

SPACE NORMS AND HOUSING SATISFACTION OF LOW INCOME FAMILIES¹

Kathleen Yockey

There seems to be a general consensus expressed in the literature that growing families desire an increase in space for their household functions (Rossi, 1955; Alonso, 1969). Due to steadily rising construction costs and an increase in the demand for mechanical devices, space has often been sacrificed and as often is the case, those who have the least (low income families) are the ones who suffer (crowded housing) the most. Alonso (1969:25) emphasized this point stating: "...amenities in housing built for the low income...[were] impeded by the creation of constantly raised expectations in the housing built for other income levels." The low income people are forced to live in substandard and crowded housing because they cannot afford the rent of better,

Kathleen Yockey is a Master of Science Candidate in the Department of Family Environment, College of Home Economics, Iowa State University, Ames, Iowa.

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larger units. The rising standards of the middle and upper income groups serve only to increase the number of substandard units (due to the rising definition of a standard unit, not to deteriorating housing) and do not necessarily improve the existing units.

Recognition of the need for more space by the dweller may not inevitably mean he is aware of the consequences the deficiency may have for his family. Tensions may erupt without the dweller knowing why.

The machine has built the city and the city has condemned most families to live in spaces so small that it is hard in the extreme for individuals to find a full release for their creative powers. There is not enough privacy. There is not enough silence; and not enough places in which children can make the legitimate noises of childhood without being shushed and hushed (APHA, 1951:39).

For example, inadequate space could constrain a young child's normal behavior, resulting in psychological repercussions on his development. Once again, this is compounded for low income families who are most likely to be living under such conditions.

This is not to say that eliminating overcrowded conditions should remove all or even many other deficiencies suffered by low income families. However, it most definitely is an integral part of the problem. "...the most urgently felt housing need of the poor, is for additional interior space" (Alonso, 1956:15).

The assessment of housing space requirements should be based on the needs of the occupants. A family's stage of life cycle and the number of people in the household are key determinants of their total space needs while their preferred activity patterns may determine the specific patterns of space required.

Importance of size of house or apartment lies in use as a measure of adequacy to satisfy requirements of families of various sizes and composition and demands of the community depending on location, income, social values and family size (Beyer, 1958:50).

Nevertheless, due mainly to cost limitations, minimum standards which often do not meet the occupant's needs are forced upon them even though their inherent needs are comparable to families of other income levels. Federal housing standards are lower for low income families than for middle and upper income groups (Morris and Winter, 1974:153). Yet, the low income groups are expected (by others in the society) to meet their needs and maintain a respectable standard of living in housing below cultural standards.

The importance of space in housing satisfaction was emphasized in a study of livability problems of 1000 families (FPHA, 145). Most families suffered from a deficit of bedrooms complicated by their disapproval of living room sleeping. They desired units with a greater number of bedrooms and fewer one person bedrooms. Bedrooms were found to be too small, too narrow, and poorly located, necessitating passage through main living rooms. Doors, windows and closets prevented desirable bed location, and there was inadequate window area.

Misconceptions about low income families as well as high construction costs may be the reasons

for these double standards. It may be believed that people with lower incomes would not be able to afford as many possessions as people with higher incomes and therefore would not need as much space. However, it is more likely that their possessions would differ in quality rather than quantity compared to those of other income groups, therefore requiring the same amount of space.

A crosstabulation analysis of data from this study indicated that possession of amenities such as appliances and furnishings increase in number with income. Nevertheless, families with incomes below \$7,000 possess the majority of the same items as families with higher incomes in considerable number and require the same amount of space for their functioning. Therefore, there is little reason to believe that families living under minimum space standards have minimum size possessions they can easily accommodate in a minimum space.

Overall agreement on this point is not widespread. Opponents would argue that it is the values families at low income levels possess which differ significantly from families of upper income levels (APHA, 1951; Gans, 1962; Gutman, 1970). Presumably, if they place less value on space, they would "need" less space.

Contrary to that point, the general hypothesis of this study is that families of the same size and composition at all income levels have roughly identical standards for housing space adequacy. Therefore, an increase or decrease in housing space would produce a similar change in housing satisfaction for families at all income levels. This hypothesis is consistent with a substantial body of other studies of housing norms and values (Belcher, 1970; Stubbs, 1971; Williams, 1971; Hinshaw and Allott, 1972; Ladd, 1972; Michelson, 1967; Montgomery, 1963; Montgomery and Kivlin, 1962; Montgomery and McCabe, 1973; Morris and Winter, 1973; Winter and Morris, 1976; Stewart, 1973).

Data for this study were collected during the spring of 1975, by personal interviews with 455 households, located in Fort Dodge, Iowa. The

head of the household, the wife of the head or both were interviewed. The study examines the general topic of housing needs and conditions in Fort Dodge. Households were selected by a stratified random sample of the entire city based on enumeration districts. The final sample was weighted for underenumeration in some districts. The result was a weighted sample of 530 to give full representation for every enumeration district.

In the literature, crowding has been measured by persons per room, the number of square feet per person and the number of persons per sleeping room. "Bedroom need is the crucial space measure because there is less variation in the number of other rooms in a dwelling than in the number of bedrooms" (Morris and Winter, 1974:158). The number of bedrooms needed however, encompasses much more than the number of persons per sleeping room. Bedroom need is normative:

Bedroom need norms are an expression of the number of bedrooms needed to meet the cultural norms that prescribe the family members who should have separate bedrooms and those who may share bedrooms (Morris and Winter, 1974:159).

A measure of bedroom need developed by Morris (1972b) and Gladhart (1973) was developed to reflect those cultural norms. This measure provides that a bedroom is not to be shared by more than two people and a bedroom is needed for:

1. The parental couple (or single parent)
2. Each child aged 18 or over
3. Each pair of same sex children, at least one between the ages of 9 and 17, whose ages differ by 4 years or less
4. Each pair of children of any sex, both under age 9, whose ages do not differ by more than 4 years
5. Each additional adult or couple (see Morris, 1974:162; Gladhart, 1973:30)

A family which meets these criteria can be said to have met the cultural norms and experiences no cultural bedroom deficit. A deficit occurs when a family has fewer bedrooms than the prescribed cultural norm and a positive deficit occurs when a family has bedrooms beyond cultural norm requirements (Morris, 1972b; Gladhart, 1973)

By asking respondents how many bedrooms they felt they needed for their family and how many bedrooms are needed for an average American family of the same composition as their own, two additional measures of bedroom deficit are calculated by examining the difference between the actual number of bedrooms and these responses. These variables are termed personal bedroom deficit and average bedroom deficit respectively. If the needed and actual numbers of bedrooms are equal, no deficit exists. All three deficit variables are negative when the actual number of bedrooms is less than the number needed, and positive when the actual number is greater than the number needed.

Dependent Variables

Dependent variables used in this analysis consist of a range of housing satisfactions related to space. It was hypothesized that changes in housing satisfaction are caused by the same normative deficits felt over the entire income range. The four satisfaction variables used were: overall housing satisfaction, satisfaction with the number of total rooms, satisfaction with number of bedrooms and satisfaction with size of bedrooms. These four variables were coded with a range of four values; very dissatisfied, dissatisfied, satisfied, and very satisfied.

Control Variables

Tenure was considered an important control variable in determining housing satisfaction. The strong cultural norm of home ownership would seem to have a strong bearing on housing satisfaction. Tenure data were coded as either own or rent.

Household income consisted of total income of the entire household during 1974. This variable was the only variable analyzed that had a substantial number of missing cases. Twenty-five percent of the data for household income is missing due to respondents' refusals to supply the information. The missing data cases were suspected to have fallen predominantly in the upper income ranges based on crosstabulation of a number of variables by income class including a class of respondents with missing data. Income was first coded into three ranges: \$0-\$6,999, \$7,000-\$13,000 and \$14,000-\$99,998. This placed approximately one-third of the sample in each range. After initial crosstabulation was completed the similarity of the relationships in the upper two classes resulted in recoding the variables into two income classes: \$0-\$6,999 and \$7,000 and above.

Used as a control variable, marital status for the head of the household was coded as married, widowed, separated, divorced or single. The sample is predominantly married (344 of 530).

The age of the head of household was broken down into three classes giving consideration to family life cycle stage. The classes were coded as: 17 to 39 years, 40 to 64 years and 65 years or over with the greatest number of respondents in the 40 to 64 year range.

The final control variable used in the analysis was a computed variable for which saliency responses to eleven consumer variables were totaled to provide a measure of apathy on the part of the respondents. Responses to the eleven control variables were coded with a value of 0 given to responses indicating no importance to each consumption category and a value of 1 given for responses of importance to these categories. Consumption items included high quality clothing, amount of clothing, high quality furnishings and equipment, the right kinds of furnishings and equipment, variety in family diet, importance of quantity of food for the family, high quality housing, importance of space, high quality transportation, importance of recreational activity, and the amount of recreation the family is able to par-

ticipate in. The variable was then recoded into three categories based on the accumulated totals of the responses ranging from 0 to 1. Scores for respondents who were relatively unconcerned about these items ranged from 0 to 3, some importance 4-7 and important 8-11.

Normative Bedroom Deficits

Correlations between the bedroom deficit variables and a series of housing satisfaction variables (Table 1) show that the strongest correlation exists between satisfaction and cultural bedroom deficit (ranging from .17 to .38) emphasizing the strength of cultural norms over personal family norms (ranging from .05 to .24). This appears to suggest that cultural bedroom deficit serves as an effective measure of crowding. The average bedroom deficit variable will be dropped from this analysis due to the weak correlation between satisfaction and average bedroom deficit suggesting that average bedroom deficit does not serve as a suitable predictor of a family's feelings of adequacy.

Crosstabulation of the independent variables, cultural bedroom deficit and personal bedroom deficit results in a strong positive gamma (.83) pointing up the importance of cultural norms in developing personal family norms.

Tenure

Relationships between bedroom deficits and satisfaction are replicated when tenure is introduced as a control. The gamma for overall housing satisfaction is below .20 for both owners and renters whereas, the remaining variables maintain a relationship of .33 or above. However, there are much higher gammas for renters compared with owners when satisfaction is based on number of rooms or number of bedrooms (Tables

The data analysis (Tables 2-6) consists of crosstabulations between variables with strength and direction of the relationship measured by gamma, a measure of rank correlation (Freeman, 1965).

TABLE 1. Pearson Correlation Between Satisfaction Variables and Bedroom Deficit Variables

	Satisfaction With Housing	Satisfaction # Rooms	Satisfaction # Bedrooms	Satisfaction Size Bedrooms	Satisfaction Housing Comfort
Cultural deficit	.17	.34	.38	.37	.24
Personal deficit	.15	.23	.35	.31	.18
Average deficit	.05	.19	.24	.19	.18

TABLE 2. Rank correlations between satisfaction with housing and bedroom deficit variables controlling for tenure, marital status, age and income.

Satisfaction With Housing	Cultural Bedroom Deficit	Personal Bedroom Deficit
Total Sample	.22	.20
Tenure		
Own	.16	.16
Rent	.13	.15
Marital status		
Single	.28	.29
Married	.15	.13
Separated	.34	.34
Divorced	.26	.25
Widowed	.30	.32
Age of household head		
17-39	.16	.15
40-64	.20	.18
65-up	.15	.18
Household income		
\$0-\$6,999	.08	.03
\$7,000 - \$13,999	.40	.23
\$14,000 - up	.27	.45

3 and 4). All of the renters who met the cultural norm or had more bedrooms than needed were satisfied or very satisfied with the number of bedrooms they had. Possible dissatisfaction with

TABLE 3. Rank correlations between satisfaction with number of rooms and bedroom deficit variables controlling for tenure, age and income.

Satisfaction With Number of Rooms	Cultural Bedroom Deficit	Personal Bedroom Deficit
Total Sample	.46	.45
Tenure		
Own	.34	.33
Rent	.65	.65
Age of household head		
17-39	.62	.71
40-64	.37	.28
65-up	.20	.10
Household income		
\$0-\$6,999	.31	.24
\$7,000 - \$13,999	.73	.47
\$14,000 - up	.42	.52

renter status apparently may be reduced by substituting space adequacy for home ownership.

Age of Head

No gamma above .20 is shown for the overall housing satisfaction variable at any age level. The relationship between bedroom deficit and room and bedroom satisfaction decreases as age of household head increases. The stronger gammas

for ages 17 to 39 may be a result of this group being at the stage of firmly establishing a household and often having growing families requiring more space, thereby receiving great satisfaction when they have sufficient space and great dissatisfaction when they do not. Anticipated family size change also may account for the high gamma (.73) given for personal bedroom deficit and satisfaction with number of bedrooms for the first age span (Table 4).

TABLE 4. Rank correlations between satisfaction with number of bedrooms and bedroom deficit variables controlling for tenure, age and income.

Satisfaction With Number of Bedrooms	Cultural Bedroom Deficit	Personal Bedroom Deficit
Total Sample	.48	.54
Tenure		
Own	.43	.48
Rent	.62	.66
Age of household head		
17-39	.63	.72
40-64	.39	.38
65-up	.33	.27
Household income		
\$0- \$6,999	.19	.35
\$7,000 - \$13,999	.71	.54
\$14,000 - up	.52	.68

Household Income

Household income provides some interesting relationships. Consistently, the highest cultural bedroom deficit gammas for this variable are found in the middle income level (\$7,000-\$13,000), and high income group but dropping sharply for the low income range. A relationship between bedroom deficit and housing satisfaction completely disappears (cultural bedroom deficit .08; personal bedroom deficit, .03) for low income families when income is introduced (Table 2).

Satisfaction with size of bedroom (Table 5) has a strong relationship to cultural bedroom deficit

(.42) and to personal bedroom deficit (.45) for the low income group which may indicate that size takes over in importance because these families have accepted the existence of a bedroom deficit and have limited ability to make an adjustment if they do not have large bedrooms to double up in. The weaker relationship among high income families compared to middle income families suggests that they have been able to attain a maximum level of satisfaction. However, gammas for personal bedroom deficit of high income families are consistently higher, promoting the idea that as a family acquires more space its expectations increase accordingly. Only 18 percent of the high income families who meet the normative bedroom deficit are satisfied with their housing whereas 61 percent having a "surplus" are satisfied.

Marital Status

Crosstabulation of bedroom deficit and housing satisfaction controlling for marital status results in a low gamma (.15) for married

TABLE 5. Rank correlations between satisfaction with size of bedrooms and bedroom deficit variables controlling for tenure, age and income.

Satisfaction With Size of Bedrooms	Cultural Bedroom Deficit	Personal Bedroom Deficit
Total Sample	.47	.42
Tenure		
Own	.40	.35
Rent	.61	.54
Age of household head		
17-39	.55	.55
40-64	.40	.29
65-up	.31	.29
Household income		
\$0 - \$6,999	.42	.45
\$7,000 - \$13,999	.58	.37
\$14,000 - up	.50	.47

respondents whereas, gammas for all other values remained at .25 or above. This indicates that housing satisfaction may serve as a substitute for other satisfactions received from being married.

Apathy Scale

A measure indicating the general indifference or apathy of low income families is examined in an attempt to explain the weak relationship between housing space and housing satisfaction. If, as was postulated above, low income people have the same housing needs as middle and upper income people but do not show the same strong relationship between space deficits and satisfaction, then an explanation for that lack of relationship must be found or the original postulate must be abandoned. The explanation for the weak relationship among low income households may be found in the tendency for low income to give up and become apathetic.

The original relationship between housing satisfaction and bedroom deficit variables (cultural bedroom deficit, .22; personal bedroom deficit, .20) remains relatively the same when controlled for apathy (Table 6). For high, medium and low apathy the relation between cultural bedroom deficit and satisfaction are .29, .12 and .24 respectively. However, introducing income as a control along with apathy produces a very different set of relationships.

Looking at the same variables and controlling for household income as well as apathy, the gamma for low income families whose score on the apathy variable indicated indifference dropped to .09 which could be considered equivalent to zero. Gamma for those who showed some interest was .15 and for those with a high interest -.09. For all other income groups the gammas for cultural bedroom deficit remain at or above .24. Therefore, it would appear that housing satisfaction altered by cultural bedroom deficits are not experienced by low income families because of indifference. This indifference is interpreted as a means of adjusting to low income status rather than an indicator of differences in housing norms.

Discussion

At first glance, the findings appear to reject the hypothesis that cultural norms regarding housing space are the same for all families regardless of income level. The absence of a relationship between satisfaction and bedroom deficit among low income families in comparison to other income levels is quite apparent. Even though the strength of this relationship is stronger with other housing satisfaction variables, it still is generally

TABLE 6. Rank correlations between satisfaction with housing and bedroom deficit variables controlling for apathy and income.

Satisfaction With Housing	Cultural Bedroom Deficit	Personal Bedroom Deficit
Total Sample	.22	.20
Apathy scale		
High (0-3)	.29	.18
Medium (4-7)	.12	.06
Low (8-11)	.24	.34
Low income (\$0-\$6,999)		
High Apathy	.09	.07
Medium Apathy	.15	-.06
Low Apathy	-.09	.08
High income (\$7,000-\$99,998)		
High Apathy	.44	.46
Medium apathy	.24	.18
Low Apathy	.36	.55

lower than for the other income groups.

However, the stronger gammas for variables such as satisfaction with number of rooms and satisfaction with number of bedrooms under all control variables suggests that these variables respond more directly to normative space deficits than does general satisfaction. The housing satisfaction variable encompasses all elements of housing rather than only satisfaction determined by space increases or decreases and therefore may have been too broad for purposes of this study.

Further development of the apathy scale variable is necessary to identify the causal factors perpetuating a level of apathy and whether these factors go beyond level of income. In actuality, cultural space norms appear to be relatively similar for all families but may be overridden by other influences of social class. The role of apathy in the relationship may be interpreted in this way; norms may be relatively constant across class lines since the lack of a relationship between deficit and satisfaction among poor families is due to apathy rather than differences in norms.

Examination of housing satisfaction variables in terms of a relevant substitute for other family deficits warrants exploration. This could provide further insight into what appears to be a difference in bedroom deficit norms at different income levels.

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