

**HOUSING SATISFACTION OF HOUSEHOLDS AT RISK OF SERIOUS HOUSING PROBLEMS**

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**Abstract**

*The explanatory power of household characteristics, housing conditions, and neighborhood satisfaction on housing satisfaction were investigated by using the 1987 American Housing Survey. Household demographics used to define at-risk households were relatively weak but significant determinants of housing satisfaction. Neighborhood satisfaction and tenure (not being owners) were the most significant determinants of housing satisfaction. Although cost burden was the most prevalent housing problem, inadequate dwelling was the most powerful determinant of housing satisfaction.*

**Introduction**

The purpose of this paper is to explore the relationships between housing conditions of households at risk of serious housing problems and housing satisfaction, a component of quality of life. The concept of households at risk is based on the idea that households with certain compositions and socio-economic characteristics are more likely to experience resource constraints than others. The risk of housing problems experienced by the households is determined by constraints the households experience in the process of meeting their needs (Morris & Winter, 1986). The implication is that housing conditions are influenced by the social distribution of resources as well as through the actions of the household or through housing policy.

The following five groups of at-risk households have been identified (Winter, et al, 1993) by the North Central Regional Research Project, NC-199: 1) elderly, 2) female-headed, 3) minority, 4) large with three or more children under age 18, and 5) households with a disabled member. In this paper, due to the limitations of the data, only the first four groups are studied. The groups of at-risk households are not mutually exclusive and the concept of "cumulative risk" developed by Chi, LaQuatra and Park (1993) is used to identify 15 different household types from all logical combinations of the four basic risk groups. The 15 at-risk household types contain four single risk categories, six double risk categories, four triple risk categories, and one category combining all four risks. The household types with two or more risk categories are referred to as "multi-risk" households.

Recent research by members of the NC-199 Technical Committee explored the housing problems of the at-risk households with particular emphasis on single-risk and various combinations of multi-risk households (Canabal & Memken, 1993; Combs & Park, 1993; White, Peaslee & LaQuatra, 1993; Crull, Morris & Kusmierz, 1993; and Krofta, Franklin, Inman & Williams, 1993). Although all of the above NC-199 studies investigated the relationships between selected at-risk households and housing problems, the research by Chi (1993) was the most inclusive relating the cumulative risk concept to tenure, housing and neighborhood inadequacy, and housing cost burden. Chi found that multi-risk households were more likely to have housing problems than single-risk households. He also found that elderly risk groups were more likely to be better off and minority risk groups worse off than the reference group.

This paper goes beyond Chi's analysis to incorporate householders' assessments of their dwellings and neighborhoods to look at the subjective as well as the objective measures of housing situations. Householders' satisfaction with their dwellings and neighbor-

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hoods are considered to be indicators of their quality of life. Housing has long been recognized as an important indicator of quality of life (Harris, 1978; Campbell, et al, 1976; Wish, 1986) and a powerful predictor of well-being (Andrews & Withey, 1976).

According to Wish (1986) quality of life consists of an environmental and a psychological aspect and the latter aspect is often neglected. In this research, the environmental or objective components are tenure and three housing problems. Common problems under study are affordability of the dwelling in relation to household income, physical adequacy of the dwelling, and crowding within the dwelling (Newman & Schnare, 1988; Weicher, 1989; Apgar, 1989; Casey, 1992; and Bogdon, Silver & Turner, 1993). The psychological components are housing and neighborhood satisfaction. Satisfaction measures evaluate the objective components relative to householders' experiences and expectations. Even if one believes satisfaction measures are weak indicators or misleading indicators for societal functioning, satisfaction research can indicate what objective conditions are worth measuring and trying to change (Rodgers, 1981).

In this paper housing satisfaction will be analyzed for three population areas of the United States (nonmetropolitan, central cities, and metropolitan suburbs). Households, housing inventory, and housing problems differ by population area (Apgar, 1989; Bogdon, Silver & Turner, 1993). Wish (1983) supports the analysis of each of the population areas because of the salience of housing and crime as quality of life indicators. According to Wish, the two indicators explained why residents of larger urban areas were more dissatisfied than residents of smaller urban areas and why Blacks, who tend to live in larger urban areas, were more dissatisfied than Whites.

Included in the analysis of housing satisfaction are comparisons of single and multi-risk households and a reference group of households with no risk characteristics. Also included are tenure, three housing problems with interactive combinations, and neighborhood satisfaction. Research by Crull, Bode, and Morris, (1991) indicated that neighborhood satisfaction was a separate concept distinct from housing satisfaction. Neighborhood satisfaction is believed to include the concept of crime that was suggested as a salient quality of life indicator (Wish, 1983).

### **Procedures**

The data analyzed for this paper were taken from the American Housing Survey (AHS) which is a longitudinal survey designed to provide detailed information on the same housing units and their current occupants. The national sample of about 50,000 interviews are collected every other year by the Census Bureau for the U.S. Department of Housing and Urban Development (HUD, 1987). In this paper, the individual household records are analyzed from the 1987 public use tape. Data in 1987 were collected from 43,436 occupied dwellings from July through December. Several demographic variables about each individual in the household are available as well as many household and housing variables. The unit of analysis in this paper is the household. Information was gathered from the reference person, who was the first household member listed in the questionnaire and was the owner or renter of the dwelling.

Analyses were weighted to reflect the U.S. population with whole weights rather than fractional weights. Therefore, the "N's" reported in the tables are the estimated number in thousands of households in the United States. The numbers in the weighted data set are so large that small differences are statistically significant. Most of the comparisons reported in the crosstabulations were significantly different and significance is not designated in Tables 1 through 3. Regression analysis, however, is a more sophisticated analysis amenable to large data sets and statistical tests are reported in Tables 4 through 6.

### ***Definitions and Distributions of Risk Variables***

The four basic risk groups found in the AHS data are minority, elderly, female headed, and large households. A minority household is a household in which either the reference person or his/her spouse was Black, Hispanic, Asian, or American Indian. An elderly household is a household in which either the reference person or his/her spouse was 65 years of age or older. A female headed household is a household in which the reference person was

female with no spouse present. And a large household is a household with three or more children under age 18 living in the household.

Fifteen different household types were constructed to represent all possible mutually exclusive combinations of the four basic risk groups. The 15 combinations included the four single risk types, six double risk types (female minority, female elderly, female large, minority elderly, minority large, and elderly large), four triple risk types (female minority elderly, female minority large, female elderly large, and minority elderly large), and one type with all four risks (female elderly, minority, large). When defined in the data, very few households fell into the four household types that included the elderly-large combination. The four elderly-large types were eliminated from the analysis; thus approximately 86,000 households were omitted. Analysis was conducted on a sample that was weighted to represent 90,801,000 households with 11 at-risk household types and the reference households who did not have any of the risk characteristics.

The distribution of the households is presented in Table 1. Over 43% of the households in the United States did not have any of the four risk characteristics. When the households were distributed within the three population classifications, the central city had the smallest percentage of households with no risk characteristics. Of the four single risk household types, only the large household was represented by a small percentage. However, this small percentage of large households represents a large percentage of the children in the United States (Crull et al., 1993). In the distribution of the single risk types within the population classifications, a larger percentage of minority and a smaller percentage of elderly households were found in the central city than in the nonmetropolitan areas and metropolitan suburbs. The minority concentration in the central city was also reflected in the distributions of the multi-risk household types. The female elderly risk type had the highest percentage of households in the multi-risk categories and all the triple risk households combined only made up 2.4% of the U.S. households.

Table 1. Distribution of households at risk among total U.S. households.

Households at Risk	Total U.S. Households in Thousands	Percent of Total U.S. Households %	Row Percent of Risk Households Living in Each Population Class		
			Non Metro %	Central City %	Metro Suburb %
1. None	39192	43.2	46.3	32.3	49.6
2. Female Single Head	11065	12.2	10.9	13.1	12.2
3. Minority	8926	9.8	5.0	15.7	7.9
4. Elderly	10116	11.1	14.4	8.9	11.1
5. Large (3+ children)	3883	4.3	5.2	2.7	5.0
6. Female Minority	4454	4.9	2.4	9.6	2.7
7. Female Elderly	7526	8.3	10.5	7.7	7.6
8. Female Large	460	0.5	0.6	0.5	0.5
9. Minority Elderly	1408	1.6	1.3	2.6	0.9
10. Minority Large	1610	1.8	1.3	2.5	1.4
11. Female Minority Elderly	1197	1.3	1.4	2.3	0.6
12. Female Minority Large	964	1.1	0.7	2.1	0.5
Total households	90801 <sup>1</sup>	110.0	22.1 <sup>2</sup>	33.0	44.9

<sup>1</sup>Omitted from the study are 86,000 households that are in four risk categories with too few cases for comparative analysis.

<sup>2</sup>Row percents showing portion of households in each population classification.

#### **Definitions and Distributions of Housing Variables**

Tenure, three housing problems with interactive combinations, and housing and neighborhood satisfaction were used in the analysis. Tenure defined in this paper as "not owner" is a dummy variable that is coded 1 if the reference person rented or lived in the dwelling free and 0 if he/she owned it.

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The first housing problem, "cost burden," is a dummy variable that is coded 1 if the household was paying 35% or more of its income for housing. Although 30% is commonly used, 35% is used here in a conservative attempt to adjust for some of the income and cost error found in the AHS data (Casey, 1992). The percentage was calculated by dividing the monthly housing expenditure by the total monthly household income. Monthly housing expenditure was calculated by HUD and included expenditures for mortgage, taxes, rent, utilities, and insurance.

The second problem, "crowding," is based on the measurement of persons per room and is obtained by dividing the number of persons living in the household by the number of rooms in the dwelling. Number of rooms was calculated by HUD and was the total of all rooms reported by the reference person. Crowding is a dummy variable that is coded 1 if the household had more than 1.0 persons per room.

The third housing problem, "inadequate," is constructed from a three category index used by HUD that combined several questions on the condition of the plumbing, heating, electric, upkeep, hallways, and kitchen in the dwelling (Hadden & Leger, 1990; Weicher, 1989). Dwellings that were adequate are coded 0 and those that were moderately inadequate or severely inadequate are coded 1.

In a preliminary analysis, using procedures outlined by Bode and Morris (1993) comparisons were made of a housing problem scale, the three separate problems and a series of problem dummies with interaction combinations. The latter method was the most successful in explaining variance in housing satisfaction. Therefore, in this paper the housing problems dummy variables indicate three types of single housing problems, three types of double housing problems, and one type with all three housing problems.

The distribution of housing problems is shown in Table 2. Almost 75% of all U.S. households did not have any of the three housing problems and the most frequent problem was cost burden (almost 17%). The central city had the highest percent of households with housing problems and also the highest percentage of households with cost burdens. When the housing problems were distributed within the categories of households at risk, 85% of the households with no risks had no housing problems. The elderly households also had a high percentage (83%) without housing problems. All of the multi-risk household types, except female elderly and minority elderly, had about 50% or more of their households with housing problems. Cost burden was a housing problem for 10 to 35% of the risk households. Crowding was a relatively frequent problem for the large households and the minority large households. Inadequate dwelling was also a relatively frequent problem for minority elderly and female minority elderly. The female minority large households, although only 1.1% of all U.S. households, had relatively high percentages of all seven housing problem combinations.

The final two variables included in the analysis are housing satisfaction (the dependent variable) and neighborhood satisfaction (an additional independent variable). Each is measured by a 10 point scale indicating the reference person's evaluation of the dwelling and the immediate neighborhood. Code 1 is the worst and code 10 the best on a scale of 1 to 10. The distribution of mean satisfaction ratings are given in the Table 3.

The distributions of satisfaction in Table 3 indicate that overall housing and neighborhood satisfaction were quite high for most households. However, some interesting contrasts can be seen between tenure and population classifications. Owners generally had higher satisfaction averages than nonowners. Metropolitan suburban households generally had higher housing satisfaction and nonmetropolitan households had higher neighborhood satisfaction than the other two population classifications. Generally, only the nonmetropolitan nonowners had higher neighborhood satisfaction averages than housing satisfaction averages. The nonmetropolitan owners and the metropolitan suburban nonowner households had nearly equal housing and neighborhood averages with the metropolitan suburbs generally lower than the nonmetropolitan. The other three groups (central city nonowners and owners and metropolitan suburban owners) generally had neighborhood averages that were lower than housing satisfaction averages. Another general trend of note is that the elderly households and their risk combinations had relatively high satisfaction averages when compared to the other households in their tenure and population classifications.

Table 2. Distribution of housing problems by population classification and by households at risk.

	Total Household Population	No Problem	Cost Burden	Crowded	Inadeq. Dwelling	Burden+ Crowded	Crowded+ Inadeq.	Burden+ Inadeq.	All 3 Problems
<b>N in Thousands</b>	90801	67548	15032	1355	4126	469	361	1695	215
<b>All Households</b>	100.0%	74.4% <sup>1</sup>	16.6%	1.5%	4.5%	0.5%	0.4%	1.9%	0.2%
Non Metro	22.1	74.9	14.7	1.2	6.3	0.3	0.4	1.8	0.2
Central City	33.0	68.1	20.2	1.9	4.9	0.8	0.7	3.0	0.4
Metro Suburbs	44.9	78.8	14.8	1.3	3.4	0.4	0.2	1.0	0.1
<b>Households at Risk</b>									
1. None	43.2 <sup>2</sup>	85.3 <sup>3</sup>	9.8	0.3	3.7	0.0	0.1	0.8	0.0
2. Female Single Head	12.2	67.2	26.4	0.2	3.7	0.1	0.0	2.4	0.1
3. Minority	9.8	68.3	15.9	2.8	8.6	0.8	0.8	2.6	0.2
4. Elderly	11.1	82.7	13.2	0.2	3.2	0.0	0.0	0.7	0.0
5. Large (3+ children)	4.3	70.5	12.0	11.0	2.4	1.8	1.1	0.7	0.5
6. Female Minority	4.9	51.0	31.9	0.8	7.7	0.4	0.5	7.2	0.5
7. Female Elderly	8.3	62.7	31.9	0.0	3.6	0.0	0.0	1.7	0.0
8. Female Large	0.5	36.8	34.9	7.4	3.9	4.8	2.8	8.4	0.9
9. Minority Elderly	1.6	61.8	21.4	0.7	11.2	0.3	0.3	4.0	0.2
10. Minority Large	1.8	40.9	9.6	22.4	5.6	8.9	7.6	1.8	3.3
11. Female Minority Elderly	1.3	44.6	30.9	0.8	13.8	0.1	0.4	9.4	0.0
12. Female Minority Large	1.1	24.8	26.9	7.3	5.1	11.6	4.7	11.9	7.7

<sup>1</sup>Row percentages based on the portions of the total population; 74.4% of all U.S. households have "no problem."

<sup>2</sup>Column percent of all U.S. households; 43.2% of all households have "no risk".

<sup>3</sup>Row percent of risk group with "no problem"; 85.3% of the households with "no risk" have "no problem."

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Table 3. Comparison of mean housing and neighborhood satisfaction ratings by population classifications, tenure, and households at risk.

Household at Risk	Percent Not Owner	Not Owner		Owner	
		Housing/Neighborhood Mean Satisfaction <sup>1</sup>	Neighborhood Mean Satisfaction <sup>1</sup>	Housing/Neighborhood Mean Satisfaction	Neighborhood Mean Satisfaction
Non Metro	27.3%	7.60	8.11	8.45	8.49
1. None	23.7 <sup>2</sup>	7.43	8.01	8.46	8.45
2. Female Single Head	47.2	7.68	7.84	8.35	8.36
3. Minority	39.8	7.37	7.99	8.51	8.33
4. Elderly	11.3	7.84	8.57	8.62	8.66
5. Large (3+ children)	22.8	7.45	8.45	8.15	8.43
6. Female Minority	60.6	7.76	7.85	8.40	8.40
7. Female Elderly	28.7	8.52	8.97	8.61	8.77
8. Female Large	54.7	7.16	7.33	7.90	8.02
9. Minority Elderly	22.1	7.05	9.38	8.03	8.32
10. Minority Large	43.4	6.28	7.73	7.53	8.16
11. Female Minority Elderly	31.3	8.07	8.12	7.88	8.31
12. Female Minority Large	55.2	6.66	7.41	7.56	7.65
Central City	51.4%	7.45	7.18	8.59	8.01
1. None	42.3	7.45	7.23	8.58	8.08
2. Female Single Head	66.7	7.67	7.36	8.51	7.87
3. Minority	62.7	7.17	7.06	8.59	7.94
4. Elderly	23.2	8.11	7.69	8.81	8.26
5. Large (3+ children)	32.4	7.39	7.52	8.61	8.36
6. Female Minority	75.4	7.14	6.73	8.26	7.24
7. Female Elderly	42.6	8.49	8.04	8.79	8.19
8. Female Large	73.4	6.98	6.94	7.70	8.08
9. Minority Elderly	36.6	7.91	7.97	8.77	7.64
10. Minority Large	50.5	6.93	6.76	8.09	7.68
11. Female Minority Elderly	54.3	7.90	7.18	8.35	7.54
12. Female Minority Large	88.8	6.51	6.12	7.53	6.71
Metro Suburbs	29.0%	7.70	7.80	8.69	8.45
1. None	24.2	7.55	7.72	8.74	8.44
2. Female Single Head	46.4	7.78	7.71	8.41	8.26
3. Minority	42.8	7.51	7.68	8.52	8.33
4. Elderly	12.5	8.34	8.27	8.89	8.63
5. Large (3+ children)	19.1	7.65	7.97	8.62	8.48
6. Female Minority	62.7	7.33	7.41	8.29	8.01
7. Female Elderly	29.4	8.74	8.78	8.80	8.73
8. Female Large	61.8	6.81	6.75	7.77	7.10
9. Minority Elderly	22.0	8.24	8.24	8.51	7.83
10. Minority Large	40.5	7.29	7.84	8.30	8.52
11. Female Minority Elderly	40.8	7.71	8.61	8.32	8.54
12. Female Minority Large	74.0	6.71	7.08	8.50	6.16

<sup>1</sup>Omitted from the satisfaction means are the households without ratings, which are 1% of the total population for housing satisfaction and 2% for neighborhood satisfaction.

<sup>2</sup>Percent of each risk household category in the population classification; 23.7% of the households with "no risk" living in the nonmetropolitan areas are not owned.

### Results and Discussion

The results of a stepwise regression of housing satisfaction for nonmetropolitan areas (Table 4) indicated that the risk variables, although significant, did not explain much variance. The R-squares slowly increased through steps 2 and 3 as the tenure and housing problem variables were included. In the final step with the inclusion of neighborhood satisfaction, 21%

of the variance in housing satisfaction was explained. The most powerful determinants based on the beta weights in the fully recursive model were neighborhood satisfaction, non-owners, and inadequate dwelling.

Table 4. Regression of housing satisfaction on independent variables in U.S. non-metropolitan areas.

Independent variables	Betas for four regression steps			
	Step 1	Step 2	Step 3	Step 4
<b>Risk Households</b>				
Female headed	-.0347**	-.0018	-.0030	.0055
Minority household	-.0174*	-.0018	.0163*	.0191**
Elderly household	.0623**	.0437**	.0456**	.0284**
Large household	-.0290**	-.0308**	-.0222**	-.0268**
Female minority	-.0179**	.0073	.0213**	.0246**
Female elderly	.0577**	.0648**	.0685**	.0410**
Female large	-.0302**	-.0192**	-.0122	-.0042
Minority elderly	-.0185**	-.0204**	-.0045	-.0092
Minority large	-.0743**	-.0645**	-.0322**	-.0284**
Female minority elderly	-.0169*	-.0137*	.0105	.0101
Female minority large	-.0517**	-.0403**	-.0167*	-.0060
<b>Tenure</b>				
Not owners		-.1926**	-.1745**	-.1514**
<b>Housing Problems</b>				
Cost burden only			.0087	.0103
Crowding only			-.0217**	-.0161*
Inadequate only			-.1324**	-.1241**
Cost and crowding			-.0146*	-.0130*
Cost and inadequate			-.0968**	-.0881**
Crowding and inadequate			-.0592**	-.0547**
All three problems			-.0498**	-.0566**
<b>Neighborhood</b>				
Neighborhood satisfaction				.3538**
R <sup>2</sup>	.021	.055	.084	.207
Adj. R <sup>2</sup>	.020	.055	.083	.206
F	37.66**	94.50**	93.76**	252.34**
d.f.	11/19345	12/19344	19/19337	20/19336

\* Significant at .05 level

\*\* Significant at .01 level

• Sample weighed to represent the 19,357,000 U.S. non-metropolitan household population.

Similar regression results were also found for the central cities (Table 5) and metropolitan suburbs (Table 6). However, in both regressions, the R-squares in all steps were higher than the nonmetropolitan regression. In the fully recursive analyses of housing satisfaction, 33% of the variance was explained in the central cities regression and 29% in the metropolitan suburbs. As in the nonmetropolitan regression, the most significant determinants of housing satisfaction in the central cities and metropolitan suburbs were neighborhood satisfaction, nonownership and inadequate dwelling. In all three regressions, satisfaction with the neighborhood was positively related to housing satisfaction, and not being an owner or living in an inadequate dwelling were negatively related to housing satisfaction.

More subtle yet significant results similar in all three regressions were the direct negative impacts on housing satisfaction of inadequate housing whether alone or in combination with the other problems which were evident through significant, relatively, strong beta

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weights. Smaller beta weights were found for the other two housing problems and their combination which did not include inadequate housing.

Table 5. Regression of housing satisfaction on independent variables in U.S. metropolitan central cities.

Independent variables	Betas for four regression steps			
	Step 1	Step 2	Step 3	Step 4
<b>Risk Households</b>				
Female headed	-.0240**	.0184**	.0189**	.0209**
Minority household	-.0734**	-.0360**	-.0140*	-.0051
Elderly household	.0795**	.0507**	.0491**	.0347**
Large household	.0095	.0012	.0055	-.0052
Female minority	-.1044**	-.0540**	-.0317**	.0001
Female elderly	.0741**	.0744**	.0722**	.0517**
Female large	-.0313**	-.0203**	-.0098	-.0082
Minority elderly	.0287**	.0236**	.0371**	.0348**
Minority large	-.0487**	-.0422	-.0047	-.0003
Female minority elderly	-.0001	.0095	.0193**	.0259**
Female minority large	-.1074**	-.0729**	-.0313**	-.0072
<b>Tenure</b>				
Not owners		-.2569**	-.2258**	-.1697**
<b>Housing Problems</b>				
Cost burden only			-.0120*	-.0095
Crowding only			-.0365**	-.0249**
Inadequate only			-.1636**	-.1341**
Cost and crowding			-.0328**	-.0318**
Cost and inadequate			-.1474**	-.1210**
Crowding and inadequate			-.0930**	-.0693**
All three problems			-.0703**	-.0520**
<b>Neighborhood</b>				
Neighborhood satisfaction				.4250**
R <sup>2</sup>	.046	.105	.159	.328
Adj. R2	.045	.105	.158	.327
F	128.10**	286.92**	291.30**	715.86**
d.f.	11/29382	12/29381	19/29374	20/29373

\* Significant at .05 level

\*\* Significant at .01 level

• Sample weighed to represent the 29,394,000 U.S. metropolitan central cities household population.

Although the risk variables were not major direct predictors of housing satisfaction, a few interesting observations can be made. In all three regressions, elderly and female elderly risk variables were positively related to housing satisfaction. Large households and the multi-risk combinations containing large households were all negatively related to housing satisfaction. Single and multi-risk variables containing female headed and/or minorities were not uniformly, positively, or negatively related to housing satisfaction.

### Summary

Estimates of the United States population based on the American Housing Survey indicated that 57% of all households had household compositions or socio-economic characteristics that placed them at risk of serious housing problems. About one-fourth of all households had one or more of three serious housing problems (housing cost burdens, crowding, and inadequate dwellings). The central cities had higher percentages of at-risk households and households with housing problems than metropolitan suburbs or nonmetropolitan areas.

Table 6. Regression of housing satisfaction on independent variables in U.S. metropolitan suburbs.

Independent variables	Betas for four regression steps			
	Step 1	Step 2	Step 3	Step 4
<b>Risk Households</b>				
Female headed	-.0636**	-.0253**	-.0215**	-.0113**
Minority household	-.0568**	-.0305**	-.0198**	-.0146**
Elderly household	.0702**	.0503**	.0501**	.0328**
Large household	.0004	-.0056	.0034	-.0011
Female minority	-.0713**	-.0381**	-.0242**	-.0104*
Female elderly	.0515**	.0587**	.0616**	.0326**
Female large	-.0461**	-.0331**	-.0257**	-.0092*
Minority elderly	-.0006	-.0019	.0016	.0088*
Minority large	-.0378**	-.0277**	-.0112*	-.0157**
Female minority elderly	-.0172**	-.0106*	.0015	-.0060
Female minority large	-.0504**	-.0324**	-.0182**	-.0033
<b>Tenure</b>				
Not owners		-.2404**	-.2249**	-.1703**
<b>Housing Problems</b>				
Cost burden only			-.0135**	-.0132**
Crowding only			-.0275**	-.0294**
Inadequate only			-.1284**	-.1079**
Cost and crowding			-.0039	.0049
Cost and inadequate			-.0934**	-.0868**
Crowding and inadequate			-.0421**	-.0355**
All three problems			-.0694**	-.0593**
<b>Neighborhood</b>				
Neighborhood satisfaction				.4278**
R <sup>2</sup>	.028	.081	.111	.2871
Adj. R <sup>2</sup>	.027	.081	.111	.2867
F	103.00**	294.86**	263.45**	805.71***
d.f.	11/40017	12/40016	19/40009	20/40008

\* Significant at .05 level

\*\* Significant at .01 level

- Sample weighed to represent the 40,029,000 U.S. metropolitan suburbs household population.

Housing satisfaction was analyzed as a quality of life indicator to measure the impacts of the at-risk households, tenure, housing problems, and neighborhood satisfaction. Neighborhood satisfaction was the most powerful determinant of housing satisfaction. From the regressions and the comparisons of means in this paper, it is confirmed that neighborhood is more of an issue in the central cities and metropolitan suburbs than in the nonmetropolitan areas. Additional analysis needs to be done to better understand what factors in neighborhoods impact neighborhood satisfaction.

Tenure was the second most powerful determinant with lack of ownership negatively related to housing satisfaction. Although cost burden was the most prevalent housing problem, inadequate dwelling was the most powerful direct housing problem determinant of housing satisfaction.

Generally, the impact of the at-risk household indicators were relatively small in the regression analyses. However, the negative impact of large families was clear on housing satisfaction. Elderly and female elderly were satisfied with their housing even though some had cost burden problems. Female headed and minority households and their various multi-risk combinations did not give clear, direct impacts on housing satisfactions. Additional analysis

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is especially needed in separating out the minority groups to look selectively at housing patterns of Blacks, Hispanics, Asian, and American Indians.

The final issue comes back to the point made by Rodgers (1981), that housing satisfaction may not be the social indicator that should drive policy decisions but should identify objective measures of housing situations that can be altered by policy. If one follows this logic, the housing issues of neighborhoods, tenure, and inadequacy need to be addressed in the housing policies of the 1990s.

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