = 286.30 : GFI = 0.96 : AGFI = 0.93</td>
</tr>
</tbody>
</table>
The three endogenous variables were latent variables measured with multiple indicators (Table 2). For community satisfaction, three indicators of overall satisfaction measures were used: (1) feelings about the community; (2) overall quality of government services; and (3) overall quality of services and facilities in the community. The items were rated on a 9-point set of ordered categories ranging from very dissatisfied (1) to very satisfied (9). Two indicators were used for community attachment: “feel at home in the community” and “sorry to leave” using ordinal measures (i.e., 1=very pleased to leave 5=very sorry to leave). For housing satisfaction, two indicators were used: feelings about current residence and emotional attachment to the dwelling. Both were measured with a 9-point set of ordered categories ranging from 1 to 9 (i.e., 1=very dissatisfied to 9 very satisfied). The skewness and Kurtosis scores of all indicators fell within the acceptable range, indicating the normality assumption was not violated. Seven predictor variables, drawn from both the individual/household and community contexts, were employed in the model. Each of the variables and their measurement worthiness is illustrated in Table 2.

**Results**

This study used multiple indicators to measure community satisfaction. Construct validity for the measure was tested. Table 2 illustrates the significance of factor loadings for each indicator, goodness of fit, and evidence of construct validity using LISREL. A nested and parsimonious model was identified, proceeding from a fully recursive model. The relationships (paths) among the constructs of the model were tested using LISREL (Figure 1).
* significant at the 0.05 level of t-value (t>2)

Figure 1. Structure Equation Model for Community Satisfaction with standardized coefficients
Length of residence had a significant path to community attachment ($\beta=.20$). The decomposition of effects (Table 3) indicates that length of residence had a significant indirect effect on housing satisfaction and community satisfaction through community attachment. The variable housing conditions also had a significant path to community attachment and to housing satisfaction ($\beta = 0.11$ and 0.49, respectively), and indirectly impacted community satisfaction ($\beta = 0.08$).

The influence of community context was tested. Community housing stock had a significant path to community satisfaction ($\beta = 0.08$), and a positive path to housing satisfaction which was not significant ($\beta = 0.05$). The predictor variables measuring economic infrastructure in the community, employment opportunities and commercial services, significantly affected only community satisfaction not community attachment or housing satisfaction ($\beta = 0.10$ and 0.18, respectively). The ratings on local government’s services significantly affected community attachment and community satisfaction with standardized path coefficients ($\beta$s) of 0.18, and 0.36, respectively. It positively affected housing satisfaction but the path was not significant ($\beta = 0.06$, respectively). However, the ratings on local government’s services had a significant indirect effect on housing satisfaction, with a standardized effect size of 0.07 through community attachment. In addition, the local government’s services variable was significantly correlated with other predictors such as length of residence, housing condition, housing capital, employment opportunities, and commercial services in the model. Social capital established importance in predicting community attachment and community satisfaction ($\beta = 0.43$ and 0.22, respectively). The
Table 3. Decomposition Table of Community Satisfaction Model
(Standardized Solution)

<table>
<thead>
<tr>
<th>Regression Weight</th>
<th>Effect (t-value)</th>
<th>Total (TE)</th>
<th>Direct (DE)</th>
<th>Indirect (IE)</th>
<th>DE % of TE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LResidence =&gt; CAttach</td>
<td>0.20 6.11*</td>
<td>0.20 6.11*</td>
<td>0.20 6.11*</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>HScondition =&gt; CAttach</td>
<td>0.11 3.41*</td>
<td>0.11 3.41*</td>
<td>0.11 3.41*</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>PublicServ =&gt; CAttach</td>
<td>0.18 4.99*</td>
<td>0.18 4.99*</td>
<td>0.18 4.99*</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>SocCapital =&gt; CAttach</td>
<td>0.43 12.04*</td>
<td>0.43 12.04*</td>
<td>0.43 12.04*</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>LResidence =&gt; HouSat</td>
<td>0.08 5.11*</td>
<td>0.08 5.11*</td>
<td>0.08 5.11*</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>HScondition =&gt; HouSat</td>
<td>0.54 13.51*</td>
<td>0.49 12.53*</td>
<td>0.05 3.16*</td>
<td>91%</td>
<td></td>
</tr>
<tr>
<td>HSCondition =&gt; HouSat</td>
<td>0.05 1.42</td>
<td>0.05 1.42</td>
<td>--</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>PublicServ =&gt; HouSat</td>
<td>0.13 3.29*</td>
<td>0.06 1.39</td>
<td>0.07 4.29*</td>
<td>46%</td>
<td></td>
</tr>
<tr>
<td>SocCapital =&gt; HouSat</td>
<td>0.18 7.35*</td>
<td>-- --</td>
<td>0.18 7.35*</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>CAttach =&gt; HouSat</td>
<td>0.42 8.32*</td>
<td>0.42 8.32*</td>
<td>--</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>LResidence =&gt; ComSat</td>
<td>0.07 5.01*</td>
<td>-- --</td>
<td>0.07 5.01*</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>HScondition =&gt; ComSat</td>
<td>0.08 3.77*</td>
<td>-- --</td>
<td>0.08 3.77*</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>HSCondition =&gt; ComSat</td>
<td>0.09 3.03*</td>
<td>0.08 2.86*</td>
<td>0.00 1.19</td>
<td>88%</td>
<td></td>
</tr>
<tr>
<td>EmpOpp =&gt; ComSat</td>
<td>0.10 3.56*</td>
<td>0.10 3.56*</td>
<td>--</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Commercial =&gt; ComSat</td>
<td>0.18 6.61*</td>
<td>0.18 6.61*</td>
<td>--</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>PublicServ =&gt; ComSat</td>
<td>0.43 12.72*</td>
<td>0.36 10.88*</td>
<td>0.07 4.62*</td>
<td>84%</td>
<td></td>
</tr>
<tr>
<td>SocCapital =&gt; ComSat</td>
<td>0.37 11.55*</td>
<td>0.22 6.29*</td>
<td>0.15 6.80*</td>
<td>59%</td>
<td></td>
</tr>
<tr>
<td>CAttach =&gt; ComSat</td>
<td>0.34 7.78*</td>
<td>0.31 6.13*</td>
<td>0.04 2.16*</td>
<td>91%</td>
<td></td>
</tr>
<tr>
<td>HousSatis =&gt; ComSat</td>
<td>0.09 2.18*</td>
<td>0.09 2.18*</td>
<td>--</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

* t > 2

KEY: ComSat = Community Satisfaction; HouSat = Housing Satisfaction; CAttach = Community Attachment; LResidence = Length of Residence; HScondition = current housing condition; HSCapital = Community housing capital; EmpOpp = Community employment opportunities; Commercial = Community commercial services and facilities; PublicServ = Ratings on community public services; SocCapital = Community Social Capital.
social capital variable also had a significant indirect effect on housing satisfaction (0.18) through community attachment.

Community attachment positively affected both housing satisfaction and community satisfactions, and housing satisfaction also positively affected community satisfaction, although the effect was small. The standardized path coefficient from community attachment to housing satisfaction and community satisfaction was 0.42 and 0.31, respectively. However, the standardized path coefficient from housing satisfaction to community satisfaction was 0.09.

Overall, this nested model of community satisfaction fit the data well. The estimates of squared multiple correlations ($R^2$) for the three endogenous variables were .36 for community attachment, .52 for housing satisfaction, and .70 for community satisfaction. Seventy percent of the total variance of community satisfaction was explained by the predictors in the nested model.

**Discussion and Conclusions**

In previous research, community satisfaction, housing satisfaction, and community attachment were key concepts in the explanation of family environment and family well-being. However, the previous studies did not attempt to determine the relationships among these concepts using an integrated model. The SEM results confirmed the influences of community attachment and housing satisfaction on perceived community satisfaction. The more attached to a community, the more likely respondents were to be satisfied with their dwelling and with their community. Housing satisfaction also significantly affected
community satisfaction, although its effect size was not large. Respondents who were more satisfied with their housing were also more satisfied with their community environment.

These results indicated a “spillover” effect from one domain to another in perceived satisfaction. For example, the spillover of an individual’s subjective satisfaction with his or her dwelling characteristics and assessment of the resources in the public community context accounted for effects on housing satisfaction, which in turn affected community satisfaction. The large effects of community attachment on housing satisfaction and community satisfaction imply “spillover” of the individual’s satisfaction, in the personal psychological domain, to the physical domain. This finding supports previous research on housing satisfaction (Bruin & Cook, 1999), which reported the influences of psychological measures of individuals and physical measures of housing characteristics on housing satisfaction. In addition, the results of the current study confirmed the bottom-up spillover theory posited by Sirgy and Cornwell (2002) in which the individual’s satisfaction with specific sub-domains (e.g., housing capital, economic infrastructure, local government’s public services, and social capital) significantly predicted an individual’s perceived community satisfaction.

Previous studies of residential satisfaction asserted that different factors predict housing satisfaction and community satisfaction (Bruin & Cook, 1999; Crull et al., 1991). The assertion was also supported by the current study. However, the predicting dynamics of the three endogenous variables were different. For example, all of the community context predictor variables had significant direct effects on community satisfaction whereas only housing condition had significant direct effects on housing satisfaction.

Social capital was important in the model because it had a large effect on all of the endogenous variables of this study. A friendly, supportive, trustworthy, and exciting
community atmosphere positively influenced not only the individual’s community attachment and community satisfaction, but also indirectly influenced housing satisfaction. This finding confirms previous studies on attachment to community (Benson, 2001; Brown, 1993; Goudy, 1990; Vrbka & Combs, 1993) and community satisfaction (Cook, 1988; Filkins et al., 2000; Sirgy & Cornwell, 2002). Furthermore, a positive and significant correlation between social capital and length of residence was found in the current study. The length of residence was another strong predictor of community attachment in the current model. This finding confirms previous studies on community attachment (Lu et al., 1998; Theodori & Luloff, 2001). The longer residents lived in the community, the more social ties they had and the more they felt attached to their community.

Another important predictor in the model was the respondents’ ratings of local government’s services available in the community. Satisfaction with specific local government services such as water, garbage collection, and police protection made important contributions to explaining community satisfaction and community attachment. In addition, the ratings of local government public services were significantly correlated with other predictors in the model. Previous investigations showed mixed results concerning the effects of local government services on community satisfaction (Filkins et al., 2000; Goudy, 1977; Shin, 1980; Richmond et al., 2000). Findings from this study suggest that local government’s public services affect community satisfaction. Furthermore, local government public services and its relationship to current housing conditions and other community features suggest that the quality of local government services may be an important precondition for increases in community capital and community development.
Housing-related variables such as current housing conditions and housing capital in the community affected housing satisfaction, community attachment, and community satisfaction. Adequate housing conditions contributed to housing satisfaction and community attachment, and indirectly to community satisfaction. This finding indicates that housing may be a central issue in community life. The better maintained housing is within a community, the more satisfactory are the ratings of local government services. Furthermore, this finding bolsters previous studies on the role of local government on community housing conditions. For example, Beamish (1994) reported that local government services such as housing planning practices was associated with the portion of the housing structures built before 1959 in the community. It appears that, without planning tools in place, there was less community attention to replacing or adding new housing units. Housing capital was also significantly related to employment opportunities in the community, suggesting a mutual dependency between housing and economic development as suggested in previous investigations (Benson, 2001; Crull & Cook, 2000).

In summary, it seems clear that perceived community satisfaction is affected by respondents’ housing and community contexts. The complex dynamics revealed in this investigation illustrated that housing satisfaction and community attachment serve fairly well as mediating variables between community satisfaction, and individual and community contexts. In rural communities, housing conditions were found to affect community attachment and housing satisfaction, and were also related to local government’s public services and social capital. Thus, community planners and policymakers should consider housing in community development efforts as well as social service and family welfare programs. In addition to housing, the quality of local government services and community
attachment are important forces for strengthening rural communities. This research provides information useful to community planners and policy makers. It seems likely that small town infrastructure can be restored and the well-being of families strengthened in rural America through the efforts of community leaders to create social capital, provide quality services, promote housing satisfaction, and engender community attachment.
References


CHAPTER 4. CHILDREN'S HOUSING ENVIRONMENTS: WELFARE FAMILIES IN IOWA

A paper to be submitted to the Family & Consumer Sciences Research Journal

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

Abstract

This study uses qualitative data to examine how rural low-income women confront the housing needs of their young children in the midst of changes in public policy assistance. The focus is on the strategies employed and the difficulties faced in the provision of safe, affordable and stable homes. The data are drawn from in-home interviews with 13 mothers, conducted every six months, who were welfare-dependent at the start of the research. The investigation depicts several dimensions of the circumstances of poor children that have not had much previous attention in the literature: serial housing inadequacy and chronic mobility. It employs mothers' voices to convey the housing needs of children and suggests that families exchange one chronic housing problem for another in repeated moves. Although family and friends lent informal housing assistance, the children's experiences suggest that they are vulnerable to both health and emotional risks due to their housing conditions. Several families with children with disabilities reported severe housing deficiencies. This research provides initial evidence of the important role of housing in promoting the goals of family stability and economic self-sufficiency as well as the need to improve health and developmental outcomes for children living in poverty. Understanding the economic and psychosocial dimensions of the housing and community context in which rural families live is a precursor to revising housing and public assistance policy.

Introduction

Inadequate housing can place children at risk for 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. There is

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1 Graduate Student, Associate Professors, and Professor, respectively, Department of Human Development and Family Studies. Crull was a Principal Investigator, and Cook and Fletcher were the Co-Investigators of the original data. Auh was responsible for the analysis of the secondary data used in this study; these data include no information regarding participants' identification.
increasing evidence that neighborhoods shape the “geography of opportunity” and are important to children’s life chances (Galster & Mikelson, 1995; Shlay, 1993, 1995). Like most resources available to children, the responsibility for the provision of housing lies with a parent or adult. Among poor families, shelter poverty and distressed neighborhoods may mean that their children do not receive the same opportunities compared to children whose families are more affluent.

Debate on welfare reform has regularly fallen short in considering the implications of changes in policy on the housing needs of children in poor families. This is especially true of children living in rural settings. Children comprise 70% of all welfare recipients and more than one-third are younger than age six (U.S. Dept of Health and Human Services, 1999). Although only one-fifth of the U.S. population lives in nonmetropolitan areas, about one-third of all welfare recipients live in rural areas. Of the 7.4 million welfare recipients in rural areas, most are children (U.S. Census Bureau, 2001). Poor families, especially those in rural settings face many obstacles in providing for their children’s needs (Weber & Duncan, 2001): fewer and lower-wage jobs, longer distances to services and employment opportunities, lack of public or private transportation, and limited, affordable, high quality child care options (Auh, 2000). The well-being of children in rural settings is potentially threatened by welfare reform due to changes in family income, changes in parental stress and/or parenting styles, and changes in access to services and supports (Cauthen & Knitzer, 1999).

Rural families and their children who receive welfare are both similar to and different from other rural households and other welfare recipients (Housing Assistance Council, 1997). It is striking that almost half of rural welfare households receive more than half their
total household income from earnings. This is significantly higher than cities. Like their urban counterparts, over half of rural welfare households have at least one child under age six. Of the 7.7 million nonmetropolitan units with children present, 35% have problems with housing cost, crowding, or inadequacy. Of these problems, cost-burden is the most common among rural welfare households affecting 40 percent. Doubling up is more common among welfare households than among others; 19% of rural households share a unit with two or more families. Housing inadequacy is more common in nonmetropolitan than metropolitan areas. For example, one quarter of nonmetropolitan households with children live in units built before 1950 when lead paint was widely used. Lead paint still presents hazards.

Concern for the health and developmental well-being of poor rural children should include attention to the housing and community contexts in which they live. The implications of welfare reform on the ability of recipient families to house themselves has had very little research attention. Conversely, the role that housing plays in supporting goals for welfare reform and outcomes for children is complex and not well understood. Public policy in the United States has created a schism through the “bureaucratic separation of housing and welfare in congressional committees, executive branch agencies and delivery systems” (Newman, 1999, p. 1). While transportation and childcare have been identified as barriers to the success of families leaving welfare, a discussion of the need for and availability of affordable and adequate housing has largely unrecognized in early discussions of welfare reform. As welfare reforms have been implemented, advocates and research studies have begun to suggest that housing is necessary for families to transition from welfare dependency to economic sufficiency (The new face of welfare reform, 2000; Pavetti, 2000; Sard & Lubell, 2000).
Often lost in the statistics on poor families are the experiences of children. Qualitative studies offer insight into the daily struggles of low-income women and the types of coping mechanisms used to provide for their families’ needs. In the current study, the housing and community environments of 25 children from 13 low-income families were examined. These children lived in families who received cash benefits from the Family Investment Program (FIP) in Iowa at the study’s inception in 1997. Data were drawn from four semi-structured topical interviews conducted with children’s mothers. The goal of this research was to highlight low-income women’s housing concerns as they relate to providing shelter for their children. The mothers’ accounts highlight the barriers faced and strategies employed to house themselves and their families.

The first section of the paper contains a review of recent research on the impact and importance of children’s physical environment. Then the contextual milieu in which children’s families live are briefly related, including a short background on the state’s welfare reform initiative. Of importance were place-based factors such as a housing availability, condition, and cost in the interpretation of the data. Mothers’ “voices” were used to describe children’s experiences and to improve understanding of rural, low-income children’s housing and the small town settings in which they reside. The next section delineates the methodology employed including descriptions of the 13 families. In keeping with qualitative methodology, the findings are organized around the themes that emerged from the data. The term “serial housing inadequacy” was coined to depict the movement in and out of rental units that are physically deficient. The perpetual moving from unit to unit is termed chronic mobility (Bartlett, 1997b). Finally, in the last section policy recommendations and future research opportunities are suggested that underscore the importance of housing.
and neighborhood resources to support low-income families’ long-term independence and transition off welfare.

**Poor Housing and Poor Children**

Most early childhood educators are well aware that young children learn by interacting with their environment (Wilson, 1997), however, many consider only the “social environment” (Evans, 2000). The potential role of the physical environment in health and psychological processes is often underrated. Homes continue to be the main setting in which the vast majority of young children are reared (Johnson, 1987). “Whether in a child’s own home or that of a family day-care provider, a neighbor, or a relative, the indoor and outdoor environments of a home provide the primary settings for child development” (Johnson, 1987, p. 139). Children’s home and neighborhood experiences contribute to their cognitive, socioemotional, and motor development (Evans, Lercher & Kofler, 2002; Popkin, Eiseman & Cove, 2004; Proshansky & Gottlieb, 1989; Weinstein, 1987; Wilson, 1997).

Children’s environments, however, are not all equal. When environments limit opportunities to explore and manipulate and are “dull, disorganized, or impoverished they suggest to children that they are not valued or respected” (Wilson, 1997, p. 191). Various sources in the physical environmental have been found to directly or indirectly create stressors on children (Hambrick-Dixon, 2002). Poor environments can impact self-esteem and competence as well as physical health. DOC4KIDS, an advocate organization of pediatricians, reported that poor housing puts children at increased risk of asthma and other respiratory diseases (2001). Infestations of cockroaches, rats and mice, and dust mites from old carpeting are the cause of many of these problems. Minority children may be especially at risk (Hambrick-Dixon, 2002).
Moreover, poor children often live in old housing that has been poorly maintained. Faulty heating and electrical equipment and the absence, or malfunction, of smoke detectors are also common problems. Lead poisoning is more problematic in older homes, and recent research has suggested that the effects of poisoning – from abdominal pain to brain damage depending on the extent of exposure – may be irreversible (Farr & Dolbeare, 1996; Richardson, 2002). Drinking water or old paints in older rural homes are often the source of lead exposure. In a study of lead poisoning among children in rural areas, living in rental housing and having parents who are migrant farm workers were related to the high levels of lead in children’s blood (Shaffer, Kincaid, Endres, & Weitzman, 1996).

Parents of young children in low-income families have far less control over their housing environment since a lack of affordability limits families’ choices. For poor rural households, housing costs represent a large portion of their monthly expenditures and can cause economic strain on the families. In rural communities, the availability of affordable housing units for rent is especially problematic. The high cost of utilities can precipitate chronic mobility among low-income families and housing instability plays a role in decreasing children’s school achievement and negatively influences children’s behaviors (Colton, 1996; Rubin, Erickson, Agustin, Clearly, Allen, & Cohen, 1996). Residential instability also puts children at risk of becoming homeless themselves when they become adults (George, 2001). Other studies have shown that parental stress due to economic strain impedes children’s development (Bassuk, Weinreb, Dawson, Perloff, & Bucker, 1997; Graham-Bermann, Coupet, Egler, Mattis, & Banyard, 1996), and that mothers’ stress and stress-induced depression are related to problematic behaviors in children (Graham-Bermann et al., 1996).
Government assisted housing such as public housing and Section 8 certificates can provide needed housing stability for low-income children (Bartlett, 1997; Katz, King & Liebman, 2001; Sard & Lubell, 2000). As long as housing that was adequate and affordable was available, “families remained in one place and families made an effort to cope constructively with other difficulties in their lives” (Bartlett, 1997b, p. 131). Housing permanence and reduced housing costs also affect other family decisions about consumption and resource allocation. These decisions, in turn, influenced the availability of resources to meet children’s needs. For example, a study of the relationships between housing subsidy and children’s nutrition revealed that a lack of subsidized housing contributed to malnutrition in children from low-income families (Fisher, Sard, & O’Neill, 2004; Myers, Frank, Roos, Peterson, Casey, Cupples, & Levenson, 1995; Taylor & Koblinsky, 1994). Another study by the same researchers revealed that children from families that do not receive housing subsidies were 50% more likely to report iron-deficiency than children from families with housing subsidies (Meyer, Frank, Roos, Peterson, Casey, Cupples & Levenson, 1993). Even though these families used food subsidies, a large share of their family’s budget went to pay for housing (Meyer et al., 1995, 1993).

The need for quality outdoor play environments also is critical to child development (Greenman, 1988). Child development experts lament the organized sports and ubiquitous wooden play structures that have replaced the “field and stream, rocks and vacant lots, tiny things that crept across or poked out of the earth’s surface” (Rivkin, 1995, p. 2). For many children, “access to outdoor play has evaporated like water in sunshine” (p. 2). Vehicular traffic, a shrinking number of natural places, and school and adult work schedules have limited outdoor play. Children reared in small towns and rural environments may still have
access to outdoor play opportunities that are unavailable to their urban counterparts but there is some suggestion in the literature that even in rural settings, children may lack adequate outdoor space to play (Bartlett, 1997a). Bartlett found the absence of safe play spaces outside limited their time outdoors; influenced parent-child interactions; and was detrimental to child’s behavior and language development.

Whereas housing and outdoor play spaces may be critical for young children’s development, for older children the community probably takes over as the milieu for developmental opportunity. Most previous studies designed to understand children's needs within the community have focused on adolescents in urban environments and the important influence of neighbors and neighborhoods on children’s development (Galster & Mikelson, 1995; Goering & Feins, 2003; Katz, King & Liebman, 2001; Morrow, 2003; Wilson, 1987). The notion that where a child lives defines the availability and quality of schools, services, neighborhoods, and peers has received research attention since the publication of The truly disadvantaged (Wilson, 1987). In particular, the disadvantages experienced by children living in persistently poor communities have received increased attention (Galster & Mikelson, 1995; Simons, Johnson, Conger, & Lorenz, 1997). Friendships and social networks are a function of the community in which children play and go to school and these associations can stymie or propel success. Dubrow and Garbarino (1989) compared environmental concerns of mothers from an inner city public housing and mothers from a suburban low-income community. The results showed strikingly different pictures of “community”. The authors called inner city public housing ‘the war zone’ because of the frequent shooting and high rates of crime. The mothers from the war zone felt powerless because they could not control their environment. Mothers from suburban low-income
community told different stories; most community concerns were not different from those of middle-class residents (Dubrow & Garbarino, 1989). The mothers from the suburban low-income community worried most about kidnapping.

Conger and colleagues examined the community influence on parenting and children’s outcomes in rural communities with longitudinal data (Conger & Elder, 1994; Elder & Conger, 2000; Simons et al., 1997). They found that high levels of poverty, underemployment, and low levels of educational attainment among community residents resulted in “community disadvantage” and influenced “community disorganization”. Community disorganization included measures of difficulties in a community’s economy and retail business environment, poor quality public schools, availability of commercial and medical services, low turnover rates in housing, and low levels of community involvement. Community disorganization was directly related to negative parenting outcomes (Simons et al., 1997). The community economic context, poor employment opportunity for residents and recent loss of income caused economic stresses within the family that, in turn, affected parenting (Conger & Elder, 1994).

Evidence suggests the housing and neighborhood context in which children are reared have profound effects. The rural landscape for youngsters seems ideal to on-lookers but poverty, near homelessness, and poor conditions are often just out of view (Fitchen, 1992; Ziebarth, 2000). “A growing number of rural low-income people have housing that is so inadequate in quality, so insecure in tenure and so temporary in duration that to keep a roof over their heads is a preoccupying and precarious accomplishment” (Fitchen, 1992, p. 173).
Iowa context

It is useful to consider how women’s responses to housing and neighborhood questions are framed by the state and local context in which they live. The experiences of children and the portrayal of those experiences by their mothers are “place bound”. Political power, poverty, and public policy at the local, regional, and state levels exhibit important spatial variations (Tickamyer, 1995, 1996). There are spatial dimensions to the availability of affordable rental stock and community resources that shape families’ decisions about how and where to house themselves. Neighborhoods “have defined locations that create and limit individual and collective opportunities and outcomes” (Tickamyer, 2000, p. 807).

In the late 1980s, the state of Iowa began a study of its welfare system that culminated in the transformation of its welfare program. In 1993, Aid to Families with Dependent Children was replaced with the Family Investment Program (FIP) that required families receiving cash assistance to outline steps to move them off welfare. At that point Iowa began a comprehensive package of reform that emphasized self-sufficiency and incentives for employment such as job training, childcare and transportation. Not unlike the reforms at the national level, no attention was given to housing needs or costs as part of the Iowa program (Newman, 1999). Beginning on January 1, 1997, Iowa’s welfare recipient families were required to comply with the five-year federal lifetime limit on cash benefits (The Personal Responsibility and Work Opportunity Reconciliation Act, 1996).

Children 10 years and under comprise about 15% of Iowa’s population [433,191] (Iowa State University, 2003). In 2000, the poverty rate among young children 0 to 6 years (16.5%) was lower than the national rate of 23% (National Center for Children in Poverty, 2003). However, nearly 44% of Iowa’s young children live in a low-income family, one that
has an income below 200% of federal poverty guidelines. Just over 64% of these children have parents who are employed either full- or part-time compared to 51.5% nationally.

Recent data suggest that families in Iowa continue to struggle with housing that is “Out of Reach” (National Low Income Housing Coalition, 2001). The estimated median family income in 2001 in Iowa was $55,300, but was less in rural Iowa, where it was $50,100. An extremely low-income family whose income is 30% of the median income can afford a monthly rent of no more than $376, but the Fair Market Rent (FMR) established by HUD for a two-bedroom unit in nonmetropolitan Iowa is $445; and $571 for a three-bedroom unit. An extremely low-income family whose income is 30% of the median income can afford a monthly rent of no more than $376, but the Fair Market Rent (FMR) established by HUD for a two-bedroom unit in nonmetropolitan Iowa is $445; and $571 for a three-bedroom unit. A minimum wage earner ($5.15 per hour) can afford monthly rent of no more than $268. This same minimum wage earner must work 75 hours per week to afford a two-bedroom unit at the nonmetropolitan area’s Fair Market Rent. Alternatively, the nonmetropolitan Iowan must work 40 hours per week and earn $8.56 an hour to afford a FMR two-bedroom unit.

As stated previously, the purpose of this study was to explore low-income mothers’ housing concerns as they relate to providing for their children. Two research questions were asked: (1) “What are the housing difficulties faced by low-income families with children?” and (2) “What are the influences of the contextual milieu on the well-being of children and their families?” To answer these questions, qualitative interviews with 13 rural families were analyzed. Several themes emerged from the data.

**Methods**

Qualitative studies offer insight into the daily struggles of low-income women and the types of coping mechanisms used to provide for their families’ needs. This investigation
offers an in-depth analysis of how and the extent to which children’s shelter needs were met. Data for this study were drawn from the “Family Well-being and Welfare Reform in Iowa” project that was conducted by Iowa State University Extension and the Iowa State University Center for Family Policy between 1997 and 2000. Data collection processes were reviewed and approved by Iowa State University’s Human Subjects Committee. Data were collected and managed in the compliance with the Human Subjects requirements. The initial purpose of the project was to monitor welfare reform in Iowa by researching the influences of government policies and social programs on communities and families within them (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 an explanation about the interview process.

**Procedure**

Beginning in 1997, Iowa State University Extension field staff conducted 60-to-90 minute interviews with five families from each community. A total of 35 families were interviewed in wave one. 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 summarized by two interviewers. The first interview probed various domains with an emphasis on general difficulties in living on welfare. Then these respondents were
revisited at six-month intervals over the next two years. The second wave of interviews focused on employment including current employment information and employment history. The third wave of interviews focused on experiences of child rearing and the fourth wave focused on current housing and housing histories of participant families. The fourth wave took place in the spring and early summer of 1999.

By the fourth wave, only 18 families from six communities were interviewed because some families had moved, could not be located, or were unwilling to continue. Thirteen families met the criteria for inclusion – one child of age 10 or under living in the household at wave four. Some data from each of the four waves of interviews were used in the analysis. The data were examined to create profiles of these families with an emphasis on the housing conditions and community circumstances that they said impacted them or their children.

Data analysis

The data analysis procedure for this research was adopted from Taylor and Bogdan (1998), and Krathwol (1998). To protect participants’ identification, the names were replaced with pseudonyms. The interview transcripts were read by two investigators and more than one hundred pages of logs and learning journals were produced based on the readings of the initial transcripts. Tentative categories were developed based on the frequency of events, comments, and emphasis of the respondents and then the categories evolved into coding scheme. A review of previous research was examined to assess the validity of the categories and coding as an effort in triangulation. In keeping with qualitative methodology, co-investigators and research assistants analyzed the data and identified themes particularly meaningful for young children in rural settings, e.g., housing inadequacy and chronic
mobility. For reporting the analysis, verbal quotes from the data were selected to represent each of the themes. One scenario based on families’ responses was developed to illustrate chronic mobility. In reporting the data, pseudonyms have been employed to protect the anonymity of respondents.

**Sample and community contexts**

Selected characteristics of the 13 families analyzed in this study are presented in Table 1. Among the 13 families, one was Latino, one was African-American, one couple was interracial; and the remaining participants were Caucasian. Five families were headed by a married couple and eight families were headed by single mothers, three of whom cohabitated with partners. The range of mothers’ ages was from 20 to 36 and fathers’ ages was from 23 to 38. Of the parents, nine had finished high school or equivalency diplomas and 8 parents had 13 or more years of education.

The mean number of children per household was 1.78. Of the 25 children, 8 were girls, 15 were boy and for two infants the sex was not identified. The range of child’s age was from 2 months to 10 years old. Most of the children [18 of 25] were 4 years old or younger. Two children were both autistic and mobility impaired.

Only one family was a homeowner at the start of the study; the remaining 12 rented homes. Two families were living in mobile homes, 5 families were living in small apartment complexes, and 6 families were living in single-family dwellings. Nine families reported that their children had access to some outdoor play but 4 families said there was no available place to play outside of the home. At the time of the fourth wave of interviews, 4 families received federal housing assistance and 2 families received only energy assistance,
Table 1. Characteristics of Families Interviewed

<table>
<thead>
<tr>
<th>Age Range of Children</th>
<th>N (%)</th>
</tr>
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<tbody>
<tr>
<td>2 months – 1 year</td>
<td>7 (28%)</td>
</tr>
<tr>
<td>2 years – 4 years</td>
<td>11 (44%)</td>
</tr>
<tr>
<td>5 years – 7 years</td>
<td>6 (24%)</td>
</tr>
<tr>
<td>8 years and older</td>
<td>1 (4%)</td>
</tr>
<tr>
<td>Total</td>
<td>25 (100%)</td>
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</table>

<table>
<thead>
<tr>
<th>Gender of Children</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>15 (60%)</td>
</tr>
<tr>
<td>Female</td>
<td>8 (32%)</td>
</tr>
<tr>
<td>Unidentified</td>
<td>2 (8%)</td>
</tr>
<tr>
<td>Total</td>
<td>25 (100%)</td>
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<table>
<thead>
<tr>
<th>Type of Home</th>
<th>N (%)</th>
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<tbody>
<tr>
<td>Trailer or Mobile Home</td>
<td>2 (15.4%)</td>
</tr>
<tr>
<td>Apartment</td>
<td>5 (38.4%)</td>
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<tr>
<td>House</td>
<td>6 (46.2%)</td>
</tr>
<tr>
<td>( Homeowner )</td>
<td>1 (7.1%)</td>
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<tr>
<td>Total</td>
<td>13 (100%)</td>
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<table>
<thead>
<tr>
<th>Frequency of Moving (Since the first child was born)</th>
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<tbody>
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<td>Never moved</td>
<td>1 (7.7%)</td>
</tr>
<tr>
<td>1 or 2 times moved</td>
<td>4 (30.8%)</td>
</tr>
<tr>
<td>3 or 4 times moved</td>
<td>5 (38.4%)</td>
</tr>
<tr>
<td>5 or more times moved</td>
<td>3 (23.1%)</td>
</tr>
<tr>
<td>Total</td>
<td>13 (100%)</td>
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<table>
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<th>Parental Status</th>
<th>N (%)</th>
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</thead>
<tbody>
<tr>
<td>Two Parents – Married</td>
<td>5 (38.4%)</td>
</tr>
<tr>
<td>Single Headed</td>
<td>8 (61.6%)</td>
</tr>
<tr>
<td>( Living with Partner )</td>
<td>3 (23.1%)</td>
</tr>
<tr>
<td>Total</td>
<td>13 (100%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parental Education</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High school &amp; GED</td>
<td>9 (50%)</td>
</tr>
<tr>
<td>College years+</td>
<td>8 (44.4%)</td>
</tr>
<tr>
<td>No information</td>
<td>1 (5.6%)</td>
</tr>
<tr>
<td>Total</td>
<td>18 (100%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FIP Participation</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Families on FIP</td>
<td>6 (46.2%)</td>
</tr>
<tr>
<td>Families not on FIP</td>
<td>7 (53.8%)</td>
</tr>
<tr>
<td>Total</td>
<td>13 (100%)</td>
</tr>
</tbody>
</table>
2 received Supplemental Security Income [SSI] for their children’s disability and 6 families were on welfare [FIP].

Five of the 6 communities in which respondents resided were in nonmetropolitan counties (Table 2). These communities ranged in population from just under 1,800 to 25,000’. Two of the 13 respondents lived in A-community, a city with a population of about 121,000. The median household income in A-city was $31,458 in 1990 and $43,704 in 2000. The median income in the nonmetropolitan communities was lower, ranging from $20,761 to $27,325 in 1990 and $26,893 to $35,688 in 2000. The proportion of children under 10 years and ranged between 11% and just over 14% in the year 2000.

Table 2. Community Characteristics, 1990 and 2000

<table>
<thead>
<tr>
<th>Community</th>
<th>Population</th>
<th>Median H.H. Income</th>
<th>% Renter-2000</th>
<th>% Vacant 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>108,791</td>
<td>120,563</td>
<td>$31,458</td>
<td>$43,704</td>
</tr>
<tr>
<td>B</td>
<td>11,618</td>
<td>10,877</td>
<td>$22,098</td>
<td>$34,318</td>
</tr>
<tr>
<td>C</td>
<td>4,133</td>
<td>4,299</td>
<td>$22,336</td>
<td>$33,005</td>
</tr>
<tr>
<td>D</td>
<td>25,178</td>
<td>26,032</td>
<td>$27,325</td>
<td>$35,688</td>
</tr>
<tr>
<td>E</td>
<td>1,796</td>
<td>1,802</td>
<td>$20,398</td>
<td>$26,893</td>
</tr>
<tr>
<td>F</td>
<td>8,769</td>
<td>10,150</td>
<td>$23,755</td>
<td>$35,270</td>
</tr>
</tbody>
</table>

The stock of housing in Iowa is old; more than half of all occupied housing structures were built before 1950. Almost 90% of Iowa’s total housing units were built before 1978 and are at risk of containing some amount of lead-based paint. According to estimates by the Iowa Department of Public Health, about 233,575 low-income households lived in housing units containing lead-based paint that presents a hazard to occupants, particularly children (Iowa Department of Public Health, 2003).
Except among low-income families or those in group quarters, renting is uncommon in Iowa, and the proportion of rental housing stock and the number of available units is small in most rural communities. Upwards of 70% of the occupied housing in Iowa is owned. According to the 2000 census, the value of homes in the 6 counties in which respondents lived ranged between $45,000 to $99,400 (Office of Social and Economic Trend Analysis, 2003). Average rental costs in the counties in which respondents lived varied little, from $367 to $369.

Results

Family ties

Most of those interviewed had extended family ties in and around the small towns in Iowa in which they lived. Although some families that were interviewed had moved out-of-state and then back again to Iowa, the majority of those who moved did so between small towns within a very small radius. Respondents said they are very attached to their communities because they were born or had grown up there.

Often women or their partners had parents or grandparents living in the same town. All but one of the families reported that they were renters and several reported that they rented their homes from family members or friends. Some families also reported that they depended upon financial support from kin to pay utilities or other housing expenses.

Jenny and her daughter lived in a house that belonged to her parents.

_The renters happened to move out of my mom and dad’s house. It wasn’t something that we were working on it just fell into place. I was looking for something different, and it just worked out perfectly at the time… [The house] is 117 years old … It’s roomy and it’s fantastic … All of my neighbors have always lived here and are fantastic. In fact, one neighbor mows my lawn; the_
other neighbor moves my snow. I’ve got it made. It’s funny, because I have a swing set out back. It’s the neighborhood drop off center for the children in a way because there are two other families on the same block that have children that are a little bit older ... They are always there. They are keeping an eye on Melody when she’s outside if I’m in the house. If I need something fixed, I’ve got the neighbor I can always go and ask. I can’t go wrong with it. Mom and dad actually lived across the alley until a couple months ago, too. They always lived [in this community], too. I always had them, too.

Mary reported that her husband’s parents had moved to be near them.

They moved here after we moved here. Yes, it’s usually the kids that follow the parents around, not the parents that follow the kids. [My mother-in-law] goes to the store for me sometimes when I can’t go to the store. Or if we’re low on money she’ll help out. Not very often, maybe once it’s happened; but other than that, not really. [My husband] and his dad work on the car together.

Three of the 13 families received government housing assistance (Table 3), but more families relied on this type of informal help, primarily from kin including parents and step-parents. Informal housing assistance from families included paying portions of the rent or renting a house or mobile home at a reduced rate. Some informal arrangements were with property owners and families completed needed repairs and general upkeep on the units.

**Serial housing inadequacy**

According to the American Housing Survey, structural soundness and adequacy are especially problematic in rural settings (Housing Assistance Council, 1997). Poorly maintained older housing units were common among families interviewed. Leaking ceilings, broken toilets, nonworking refrigerators, damaged windows, and the presence of rodents and insects were often cited as problems even for some whose landlords were members of their extended families or who received Section 8 rental subsidies for which housing inspections were mandatory. Commonly mothers indicated a whole host of problems in each of the housing units, past and present. During the course of our two years of investigation, these
Table 3. Housing Characteristics of Families Interviewed

<table>
<thead>
<tr>
<th>Family Profile</th>
<th>Housing Type</th>
<th># of bdrms</th>
<th>Current Housing Cost</th>
<th>Current Housing Assistance</th>
<th>Housing Expenses&lt;sup&gt;1&lt;/sup&gt;</th>
<th># of Moves</th>
<th>Time at current address</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mobile</td>
<td>2</td>
<td>$3000 owed</td>
<td>None</td>
<td>Missing&lt;sup&gt;2&lt;/sup&gt;</td>
<td>5 in 6 years</td>
<td>Under 6 months</td>
</tr>
<tr>
<td>2</td>
<td>House</td>
<td>2</td>
<td>NA</td>
<td>None</td>
<td>$100</td>
<td>9 in 12 years</td>
<td>NA</td>
</tr>
<tr>
<td>3</td>
<td>Mobile</td>
<td>2</td>
<td>$235</td>
<td>Informal</td>
<td>$143 winter; $48 spring</td>
<td>8 in 13 years</td>
<td>2 years</td>
</tr>
<tr>
<td>4</td>
<td>Apartment</td>
<td>2</td>
<td>$46</td>
<td>Gov't</td>
<td>$155</td>
<td>5 in 4 yrs</td>
<td>2 years</td>
</tr>
<tr>
<td>5</td>
<td>Apartment</td>
<td>2</td>
<td>$355</td>
<td>Informal</td>
<td>$65</td>
<td>22 in 10 years</td>
<td>9 months</td>
</tr>
<tr>
<td>6</td>
<td>Apartment</td>
<td>1</td>
<td>$230</td>
<td>None</td>
<td>$30</td>
<td>15 in 7 yrs</td>
<td>Under 1 year</td>
</tr>
<tr>
<td>7</td>
<td>House</td>
<td>2</td>
<td>$280</td>
<td>Informal</td>
<td>$131-136</td>
<td>6 in 8 yrs</td>
<td>Just over 3 yrs</td>
</tr>
<tr>
<td>8</td>
<td>House</td>
<td>4</td>
<td>$275</td>
<td>Informal</td>
<td>Included In rent</td>
<td>10 in 4 yrs</td>
<td>Several months</td>
</tr>
<tr>
<td>9</td>
<td>House</td>
<td>3</td>
<td>$150</td>
<td>Informal</td>
<td>$180</td>
<td>8 in 7 yrs</td>
<td>Just over 2 yrs</td>
</tr>
<tr>
<td>10</td>
<td>House</td>
<td>3</td>
<td>$155</td>
<td>Gov't</td>
<td>$145-155</td>
<td>10 in 8 yrs</td>
<td>4 years</td>
</tr>
<tr>
<td>11</td>
<td>Apartment</td>
<td>2</td>
<td>$132</td>
<td>Gov't</td>
<td>Paid by payee</td>
<td>9 in 5 yrs</td>
<td>3 years</td>
</tr>
<tr>
<td>12</td>
<td>House</td>
<td>3</td>
<td>$600</td>
<td>None</td>
<td>Plus utilities&lt;sup&gt;3&lt;/sup&gt;</td>
<td>12 in 9 yrs</td>
<td>3 months</td>
</tr>
<tr>
<td>13</td>
<td>House</td>
<td>3</td>
<td>$250</td>
<td>Informal</td>
<td>$150</td>
<td>10 in 16 yrs</td>
<td>2 years</td>
</tr>
</tbody>
</table>

<sup>1</sup> Includes gas, electric, and water when reported.
<sup>2</sup> Missing data.
<sup>3</sup> Not specified by respondent.
problems precipitated moves from one housing location to another. Nevertheless, in moving, families seemed to merely exchange one chronic housing problem for another, perpetuating a cycle of serial housing inadequacy.

When Ann was first interviewed she gave a history of the housing units in which she had lived.

*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 Stop and Go. 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.*

Some families expressed concerns about indoor air quality and exposure of their young children to toxins.

*One thing is that... we talked to Section 8. Section 8 is the one that moved us here. They did a radon test in the basement...they couldn't believe how high it was.” They had never seen a number that high. Jimmy was under a year old at that time. They couldn't believe how happy of a baby he was considering all that toxin in the air. All they could figure out is the basement of that place...the window was broke, so it must have blew it out instead of into the house. So that was one thing bad about that place that made this much better. We didn't have to worry about those toxins.*

Now, in a new Section 8 rental unit, Terri was asked by the interviewer, “When you first moved into this house you had roaches and you had trouble with the landlord. Can you look back and describe some other problems that you think you had?”

*Quite a few times in the winter time the hot water heater in the basement...the pilot light will go out when it's real cold. Nobody seems to know why that happens. We try to shut the basement door. That sometimes helps, but not always. So that's a problem. We're without hot water sometimes in the winter. Now we have a leaky ceiling in the kitchen. Something upstairs has burst or something. Nobody seems to know. That's basically all the problems. Any problem we've ever had with this place, the landlord or anybody else just can't figure out where it's coming from ... they don't know how to fix it. Even Section 8...they see the problem, but when they come in and check it, it's fixed.*
But by the time they leave, it's broke again. I have this sink in the bathroom. It drips water. They have fixed it twice every two years. I swear to God every time they fix it, it leaks worse afterwards. I don't know why... He's completely changed the whole fixture. It still leaks water.

Many of interviewed families had problems controlling indoor temperature. The old structures in which they resided were often poorly insulated or the heating/cooling systems needed updating and were not energy efficient. Control of indoor temperature has both a psychosocial and physical dimension. A lack of control of indoor temperatures can have a negative effect on children's health and at the same time leave parents feeling helpless to regulate and control their environment. Becky, mother of a three-year old son and a one-year daughter, said of her previous housing,

There was no heat upstairs. It just had holes in the ceiling that the heat is supposed to go through. It really wasn't that warm. Everybody had to sleep downstairs when it was cold outside.

Excessive heat in the dwelling unit her worried about her two young children's health.

I have a major problem. It's very hot. I live next to the boiler. There's no way of turning the heat down in this apartment. All winter long it's between 85 and 90 and the landlord will not turn it down. I can complain and complain and tell him, "Look, you need to turn it down. My doctor said that 72 is adequate for a child. They tell me, "You can adjust it in your apartment." But oh, no... One of the tenants turned off the boiler. [This tenant] said something about the Gas Company saying they only have to have the heat on until April 15. I called [the landlord] and asked him to turn it off. He said, there's a girl on the top floor who's got a medical problem-she's always cold...It's not healthy for my children to live in hot temperatures. I don't feel it's healthy that I have to have my window open all winter.

Home safety: I don't like it here; it's not safe

Most people do not often associate fear and insecurity with small town living but there is increasing evidence that transformations are occurring in these communities due to economic restructuring and demographic changes. These new rural realities have increased
the uncertainty about safety at home and in the community (Hedgers, 1996; Ziebarth, 2000). These community changes can be accompanied by a feeling of insecurity, regardless of actual crime rates. There are two important dimensions to safety in the home: one is the sociopsychological dimension, that of feeling safe inside one’s home and outside in the community, and a second dimension is the physical soundness of the dwelling unit.

Becky lives in a first floor apartment with her two young children, and when asked about feeling safe, she said:

_They don’t have locks on all the windows... But the people on the top floor have locks on their windows. Imagine that. Why do they need locks? I would think that if the locks fell off down here, they should take them off up there and bring them down. One day [the window] fell out and it busted. I told the landlord, “Excuse me, but there’s a problem. The window fell out.” They are like, “oh, well, we’ll call Glass Emporium and have them come out sometime this week..._ 

Alternatively, as the mother of two children, Ann was worried about the structural safety of her apartment’s windows.

_We’re moving again. I don’t like it here. It’s not safe. The windows are way too low to the floor. I don’t like it... Upstairs in the bedrooms, the windows are coming out of the frames. Once Johnny gets out of his crib, he can’t be upstairs with the windows falling out ... The windows I was telling you about...one did fall out of the frame. It was 2 weeks before it got fixed. Johnny had to sleep with me for 2 weeks. Even with a crib, I couldn’t keep him in there._

**It’s a roof over our heads**

Poor children do not get the privacy they need to develop a sense of autonomy that comes from controlling social interaction (Weigel-Garrey, et al., 1998). Many of the mothers said that they need more space to meet their families’ circumstances. Their children are doubled up or sleeping with parents. Ricky, a three-year-old boy, shares his room with his
little sister and is living with his mother and her boyfriend. The apartment is small and has just two bedrooms; the children cannot have separate bedrooms. There is a new baby due soon and the family feels their space needs are critical.

Bedroom space, of course, is often how families establish their space needs (Morris & Winter, 1978). While it is tempting to say that poor children are not entitled to a bedroom, nor do they expect one, families mostly prescribe to societal norms regardless of income. Ilene explained her frustration with her current housing.

> Since we don't have no where else to go, it's a roof over our head... it's not enough space. We need another bedroom ... 4 bedrooms. On HUD we cannot have Clay and Susan together because she's over 6. We can have Brenda and Clay together, but we can't do that either. So we're going to have to get another house and get HUD approval. I suppose we can get a medical note from the doctor saying Brenda needs her own room-because she does. She's very hyperactive, very strong-willed and destructive. There's no storage space. The living room...you can't arrange it because there is one big window, one small window, 6 doors off of the living room, plus the floor furnace and chimney sticking out. You can't do anything with it.

Although families often indicated problems with the quality, size, and cost of their housing, they were usually satisfied with the space for play outdoors. There were exceptions, however. Outdoor play was not perceived as safe for some children whose families lived in apartments or in trailers where there were no yards.

**Special needs children**

The families whose children had special needs because of physical and cognitive disabilities most keenly felt housing space limitations. Tim is a 7-year-old boy with autism. At the time of the interview, he was recovering from his sixth hip surgery and he spent most of his time at home. Tim lived with his parents and two other siblings in a two-bedroom house that they rented. Because of Tim's health condition, the structure of the housing was a
problem for his family. There was no bathroom on the first floor and all bedrooms were located upstairs. His parents always carried him up and down the stairs.

I would like to have a ranch style house because [Tim] is well over 50 or 60 pounds. His cast adds another 15 to 20 pounds onto the child – so you’re talking 75 pounds that I would be hauling in an “out stretch” of over 4 feet...Plus I have to haul his wheelchair up and down that many stairs out front...We need a bedroom on the first floor because hauling him up and down the stairs is not only going to be awful for him...because we’re going to have to turn him upside down in order to get him around corners and stuff like that because he shouldn’t be stood on his own.

Eight-year old Matt is also mobility impaired and autistic. His bedroom and the bathroom are not on the same floor. This arrangement was problematic for Matt’s father, John, who has severe weight problems. Matt’s mother wanted to move to another house but it was impossible because they owned their current place. Unlike her counterparts in this study, she said:

Our taxes are low, our house is paid for, and that’s about it. If I had the opportunity to move tomorrow, I would do it.

**Chronic mobility**

The majority of children in this study had moved frequently from one home to another since birth. The search for cheap housing led families to the outskirts of town.

[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.” “There are two buildings in this [block], but just across the way there are a couple more buildings. That’s the very edge of town...almost isolated. There aren’t neighbors that way either... I was going to be at the Hillside apartments, but my social worker said to talk to this lady because she has cheaper apartments.
During the course of the two-year study, it was not uncommon to meet families at a new place for an interview. Of the 13 families visited, only 1 family reported having never moved; 5 families changed residence 3 or 4 times since the birth of their first child; and 3 families had moved 5 or more times (Table 1). In a few cases, families had moved every 6 to 9 months over the last several years. Of the 13 families interviewed in wave 4, 7 families indicated that their children had experienced sharing housing with kin or nonkin at least once in their lives. Usually a mix of underlying causes precipitated the residential mobility: changes in space needs because of changes in family configuration – marriage, divorce, or the birth of a child. Mobility was set into motion too when housing was poor quality or families’ experienced excessive housing costs. Dissatisfaction with neighbors or neighborhoods, surrounding people or areas that were perceived as threatening, prompted mobility. Families that discovered cheaper housing options, doubling up or renting from family or friends, also moved frequently.

Only one case is used to illustrate the chronic mobility that was prevalent among families that we interviewed.

Janet was 5 years old when her family was interviewed in Wave four of the study. She had a new baby brother just 5 months old. Janet’s mother, Mary, described her residential history. She was 16 when she left her parents home. *My parents were having problems, and I was in the way, so I just moved out...In with my boyfriend.* Then she met her husband when she was “22 or 23.” The couple lived with her parents in a trailer in another state. Jeff was very violent and so this marriage didn’t last. Mary and her infant moved twice after the breakup of her marriage. By the time Janet was a 2-year-old baby, her mother had
made a third move to live with her boyfriend, Tom. As in her previous relationship, Mary lived with Tom in a family-owned trailer.

*It was my brother’s 5th wheel trailer. We moved it out to his mom and dad’s – on their property. We lived there a couple months... it was too small...Janet was there too. Janet had to sleep on the couch.*

Later, the family moved again, this time to the suburbs. They lived in a two-bedroom apartment so Janet could have her own room. The family lived there for almost a year. In 1996 when Tom’s parents decided to move to Iowa for their jobs, Tom and Mary decided to move too; Janet was 3-years old. After moving to Iowa, Mary wanted to stay home with Janet because she couldn’t find affordable childcare. In order to stay home, she applied for welfare benefits and did child care in her two-bedroom apartment. At the time of the first interview, Janet was 3 years old. During the day Janet shared her room with older children who were cared for by her mother. Mary said that the house was infested with cockroaches even though it was a brand new apartment and cost a lot. Space problems and the cockroach infestation instigated another move.

At the third interview, after just 6 months, the family moved into a three-bedroom house. The three-bedroom house was affordable and had a yard for Janet and the other children to play, but the landlord wanted the house back. After less than 6 months, Janet’s family had to pack and move again. They moved into another house in the same town. When they moved into this house, Mary had a new baby. This house was a four-bedroom house but it still did not seem to meet her family’s needs. Mary complained that this four-bedroom house was unsatisfactory because of her growing family, the child-care business needs, the small outside play space, and its distance from Janet’s school. Janet’s walk from school was too far so sometimes Mary sent a taxi to pick Janet up after school, since she was busy
running her child care business. At the fourth interview, Janet was 6 years old and her family had moved to another three-bedroom house near the school she attends. This house was a two-story house and Janet’s mother was satisfied with the structure because the family can have privacy away from the child care space. At age six, Janet had lived most places less then six months.

**Discussion: Rural Housing Conditions and Children’s Development**

The rural landscape as the place families and children call home has changed dramatically over the last 20 years. Many American families and young people continue to leave small towns and rural communities and their exodus raises perplexing questions about those left behind. The impact of the rural community and housing context on young children, however, has been woefully missing from the literature. In general, poverty in rural settings has tended to receive less attention from policy makers than urban issues; consequently the effects of welfare reform on rural families and children are generally not well understood.

This study focused on the housing and neighborhood environments of children in rural low-income families. The themes that emerged imply that limited economic resources of families reduce their housing choices. Housing affordability exacerbated the economic difficulties that these families face. Though the current housing conditions and housing histories of respondent families varied, the common ingredient in each of the interviews is that children’s physical surroundings were inadequate and that providing safe, secure, and stable housing was a constant struggle. The children’s experiences as portrayed by their mothers suggest that the children are vulnerable to both health and emotional risks due to their housing conditions.
One of the striking findings from this study was the instability of children’s housing: frequent moves within the community or into a nearby community were common. Multiple factors precipitated the families’ moves: changes in family structure such as divorce, cohabitation, and the birth of a child; economic hardships such as job changes; availability of social support networks; and dissatisfaction with substandard, poor quality housing. The data revealed that families often moved to find cheaper housing and/or reduce housing expenditures. The housing histories of these families showed that they employed strategies that reduced housing costs: moving in with kin and renting from parents and friends were indicative of the families’ attention to housing expenditures.

Previous research suggests that this kind of housing instability can negatively effect the development of locus of control, feelings of security, and attachment in young children. The data in this research, although spanning a two-year period, did not provide the longitudinal nor quantitative data necessary to speak conclusively about child outcome measures. One can speculate, however, that without improvements the unstable housing arrangements and the physical inadequacy of the housing will be detrimental to the children. Certainly, a child’s quality of life and overall well-being appears threatened as schools, social networks, and communities’ change frequently. Compared to children with more stable housing situations these children are at greater risk of negative outcomes. It is clear from interviews with mothers that they were cognizant of the risks associated with frequent moving and they try to prevent changing school districts whenever possible.

Families’ appraisals of their communities were one of the interesting findings of this study. Even though they were very dissatisfied with their current dwellings, parents expressed attachment to their community. Often children were living in the same place where
their parents were born and kin lived nearby. Various forms of help from support networks were reported, either emotional or instrumental. Families relied heavily on these supports; they rent their families’ trailer or house and their kin pay for housing or utilities when families run short of funds. It is not clear from the data whether family and friends feel burdened by these arrangements.

**Conclusions: The Critical Role of Housing Subsidies and Community Support**

The data illustrate that both inadequate and unaffordable housing contribute to housing instability for poor rural children. A lack of affordable housing was a significant underlying problem that created housing difficulties for children in rural low-income families. Energy costs also affected families’ decisions on consumption and resource allocation. Insufficient income of the parents limited their choices in housing regardless of their families’ housing needs. The limited choices resulted in “serial housing inadequacy,” an exchange of one housing problem for another. Cockroach infestations, broken toilets, nonworking appliances, and heating and cooling malfunction, and a lack of space were common problems. Given recent research findings, it seems likely that these poor housing conditions will have a long-term detrimental affect either directly as on the children’s education (Colton, 1996) and health (DOC4KIDS, 2001) or indirectly because parenting will be compromised (Simons, 1997).

A common strategy of low-income families to save on housing costs was to double-up with kin or friends. By sharing housing, families saved money or cut down on housing costs. The majority of children in this study experienced doubling-up at least once during
their lives. Whereas this type of living arrangement has economic benefits, it usually results in overcrowding and interpersonal tensions that can cause family stress. Families perceived doubling-up as far from ideal and temporary in nature, and their housing histories suggest the arrangement is fragile, often lasting less than six months.

Analysis of children’s housing environments and housing histories provide some valuable insights into shortcomings in current policy on children and housing. The results highlight the need to: (1) reinforce current policy in housing and energy subsidy assistance; (2) expand housing assistance for children with special needs; (3) provide help to landlords and tenants to rehabilitate existing housing; and (4) invest in community programs that support children’s needs.

Like child care subsidies, housing subsidies are essential to promote the welfare reform goal of family economic self-sufficiency. Of the thirteen welfare families in this analysis, only three families were currently receiving federal housing assistance. However, even with the assistance, respondents still had to pay a large portion of their income for housing expenditures – electric and gas – that were often higher than their rent payments.

In general, federal housing assistance poorly serves children with disabilities. There appeared to be no immediate remedies available to families in this study who had children with disabilities. The housing available to them was not modified, so the bathroom and child’s bedroom presented problems for families. Already in place is the 1989 Fair Housing Amendment Act which enables renters some latitude for making unit alterations, but its provisions do not go far enough. Currently those who rent may make needed adjustments to accommodate family members with a disability. However, they must pay for these adjustments and landlords can request that tenants return the unit to ‘its original state’ upon
moving (U.S. Department of Housing and Urban Development, 2003b). Again, the costs incurred would go to the family.

Grants to families and/or landlords to make needed adjustments would help. These grants could be generated from local, state or federal funds. There is very little incentive to maintain old housing stock. In rural communities poor families that rent had very few choices to begin with and since they often rented single family houses or duplexes, perhaps they would be willing to do some repairs if funds were available. Arrangements with kin for housing often were premised on an exchange of housing maintenance for reduced rents. Funds available to tenants or landlords might assist with making housing more accessible for children with disabilities or simply improve the adequacy of the unit.

Previous studies indicate that the disadvantages that poor families experience can be compensated for in part by public intervention (Scarr, 1998). Community resources for children that include a library or book mobile, places to play outdoors and indoors, and public services for developmentally disabled children can be lifelines for poor rural families. A community service that provides public transportation, perhaps a volunteer effort like a ‘seniors van’ would have helped one respondent whose home was too far from school for her young daughter to walk. She would often send a taxi to get her when her childcare job prevented her from doing so. This inconvenience compelled the family to move after 6 months. Public investments in rural communities for young children are needed. For example, the model for services and delivery could be what many small towns use for providing “seniors” with assistance – the seniors center, call-a-van services, and grants for housing rehabilitation.
**Future Research Directions**

Young children in rural settings need additional research attention. The data for this study were limited to Iowa. More representative and diverse data should be collected in studies that focus on children’s housing and community needs. The authors believe that a grounded theory can emerge from additional qualitative data on the particular risks of housing instability and serial housing inadequacy among children living in poverty. Furthermore, additional research is needed to understand the strategies that families use to provide shelter. How do parents who lack supportive housing then develop strategies for communicating norms to their children and providing them with developmental opportunities?

In short, more attention should be given to housing, recognition of its importance, and elevation to the same status as child care and transportation needs. It is astonishing that housing of welfare recipients is not regularly cited as one of the significant barriers for families seeking economic self-sufficiency. Perhaps one the most fruitful avenues of future research might be the examination of housing economic hardship, chronic mobility, and family stress. What is the mechanism by which housing costs and conditions affect family stress, and how does this stress influence family functioning and children’s outcomes? Can and how do improvements in housing alter parent-child interaction? These and other questions should be raised particularly in light of the downturn in the U.S. economy. The research presented here not only raises questions about the quality of life and well-being of young children in rural communities but suggests that housing and community resources are part of the answer to those seeking improvements on their behalf.
References


The terms rural and nonmetropolitan are used interchangeably even though census publications do not. In Census publications “Rural” is a place of less than 2,500 people and nonmetropolitan areas are those outside Metropolitan Statistical Areas.

Housing cost burdens are measured as a percentage of income, “on what has become a slowly sliding scale. The Department of Housing and Urban Development (HUD) defines moderate cost burdens as those between 30% and 50% of income, and severe cost burdens as those above 50% of income. The 30% of income has become the norm that housing subsidy programs require households living in subsidized housing to pay” (Housing Assistance Council, 1997, p. 35).

The American Housing Survey defines physical housing problems as severely or moderately inadequate or adequate (American Housing Survey in 1995, 1997). For example, housing that is severely inadequate lacks hot or cold piped water or a flush toilet or has been uncomfortably cold for 24 hours or more because of heating equipment break down.

HUD annually estimates Fair Market Rents (FMR) for 354 metropolitan and 2,350 nonmetropolitan county FMR areas (U.S. Department of Housing and Urban Development, 2003). FMRs determine the eligibility of rental housing units for the Section 8 Housing Assistance Payments program and serve as the payment standard used to calculate subsidies under the Rental Voucher program. FMRs are gross rent estimates. The current definition used is the 40th percentile rent, the dollar amount below which 40% of the standard-quality rental housing units are rented. The 40th percentile rent is drawn from the distribution of rents of all units occupied by recent movers (renter households who moved to their present residence within the past 15 months.

The table contains only a few of the many community characteristics that could be deemed useful in understanding families’ context. Additional community descriptions are in the report available on line at http://www.extension.iastate.edu/Pages/pubs/reform.html.

2000 census data for each of the six communities were not available: county data are reported to provide the reader with economic characteristics of the places in which respondents’ reside.
CHAPTER 5. CONCLUSIONS

Rural America has undergone substantial economic restructuring over the last several decades. Changes have meant that local and state economies no longer rely on farming or small manufacturing plants, and consequently have experienced an eroding base of employment. The decline in farm employment has profoundly impacted surrounding small towns and contributed to widespread population out-migration. Changes in rural places have resulted in significant challenges for family life.

By focusing on community resources and housing, we can enhance our knowledge of quality of life among rural families. The community and residential environment are crucial to family well being. Housing is a multi-million dollar industry of economic importance to local communities and it is a multi-dimensional construct in the quality of life for families. Professionals and researchers alike need more information about the residential experiences of rural community citizens, their problems, preferences, and concerns. Both objectively observed and/or subjectively rated housing contexts such as affordability, availability, and adequacy affect residents’ housing satisfaction and further affect community and life satisfaction. Better understanding of community satisfaction is a planning tool; those who are dissatisfied or disenfranchised move and/or do not contribute to their communities.

The overall purpose of this dissertation was to investigate the communities and housing of rural families and their role and effect on family quality of life. The two studies in this dissertation contribute to the literature on quality of life. One study used a random sample from rural counties in Iowa, representing rural households with various socioeconomic characteristics. Residents’ community satisfaction was modeled using various
subjective measures. According to Sirgy (2002), lower level life concerns such as community’s social attributes and upper level life concerns (i.e., housing satisfaction and community satisfaction) were assessed. This approach was meaningful because the challenges faced by rural households were tested with a model built upon elements of the communities’ contexts. The dynamics of community satisfaction that was revealed has the potential to be helpful for understanding quality of life generally and for examining other rural communities specifically.

The first manuscript in Chapter 3 provides a credible method for research on quality of life, structural equation modeling. The use of multiple indicators permits more precise measurement of subjective concepts such as community attachment and housing and community satisfaction. Convergent validity was achieved using this technique and the results highlighted the complexity in the prediction of community satisfaction. Furthermore, the results of this study showed that the nested model was representative. Thus, replication work with other samples is recommended for future investigations. The final model should prove useful to community planners because it shows a clear picture of the dynamics of community attachment, housing satisfaction and community satisfaction.

The second study used qualitative methodology and is based on four waves of longitudinal data drawn from family interviews focused on various topics: i.e., parenting, child care, parental employment and current economic difficulties, housing histories and community resources. Family histories as well as cross-sectional information were included in the study. The manuscript in Chapter 4 presented analyses of data obtained through these in-depth interviews with 13 rural families that had received welfare cash benefits and who had young children. The longitudinal and historical approach provided insights into the
strategies used by poor mothers who are squeezed by both housing constraints and economic hardships. The influences of the multiple levels of a family’s environments – housing, community and housing policy – were assessed. The quality of life among the children and their families were analyzed. Furthermore, the study included analyses of narratives from mothers with typically developing and children with disabilities. Both the residential circumstances of low-income children in general, housing problems for families with children with disabilities has been missing from the literature.

In the second study of low income housing of children, themes emerged that imply that limited resources of families shrink their housing choices regardless of their families’ housing needs. Limited choices resulted in serial housing inadequacy, an exchange of one housing problem for another: Cockroach infestations, broken toilets, nonworking appliances, and heating and cooling malfunction, and a lack of space were common problems. Housing costs can exacerbate the economic difficulties that these families experience and chronic mobility is both a solution and contributor to continuing housing problems and family instability. Although the current housing conditions and housing histories of respondent families varied, the common ingredient in each of the interviews is that children’s physical surroundings are meaningful and their poor and unsafe conditions are a constant concern and stressor to their families. As other research in the same vein has suggested, housing and community conditions seemingly may shape their life experiences and thus their opportunities in life.

Two theoretical perspectives were especially instructive in framing this research. Bottom-up Spillover theory was used to explain the dynamics of community satisfaction. According to Bottom-up Spillover theory, the individual’s evaluations of salient or repeated
events influence satisfaction within subordinate domains such as social relations in the community and these, in turn, travel up the hierarchy of life domains. Lower levels of life concerns (i.e., satisfaction with local services, social capital, employment opportunities and local government services) affect superordinate domains of life, such as perceived community satisfaction. Theoretically relevant too is length of residence and housing conditions because they affect individuals emotionally through community attachment. Community attachment, in turn, affects housing satisfaction and community satisfaction. Findings in Chapter 3 confirmed the theory since “Bottom-up Spillover” was observed in the final model.

An ecological perspective (Brofenbrenner, 1993) was employed to emphasize human development in the context of the life space. This theoretical approach supports the notion that an individual’s life can be better appreciated when coupled with an examination of the environments in which they conduct their daily routines. (Bronfenbrenner). By using the term, ecological validity Brofenbernner emphasized that research must include an individual’s perception of the environmental context rather just the environment’s objective characteristics. Brofennbrenner’s theoretical approach was meaningful in this research because it provided a framework for linking community satisfaction among a general population and research that uncovers the housing experiences of families with children in the residential environment. Together, these studies contribute to understanding the dynamics of quality of life in rural communities. The two studies are like layers of an onion, shedding one layer reveals another and together the studies support an ecological dynamic.

Taken together, the results of this dissertation study give insight to researchers and policy makers regarding the quality of life in rural contexts. The first study gives researchers,
planners, and policymakers valuable information about what makes a community attractive, what current residents prefer and what draws newcomers to the community. In rural communities, perceived community satisfaction is affected by respondent’s housing and community contexts. Housing conditions affect community attachment and housing satisfaction, and are related to the local government’s public services and community’s social capital. This implies that community planners and policy makers should consider housing in community development efforts as well as social service and family welfare programs. Because the quality of local government services was important to community satisfaction and was related to other features in the community (i.e., business) in the model, it appears that community development efforts will be enhanced by attention to the quality of public services. Local governments working together with community and housing planners, actively listening to the needs and concerns of current residents will be more successful in sustaining and growing economic bases than those who fail to obtain the residents’ input.

Social capital and community attachment were strong predictors of community satisfaction. Feeling of pride or community attachment may influence local growth efforts through this commitment to the community. Although the model of community satisfaction presented in this study does not include behavioral variables such as community involvement, future research can confirm and policymakers will benefit from additional information on the relationships between community satisfaction and behavioral factors. Finally, this study suggests to community leaders and policymakers that small town infrastructure can be restored and families’ well-being strengthened in rural America through efforts that create social capital, provide quality services, promote housing satisfaction and engender community attachment.
The findings presented in this dissertation also highlight the need to reinforce current policy in housing: energy assistance, expand housing assistance for children with special needs and provide help to landlords and tenants to rehabilitate existing housing. The current study suggests housing subsidies are essential to promote low income families’ economic self-sufficiency and children’s well being. The mothers interviewed had to use diverse strategies to patch up their available resources to keep a roof over their families’ heads. The difficulties faced by and the resources available to the families differ within communities, thus a return to the importance of residential context needs to be a part of the community planner’s understanding. Housing assistance can come in many forms locally and federally but must reflect the unique characteristics and resources available of the family and in the community. A one-sized housing assistance program won’t fit all the needs of families.

A growing body of studies revealed that housing problems adversely affect quality of life, especially for children. This study has limited information on children’s outcome (i.e., physical or cognitive development) per se, but does illustrate the adversity experienced by low income families. In future studies “outcomes” should be probed using both qualitative and quantitative inquiry. Future investigations should also identify how community resources can buffer the negative influences from poor housing conditions to improve children’s quality of life. This study emphasized that young children in rural settings can benefit from additional focused research attention on family housing problems and improvements in the communities in which they reside.