

RESIDENTIAL SATISFACTION OF RECENT MOVERS INTO GOVERNMENT ASSISTED HOUSING PROJECTS: The Impact of the First Nine Months

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Satisfaction with the residential environment is an important aspect of one's quality of life. Housing being provided both privately and publicly should not only satisfy government imposed standards of quality and safety but also fulfill user requirements, giving maximum satisfaction under the given resource constraints.

This paper explores changes in housing satisfaction of families living in government supported housing projects over a nine month time period. Effects of background characteristics of residents and previous housing condition on changes in satisfaction are analyzed.

Carp (1975) did an analysis of changes in satisfaction of older people who moved into low-rent public housing compared with those who did

Determinants of Housing Satisfaction

One focus of past research has been the relationship of neighborhood interaction and satisfaction. Festinger, et. al. (1950) studied the relationship of dwelling unit entrances to interaction and friendship. Caplow (1964), Fried and Gleicher (1961) and Hartman (1963) focused on social integration and its relationship to satisfaction. Views, perceptions and interaction with neighbors were studied in relation to residential satisfaction by Lansing and Hendricks (1967), Keller (1968), Michelson (1970) and Mogey (1955). Residential social structure and satisfaction were studied by Taube (1972). Although most of these researchers emphasized the importance of the social setting for residential satisfaction, a few did study the effect of the residents' background characteristics and the physical setting. However, most of this work did not consider variables from all three categories so there is little conclusive evidence on the relative importance of physical, demographic, and social variables.

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not. She reported that over time:

- (1) the satisfaction of the public housing tenants with how good their apartment was increased; that of the non-tenants remained about the same.
- (2) satisfaction with cost increased for the public housing tenants but decreased for the non-tenant group.
- (3) satisfaction with the neighborhood decreased for both groups.

Several of the more recent studies of housing satisfaction include Onibokun (1974, 1976), Ryan, et al. (1974), Rent (1974), Harris (1976), and Fisk (1974).

Onibokun (1974) examined the interdependence of dwelling unit characteristics, the environment, and managerial approach as related to tenant satisfaction in several Canadian Public Housing Projects. He found that factors pertaining to the total environment, such as provision of public transportation, emerged as the greatest source of dissatisfaction. Environmental factors were also interrelated and cumulative in their effect and impact.

Onibokun (1976), in an analysis of social system variables related to residential satisfaction, reported that the larger the size of the household the lower the satisfaction, one parent families tended to have lower satisfaction than two parent families, employed tenants had higher satisfaction, higher socio-economic status tenants had lower satisfaction, and the longer the stay in public housing the lower the satisfaction. Age of the respondent, length of stay in the city and rural-urban background had no relation to residential satisfaction.

Ryan, et al. (1974) in a study of tenant satisfaction in 16 Massachusetts Housing Finance Agency developments considered community variables, development variables, comparative value variables, and tenant variables. They found that most respondent characteristics, such as income, race, educational level and early housing experience, had no relationship to satisfaction. The same study also found that physical features of the

development and management practices were the greatest contributors to high or low satisfaction levels. Group characteristics of neighbors were found to be essentially irrelevant as long as neighbors were friendly and well-behaved.

Although based on less rigorous statistical techniques than the previous studies, a South Carolina study conducted by Rent (1974) analyzed the effects of previous housing experience and length of time in residence on present residential satisfaction. This study found significant increases for 24 of 29 items between previous and present housing conditions. Also individuals who had been in the present housing unit the shortest amount of time were the most satisfied while those who had been there the longest were the least satisfied. However, the great majority of residents (85 percent of the sample) had resided in the projects for zero to four years.

Greninger (1973) suggests that social-psychological variables with the exception of family and social interaction patterns have considerably more influence on housing satisfaction than socio-economic status and housing variables. Occupants' wants and expectations in regard to tenure, number of rooms, and suitability proved most important. General life satisfaction also proved to have a strong influence on residential satisfaction. But contrary to the study by Rent, social isolation was significant in explaining residential dissatisfaction. Comparison with former conditions and duration of residence were insignificant in explaining present satisfaction.

Harris (1976) analyzed the influence of housing quality on housing satisfaction, using as control variables education, sex and marital status, age of the head, household income, and race. She found that "race, sex and marital status do not affect the relationship of housing quality to housing quality satisfaction." In the regression equation, education was also not significant at the .05 level. The older the household the more satisfied the respondent was with housing quality. An increase in income also increased satisfaction.

Fisk (1974) as part of her study of residential

homogeneity and neighborhood interaction examined residential satisfaction. The determinants of residential satisfaction and mobility for low income households was examined in two path models: one in heterogeneous neighborhoods and one in homogeneous neighborhoods. In heterogeneous neighborhoods satisfaction with the house does not influence satisfaction with the neighborhood while in homogeneous neighborhoods it does.

RESIDENTIAL SATISFACTION AND MOBILITY

Few empirical studies have treated residential satisfaction as a variable that changes over time. Perhaps the best indication of why residential satisfaction may change over time and of the factors underlying such changes is gained from two studies which analyzed the relationship between residential satisfaction and a household's decision to move.

Speare (1974) developed a model of residential mobility in which residential satisfaction acts as an intervening variable between individual and residence variables, and mobility. Empirical testing demonstrated that, with the exception of ownership status, residential satisfaction acts as an intervening variable between background characteristics and the decision to move. Thus, residential satisfaction can be viewed as a concept influenced by individual and housing characteristics that change over time.

Morris and Winter (1975) presented an alternative model in which the propensity to move was viewed as a response to discrepancies between achieved and normatively prescribed housing. Background variables, such as crowding and ownership status, were treated as concepts implying conformance to or deviance from established housing norms. The empirical results confirmed the hypotheses that normative housing deficits serve as an intervening variable between background variables and housing satisfaction.

HYPOTHESES

In spite of past research efforts, at least three

relationships remain unclear:

- (1) what components of residential satisfaction are most sensitive to time,
- (2) what background factors of residents (age, income, sex, education, etc.) are most highly associated with changes in housing satisfaction, and
- (3) how previous housing conditions relate to changes in present housing satisfaction.

Accordingly, the present study attempts to shed some light on residential satisfaction as a concept that changes with duration of residence by examining these relationships. Underlying this examination is the conceptual framework that in the short run a move to a new residence reduces a previously perceived housing deficit and produces immediate high levels of satisfaction but, as time passes in the new residence, some households become dissatisfied as new deficits are perceived (Morris and Winter, 1975).

METHODOLOGY

Sample

The data are based on a sample of 93 families living in two different Massachusetts Housing Finance Agency supported projects in the Springfield, Massachusetts SMSA. Families were interviewed in both housing communities within two months of their move into the community. As both housing developments were in the construction stage, the sample selected consisted of the occupied units at the beginning of the study. Families who completed the initial survey were interviewed a second time with the same survey instrument nine to ten months later. An assumption was made that this time period is short enough to reasonably insure that the changes in satisfaction resulted from changes in the residents' perceptions of the housing environment itself and not from changes in aspirations and life cycle stages. When possible the same interviewer was used with a family. There was some loss in the number of respondents interviewed due to tenants either moving or refusing a second interview.

Of the 93 families used in the final analysis of the data, 57 were from Development A which at full occupancy would contain 250 families and 36 were from Development B which at full occupancy would contain about 200 families. Both projects were newly constructed and similar in a number of basic characteristics—size of units, type of construction, distance to the center of the city, public transportation facilities and major shopping centers. Families were similarly distributed among three rental categories found in both projects: market tenants, section 236 subsidized tenants, and low-income tenants whose rents were paid by the Welfare Department. Rent and subsidy levels were similar for both projects.

Respondents in Development B participated in a tenant consumer education program conducted by Cooperative Extension agents, University of Massachusetts faculty, and para-professionals trained under the supervision of the former two groups (Merchant, et al.). Tenants received newsletters with information concerning community social services and various consumer topics and had the opportunity to attend consumer education classes and to receive home visits and consultation if they chose to do so. Respondents in Development A did not have such educational opportunities in the development.

In terms of the background characteristics of residents, T-tests indicate that residents in each project differed in only one major respect—the age of the household head was significantly lower in the Development A project.¹ Otherwise, tenants are similar in terms of income, education, family size, and other background attributes.²

Survey Instrument

Besides the data on background characteristics of the residents, the tenant's level of satisfaction

1. In Development A the mean age was 28.9, whereas this figure was 36.8 in Development B.
2. Information about source and amount of income was obtained from the tenant's application to the development which had been verified by the developer. The other background data on the residents were collected in the interview.

was obtained by a Likert scale (1 to 5) for each of these twelve terms:³

- (1) Privacy of the apartment
- (2) Cost of the apartment
- (3) Location of the apartment
- (4) Looks of the apartment
- (5) Spaciousness of the apartment
- (6) Safety of the apartment
- (7) Description of the apartment
- (8) Feelings about the apartment
- (9) Safety of the neighborhood
- (10) Feelings about the neighborhood
- (11) Satisfaction with the city
- (12) Feelings about moving.

In addition, an overall index of satisfaction was constructed by summing the scores of the individual items.⁴ Since the data were collected at both interviews, a scale of satisfaction change could be constructed for each component and for the overall change in satisfaction.

An onsite evaluation was made of each respondent's previous residence. These data were used to construct a measure of housing condition.⁵ Twenty-five items were employed to measure the physical characteristics, the immediate environment and the neighborhood of the previously occupied housing unit. Item and factor analyses of the housing condition variables revealed that more than a single dimension was being measured. One factor concerns the structure of the immediate housing environment including items measuring the condition of walls, foundation, paint trim, front entrance way, roof, gutters and downspouts, obsolescence of the structure,

3. Scale items were developed from C. Meeks "Scale Development for Housing Satisfaction and Spatial Quality," Mimeo. The Ohio State University 1970 and C. Meeks *Housing Satisfaction of Columbus Homeowners*, Columbus Area Chamber of Commerce, March 1971. For the first interview the Hoyt-Stunkard estimate of reliability for the scale was .59 and the standard error was 2.87. For the second interview the Hoyt-Stunkard reliability estimate for the scale was .76 and the standard error was 3.15.

4. Item analysis of the scale items for both interviews indicated that cost and location of the apartment were poor contributors to the total scale. Safety was a poor contributor to the scale in the first interview.

5. Although there were 93 respondents who participated in both surveys, housing conditions data on previously-occupied housing could be gathered on only 77 of these: Development A = 44, Development B = 33.

visibility into the structure and the degree of repairs needed. The other factor concerns the overall neighborhood environment including items measuring the suitability of the land for residential purposes, litter, and nonresidential hazards, amount of parking available, traffic hazards, landscaping, condition of open space, provision for garbage disposal, general cleanliness of the area, and adequacy of lot size. The sum of the items for condition of previous housing unit and condition of previous neighborhood was used in the analysis.

Data Analysis

A three step procedure was performed in analyzing the data:

(1) Data taken from the first set of interviews was used to construct T-tests between the tenants' initial satisfaction levels in the two projects. This determines if the initial overall level of satisfaction of the tenants depends upon the project in which they reside and discerns those aspects of satisfaction in which project residents may differ.

(2) Data taken from both the first and the second interviews was used to construct a T-test of changes in satisfaction levels for the overall satisfaction index to generally determine the extent and direction of the change, and for each of the twelve components of satisfaction to determine those aspects of satisfaction that changed most readily with time in residence. This analysis attempts to expose those areas in which a household is likely to most readily perceive a housing deficit with time in residence. Also, those components in which initial levels of satisfaction were shown to differ significantly, by the analysis in step one, are more closely analyzed.

(3) Those areas in which changes in residential satisfaction were significant were analyzed by multiple-regression equations. Independent variables were related to changes in the levels of satisfaction. Consistent with the relationships described earlier, the goal of this analysis was to demonstrate both how and to what extent the

background factors of tenants and their previous housing conditions associate with changes in satisfaction.

FINDINGS AND DISCUSSION

T-Tests

The results of the first set of T-tests serve two purposes: (1) to demonstrate, generally, whether tenants' initial levels of satisfaction depend upon the project in which they reside, and (2) to expose those aspects in which project tenants differ significantly in terms of their perceptions of initial levels of satisfaction.⁶

Examination of the difference between the means of the overall satisfaction index reveals that tenants in the two projects have almost exactly equal initial total satisfaction levels (Development A, $X=26.08$; Development B, $X=26.00$). Therefore, the contention that the tenants' initial levels of satisfaction does not depend upon the project in which they reside is supported.

Examination of the T-tests for the components of the satisfaction scale demonstrate that tenants' initial perceptions differ significantly ($p .05$) in regard to four items. Development B residents are less satisfied with the rent ($T = 3.37$) and with the city in which the project was located ($T = 2.69$) compared to Development A residents. Conversely, Development A residents are less satisfied with the safety of their apartment ($T = 3.25$) and give a less favorable description of their apartment ($T = 2.19$) than Development B residents.

Additional T-tests resolve the analytical dilemma that differences in initial levels of satisfaction between the two projects would reduce the reliability of the T-tests performed to expose those components of satisfaction that change with time for the *entire* set of tenants. A comparison

6. Because the samples were drawn independently, a pooled variance estimate was used to calculate significant differences between the means of the various components.

between the T-values computed for changes in the levels of satisfaction for tenants in each project, shown in Table 1, demonstrates that these values are consistently significant or consistently insignificant in regard to a specific item. Thus, determination of those components of satisfaction that change most readily with time could still be accurately performed.

T-tests for the entire set of tenants show that except for feelings about the location and cost of the apartment, and safety of the neighborhood, satisfaction levels decrease for almost every component over the time period.⁴ Moreover, in no instance is an increase in satisfaction statistically significant. Those components which show significant decreases according to the T-tests are tenants' perceptions of *privacy*, *looks*, *space* and *safety* of the apartment; tenants' *feelings toward* and *general description* of the apartment; and the *overall index of satisfaction*.

The results of the T-tests support the supposition developed earlier in this study; namely, that

in the short-run a move to a new residence reduces previously perceived housing deficits and produces immediate high levels of satisfaction. Then, as time passes in that residence, a household is likely to become dissatisfied as new deficits appear. Another possibility is that residents' initial satisfaction levels are high since people will not often admit dissatisfaction with an immediate past action such as moving.

Regression Equations

As the final step in the analysis, the seven components which showed significant changes in satisfaction levels were placed in multiple-regression equations as dependent variables. Three categories of independent variables, nine in all, were included in the regression equations:

- (1) Five background variables:
 - family size
 - sex of the head of household
 - education of the head of household
 - earnings of the head of household
 - age of the head of household

Table 1. Results of T-Tests for Changes in the Satisfaction Levels Over Time

Scale items	Development A (N=57)	Development B (N=36)	Both (N=93)
Privacy (apartment)	-5.20 _A	-1.04	-4.11 _A
Cost (apartment)	0.28	0.00 _B	0.31
Location (apartment)	1.72	0.53	1.56
Looks (apartment)	-4.29 _A	-3.61 _A	-5.56 _A
Space (apartment)	-3.31 _A	-2.51 _A	-4.04 _A
Safety (apartment)	-3.90 _{AB}	-4.33 _A	-5.67 _A
Description (apartment)	-2.30 _{AB}	-3.79 _A	-4.27 _A
Feelings (apartment)	-5.04 _A	-2.22 _A	-5.08 _A
Safety (neighborhood)	0.74	0.60	0.60
Feelings (neighborhood)	-2.55 _A	0.36	-1.21
City	-0.50	-0.09 _B	-0.39
Feelings About Moving	-2.98 _A	0.92	-1.32
TOTAL SATISFACTION	-6.46 _A	-4.32 _A	-7.49 _A

_A significant at 95 percent level of confidence.

_B initial satisfaction level significantly lower than the other project.

(2) Two variables regarding previous housing conditions:

conditions of the previous housing unit
conditions of the previous neighborhood

(3) Two dummy variables:

Development - 0 denoting tenants in the Development B

1 denoting tenants in the Development A

Participation — 0 denoting tenants who did not participate in more than one consumer

education program in Development B

1 denoting tenants who voluntarily participated in two or more consumer

education programs in Development B.

The results of the multiple regressions are presented in Tables 2 through 4.

Examination of the multiple regression equation which includes the entire sample of tenants

Table 2. Results of Multiple Regressions Using Changes in Satisfaction Levels as Dependent Variables for Tenants In Both Projects (N=77)^A

Independent Variables	Dependent Variables						
	Overall Satisfaction	Safety	Space	Looks	Privacy	Feelings	Description
Constant	36.59	4.28	5.01	5.20	4.72	5.41	3.98
Family Size	-0.24 (4.34)*	-0.09 (0.58)	-0.18 2.32	0.08 (0.42)	-0.10 (0.71)	-0.12 (1.03)	-0.07 (0.41)
Sex of head	-0.03 (0.04)	-0.13 (0.75)	0.12 (0.59)	0.03 (0.04)	-0.08 (0.28)	-0.19 (1.46)	-0.09 (0.40)
Education of head	0.03 (0.07)	0.09 (0.55)	B	0.13 (1.13)	0.02 (0.04)	0.07 (0.28)	0.08 (0.46)
Earnings	-0.06 (0.19)	-0.03 (0.05)	0.04 (0.09)	-0.21 (1.75)	-0.04 (0.06)	0.08 (0.24)	-0.10 (0.49)
Age of head	B	-0.01 (0.01)	0.07 (0.32)	-0.24 (3.08)	0.07 (0.30)	-0.07 (0.25)	0.09 (0.52)
Condition of previous housing unit	-0.19 (0.84)	-0.44 (4.52)*	0.24 (1.24)	0.18 (0.65)	-0.18 (0.72)	0.13 (0.32)	-0.27 (1.77)
Condition of previous neighborhood	0.19 (0.80)	0.61 (8.40)**	-0.28 (1.72)	-0.26 (1.33)	0.30 (1.87)	-0.09 (0.16)	0.47 (5.16)*
Participation	-0.43 (12.01)**	-0.26 (4.35)*	-0.40 (9.76)**	-0.19 (1.99)	-0.29 (4.83)*	-0.34 (6.22)*	-0.28 (5.36)*
Development	0.17 (1.92)	-0.04 (0.07)	-0.10 (0.55)	-0.12 (0.66)	-0.28 (4.07)*	-0.34 (5.60)*	0.08 (0.41)
R ²	0.22	0.24	0.18	0.12	0.17	0.13	0.28
F	2.35*	2.37*	1.93	1.03	1.50	1.10	2.90**
Standard Error	6.00	0.95	1.29	0.83	1.17	1.08	0.78

*p .05

**p .01

^A The first number is the beta coefficient; the number under that in parentheses is the F ratio.

^B Not included in equation because the proportion of variance of that variable not explained by the other independent variables is less than 0.1 percent.

for overall satisfaction indicates that only two independent variables are significant predictors of changes in satisfaction level: participation rate and family size (Table 2). The Beta coefficients for participation rate and family size are .43 and .24 respectively.

The indication that households with larger families are most likely to experience a decrease in satisfaction is reasonable in the light of the original framework and agrees with Onibokun's (1976:339) findings. Households with larger families are most likely to readily perceive a housing deficit with respect to the fit between the size of the family and the space within the dwelling unit. Related to this presumption is the notion that

larger families are most likely to be unhappy with renting rather than owning a dwelling unit. Therefore, satisfaction with a rented unit, even though an improvement over a previously-occupied unit, is likely to diminish fairly rapidly.

Further indication of the explanatory significance of these two variables is demonstrated when overall satisfaction is broken down for tenants in each project. For Development A, only family size emerges as a significant predictor of changes in overall level of satisfaction (Table 3). For Development B, participation rate and sex of household head show a significant association with changes in overall satisfaction (Table 4).

Table 3. Results of Multiple Regressions Using Changes in Satisfaction Levels As Dependent Variables for Tenants in the Development A Project (N=44)^A

Independent Variables	Dependent Variables						
	Overall Satisfaction	Safety	Space	Looks	Privacy	Feelings	Description
Constant	36.61	3.73	5.04	5.59	4.85	5.16	3.90
Family size	-0.38 (5.88) [°]	-0.19 (1.59)	-0.20 (1.74)	0.08 (0.34)	-0.16 (1.06)	-0.10 (0.37)	-0.12 (0.90)
Sex of head	0.18 (0.39)	-0.11 (0.16)	0.45 (2.52)	0.36 (1.71)	B	B	0.21 (0.74)
Education of head	0.09 (0.30)	0.15 (0.90)	B	0.08 (0.27)	0.10 (0.38)	0.06 (0.13)	B
Earnings	-0.16 (0.38)	0.18 (0.53)	-0.18 (0.53)	-0.49 (4.18) [°]	-0.21 (1.51)	B	-0.37 (3.00)
Age of head	-0.09 (0.24)	0.05 (0.07)	0.03 (0.03)	-0.20 (1.21)	-0.06 (0.15)	-0.12 (0.57)	0.33 (4.06)
Condition of previous housing unit	-0.13 (0.19)	-0.31 (1.08)	0.09 (0.08)	-0.12 (0.18)	-0.35 (1.33)	-0.11 (0.12)	-0.58 (5.01) [°]
Condition of previous neighborhood	0.07 (0.05)	0.56 (3.28)	-0.24 (0.65)	-0.22 (0.54)	0.40 (1.65)	-0.04 (0.02)	0.78 (8.85) ^{°°}
R ²	.18	.23	0.16	0.28	0.14	0.04	0.38
F	1.10	1.55	1.19	2.02	0.97	0.32	3.73 [°]
Standard Error	5.96	0.93	1.03	0.75	1.15	1.07	0.69

[°]p .05

^{°°}p .01

^A The first number is the beta coefficient; the number that in parentheses is the F ratio.

^B Not included in equation because the proportion of variance of the variable not explained by the other independent variables is less than 0.1 percent.

Although of less importance, the results of the equations for individual satisfaction items give further indication of the predictive potential of these independent variables. The results presented below are for those equations that have relatively high R² values (above .20).

For the entire set of tenants, the equations dealing with change in perception of safety and the tenants' description of the apartment are of importance. Variance in perception of safety of the apartment is explained by program participation,

previous housing environment, and condition of previous housing unit. The Beta coefficients are -.26, .61 and -.44 respectively. Participation and previous housing environment are of major explanatory importance in the change in tenants' description of how good their present apartment is. Beta coefficients are -.28 and .47 respectively (Table 2).

In Development A, tenants' description of how good their apartment was varied according to

Table 4. Results of Multiple Regressions Using Changes in Satisfaction Levels as Dependent Variables for Tenants in the Development B Project (N=33)^A

Independent Variables	Dependent Variables						
	Overall Satisfaction	Safety	Space	Looks	Privacy	Feelings	Description
Constant	32.24	4.38	4.87	4.19	4.05	4.77	3.68
Family size	0.06 (0.10)	0.29 (1.92)	-0.12 (0.29)	0.12 (0.26)	-0.03 (0.02)	-0.02 (0.01)	0.02 (0.01)
Sex of head	-0.33 (4.06) [*]	-0.30 (3.13)	-0.23 (1.62)	-0.20 (1.05)	-0.19 (0.95)	-0.45 (7.36) [*]	-0.06 (0.10)
Education of head	-0.05 (0.07)	0.06 (0.09)	-0.17 (0.76)	0.04 (0.03)	-0.10 (0.25)	-0.03 (0.03)	0.04 (0.03)
Earnings	-0.21 (1.00)	-0.45 (4.20) [*]	0.10 (0.21)	-0.11 (0.19)	0.06 (0.07)	B	-0.08 (0.10)
Age of head	0.06 (0.12)	-0.10 (0.28)	0.07 (0.14)	-0.32 (2.13)	0.13 (0.40)	-0.08 (0.19)	-0.13 (0.35)
Condition of previous housing unit	-0.17 (0.38)	-0.37 (1.61)	0.35 (1.26)	0.44 (4.75)	B	0.32 (1.21)	0.12 (0.12)
Condition of previous neighborhood	0.37 (1.72)	0.53 (3.38)	-0.08 (0.06)	B	0.27 (1.90)	0.09 (0.10)	0.25 (0.57)
Participation	-0.44 (7.61) [*]	-0.28 (2.95)	-0.45 (6.89) [*]	-0.15 (0.66)	-0.30 (2.65)	-0.35 (4.47) [*]	-0.36 (3.72)
R ²	0.50	0.47	0.41	0.26	0.27	0.42	0.30
F	2.95 [*]	2.63 [*]	2.05	1.26	1.32	2.65 [*]	1.27
Standard Error	5.73	0.92	1.25	0.85	1.23	0.96	0.87

^{*}p .05

^{**}p .01

^A The first number is the beta coefficient; the number under that in parentheses is the F ratio.

^B Not included in equation because the proportion of variance of that variable not explained by the other independent variables is less than 0.1 percent.

condition of the previous housing unit and condition of the previous neighborhood. Beta coefficients are $-.58$, and $.78$ respectively. Earnings with a coefficient of $.49$ accounted for the variance in change in tenants' perceptions of satisfaction with the looks of the apartment (Table 3).

Because of the high explanatory power of participation, every equation involving Development B had a relatively high R^2 , that is, above $.25$ (Table 4). Participation in the consumer program explained variance in tenants' perception of space in Development B. The Beta coefficient is $-.45$ for participation. Participation rate and sex of the head of household accounted for variance in the change in tenants' feelings about their apartment. The Beta coefficients are $-.35$ for participation rate and $-.45$ for sex of the head of household. Earnings with a Beta coefficient of $-.45$ explained variance in change in tenants' perception of safety (Table 4).

There are several possible explanations as to why voluntary participation in the consumer education programs produced decreases in satisfaction. First, it is likely that participation resulted in the tenants becoming more aware of the common problems. Second, it is likely that through program participation tenants were better able to verbalize their concerns with the housing by the time the second interview occurred. Third, since previous levels and types of community participation are unknown, the possibility of preselection can not be ruled out. In other words, tenants who had a high participation rate were predisposed to a rapid decrease in residential satisfaction. If dissatisfaction is coupled with ambition and the desire to further improve their living environment, it may be seen as a positive outcome of the program. In any case, the overall effect of the consumer education program was to reduce the level of housing satisfaction for its chief participants. However because of sample size, caution must be used in generalizing these findings.

It was hypothesized that the more inadequate

the previous housing conditions, the more unlikely a household would become dissatisfied with their present housing. In general, little evidence is obtained to support this hypothesis. Although significant in three equations, neither condition of the previous housing unit nor condition of the previous neighborhood environment has a consistent relationship with changes in the level of satisfaction. Two explanations of this finding are proposed.

First, some of those households whose previous housing and neighborhood conditions were assessed as inadequate may have adapted their expectations soon after attaining residence in the projects. This adaptation process may have been so extensive that relief from certain deprivations present in the previous housing environment, that are perceived soon after moving into the project, are over time, no longer perceived. Initially, households might have perceived relief from certain deprivations but after a short time in the project, it might be perceived as adequate. Hence, previously inadequate housing conditions would not show an inverse relationship with presently incurred decreases in satisfaction; rather they would have *no* relationship. This suggestion is consistent with the theories espoused in much of the current literature on the low-income family, namely, that they have a tremendous ability to adapt to adverse circumstances.

Second, consistent with the framework outlined earlier, it is quite possible that although in the short-run a move to a new residence reduces a deficit which was previously perceived, as time passes, perceptions of new deficits appear. Thus, the results presented earlier may suggest that the salience of old conditions in assessing present housing conditions changes quite rapidly as one settles into a new residence. This notion finds considerable support in the more general findings that satisfaction levels in regard to many features of housing and the neighborhood environment change quite rapidly with duration of residence.

POLICY IMPLICATIONS

The results of this study suggest several implications for planners, housing managers, government officials and other concerned with improving the housing situation of lower-income groups. Two of the most important ones are:

(1) Future housing policy should give greater attention to correcting those aspects of the housing environment with which residents become readily dissatisfied. In this manner, the tendency of tenants to become dissatisfied with their residence over time could be considerably dampened. In addition, such policy should be particularly sensitive to the user needs of large families. As the findings of this study indicate, households with larger families are likely to undergo a rapid decrease in residential satisfaction.

(2) Consumer education programs instituted in low-income housing projects need to be re-evaluated. Results from this study suggest educational programs may increase frustration levels and thus demands both on management and the community.

SUMMARY AND CONCLUSIONS

In sum, this study examined the effect of background factors and previous housing conditions on changes in residential satisfaction. Underlying the examination of these relationships was the idea that in the short-run a move to a new residence reduces a previously perceived housing deficit and produces immediate high levels of satisfaction but, as time passes in the new residence, some households become dissatisfied as new deficits are perceived. Using a sample of residents taken from two government supported projects and, employing T-tests and multiple regression as analytical tools, three major findings were generated:

(1) Residential satisfaction decreased significantly in a relatively short time period. The components of overall satisfaction which decreased most readily were: satisfaction with the

privacy, looks, safety, and spaciousness of the apartment, and feelings about the apartment and description of the apartment.

(2) Of all the background variables only family size and participation had a significant association with changes in satisfaction.

(3) Previous housing conditions did not have a consistent significant association with satisfaction changes.

In conclusion, it is hoped that this study will serve as the ground work for future comparative evaluations of housing quality, that more emphasis will be given to changes in satisfaction, and further improvement of the residential environment. More research with a larger sample in a variety of housing situations would help clarify and expand the ideas suggested here.

References

- Caplow, T.; Strykes, and S.F. Wallace (1964) *The Urban Ambience*. Totowa, New Jersey: Bedminister.
- Carp, F.M. (1965) "Long-Range Satisfaction with Housing." *The Gerontologist*, 15 (February): 68-72.
- Festinger, L.; S. Schacter and K. Back (1950) *Social Pressures In Informal Groups*. Stanford, California: Stanford University Press.
- Fish, G. (1974) "Residential Homogeneity and Neighborhood Satisfaction," *Housing Educators Journal* 1 (May): 11-23
- Fried, M. and P. Gleicher (1961) "Some Sources of Residential Satisfaction in an Urban Slum." *Journal of the American Institute of Planners*, 27 (November): 305-335.
- Greninger, S.A. (1973) "Determinants of Housing Satisfaction." Unpublished Ph.D. dissertation. Urbana-Champaign: University of Illinois.
- Hartman, C. (1963) "The Limitations of Public Housing: Relocation Choices in a Working-Class Community." *Journal of the American Institute of Planners*, 29 (November): 283-296.

- Harris, C.M. (1976) "The Measurement of Quality in Housing and Its Relationship To Housing Satisfaction." *Housing Educators Journal* 3 (May): 7-13.
- Keller, S. (1968) *The Urban Neighborhood: A Sociological Perspective*. New York: Random House.-. 106-123.
- Lansing, B. and G. Hendricks (1967) "Living Patterns and Attitudes in the Detroit Region." Detroit Regional Transportation and Land Use Study, Detroit, Michigan.
- Meeks, C.B. (1971) *Housing Satisfaction of Columbus Home Owners*. Columbus, Ohio: Columbus Area Chamber of Commerce.
- Merchant, M.M.; S.L. Well, and C. B. Meeks (1976) *Consumer Education in the Economically Integrated Housing Community*. University of Massachusetts.
- Michelson, W. (1970) *Man and His Urban Environment: A Sociological Approach*. Reading: Addison-Wesley. pp. 168-190.
- Mogey, J. (1955) "Changes in Family Life Experienced by English Workers Moving from Slums to Housing Estates." *Journal of Marriage and Family Living*, 17 (May): 123-128
- Morris, E.; M. Winter and S.R. Crull (1975) "Housing Norms, Housing Satisfaction, and the Propensity to Move." *Journal of Marriage and the Family*, (February): 79-88.
- Onibokun, A.g. (1974) "Evaluating consumers' Satisfaction with Housing: An Application of a Systems Approach." *Journal of American Insitite of Planners*, 40 (May): 189-200.
- _____, (1976) "Social System Correlates of Residential Satisfaction," *Environment and Behavior* 8 (September): 323-343.
- Rent, G.S. (1973) "Low-Income Housing in South Carolina: Factors Related to Residential Satisfaction." Unpublished paper. Clemson, South Carolina: Clemson University.
- W.; A. Sloan, M.Seferi and E. Werby (1974) "All in Together: An Evaluation of Mixed-Income Multi-Family Housing." Summary Report of the Massachusetts Housing Finance Agency.
- Speare, Jr. Alden (1974) "Residential Satisfaction as an Intervening Variable in Residential Mobility." *Demography* 11 (May): 173-188.
- Stewart, K. "The Discrepancy Between Desired and Actual Housing and the Decision to Move into a Specific Subsidized Housing Project." August 1973. Ithaca, N.Y.: Cornell University, Unpublished Ph.D. dissertation.
- Taube, G. (1972) "The Social Structural Sources of Residential Satisfaction." Unpublished Ph.D. dissertation. Brandeis University.