

AD-A145 440

ALTERNATIVE MODELS OF FAMILY HOUSING

Richard L. Miller
Human Resources Research Organization

Submitted by

William W. Haythorn, Chief
ARI FIELD UNIT IN USAREUR

and

Joyce L. Shields, Director
MANPOWER AND PERSONNEL RESEARCH LABORATORY

DTIC FILE COPY



U. S. Army

Research Institute for the Behavioral and Social Sciences

June 1984

DTIC
ELECTE
SEP 1 2 1984
S D E

Approved for public release; distribution unlimited.

This report, as submitted by the contractor, has been cleared for release to Defense Technical Information Center (DTIC) to comply with regulatory requirements. It has been given no primary distribution other than to DTIC and will be available only through DTIC or other reference services such as the National Technical Information Service (NTIS). The views, opinions, and/or findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy, or decision, unless so designated by other official documentation.

84 09 10 035

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER Research Note 84-94	2. GOVT ACCESSION NO. AD-A145440	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Alternative Models of Family Housing		5. TYPE OF REPORT & PERIOD COVERED Final Report Sept 80 - Feb 83
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Richard L. Miller		8. CONTRACT OR GRANT NUMBER(s) MDA 903-78- C-2042
9. PERFORMING ORGANIZATION NAME AND ADDRESS Human Resources Research Organization (HumRRO) 1100 South Washington Street Alexandria, Virginia 22314		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS 2Q263743A794
11. CONTROLLING OFFICE NAME AND ADDRESS U.S. Army Research Institute for the Behavioral and Social Sciences, USAREUR Field Unit ODCSPER, HQ USAREUR, APO New York 09403		12. REPORT DATE June 1984
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) U.S. Army Research Institute for the Behavioral and Social Sciences, USAREUR Field Unit ODCSPER, HQ USAREUR, APO New York 09403		13. NUMBER OF PAGES 53
		15. SECURITY CLASS. (of this report) Unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Crowding, density, housing, environmental effects on behavior		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Residents of USAREUR family housing residing in single-family attached apartments, multi-family low rises and high rise buildings were surveyed. Results suggest that building type affects residents' health, family relations and relations with neighbors and volunteerism. Social problems occurred at a differential rate depending on type of housing. Finally, resident satisfaction differs according to housing type.		

TABLE OF CONTENTS

	<u>Page</u>
ALTERNATIVE MODELS OF FAMILY HOUSING	
Introduction	1
Health	5
Social Problems	5
Volunteerism	6
Relations with Neighbors	6
Family Relations	7
Self-Evaluation	7
Satisfaction with Housing	8
Purpose	8
Method	9
Participants	9
Procedure	9
Survey Instrument	10
Results	16
Health	19
Social Problems	24
Volunteerism	39
Neighbor Relations	42
Family Relations	48
Self-Evaluation.....	62
Satisfaction with Housing.....	62

Table of Contents (cont.)

	<u>Page</u>
Discussion	68
Single Family Attached Housing	68
Three Versus Four Story Stairwells	69
Two Versus Three Entranceway Stairwells	70
High Rise Buildings	71
On-Post Versus Off-Post Housing	71
Summary	72
References	73
Appendix A: Housing Survey	

Accession For	
NTIS GRA&I	☒
DTIC TAB	☐
Unannounced	☐
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	



List of Tables

	<u>Page</u>
1. Mean Estimates of the Extent of Hospitalization by Sponsors and Families	20
2. Predictors of Time Spent in the Hospital by Sponsors and Family Members	22
3. Mean Ratings of Subjective Stress	23
4. Predictors of Subjective Stress	25
5. Mean Frequency Ratings of Drug and Alcohol Abuse	26
6. Predictors of Drug and Alcohol Abuse	27
7. Mean Frequency Ratings of Crimes Against Property	29
8. Predictors of Crimes Against Property	32
9. Mean Frequency Ratings of Family Problems of Others	33
10. Predictors of Family Problems	35
11. Mean Ratings of the Frequency of Physical Aggression	36
12. Predictors of Physical Aggression	38
13. Mean Time Contributed to Volunteer Activities	40
14. Mean Ratings of Residents' Initiation of Neighborhood Volunteer Activities	41
15. Predictors of Volunteerism	43
16. Mean Attitudes Towards Neighbors	44
17. Mean Ratings of the Evaluation of Interactions With Neighbors	45
18. Mean Frequency of Weekly Contact With Neighbors	47
19. Mean Time Spent Socializing with Neighbors As a Function of Time in Housing	49
20. Predictors of Neighbor Relations	50
21. Mean Effects of Housing on Residents' Ability to Perform Family Roles	51
22. Mean Ratings of the Comparative Frequency of Family Activities	53

List of Tables (continued)

	<u>Page</u>
23. Mean Frequency Ratings of Family Activities By Officers and NCOs	54
24. Predictors of Family Relations: Roles and Activities	55
25. Mean Ratings of Relations with Spouse	57
26. Predictors of Family Relations: Spousal Interactions	58
27. Mean Ratings of the Quality of Parent-Child Interactions	60
28. Mean Ratings of Family Relations Before and After Moving to Current Housing	61
29. Mean Satisfaction Ratings	63
30. Mean Structural Satisfaction Ratings of Officers and NCOs	64
31. Mean Housing Satisfaction Ratings as a Function of Building and Number of Overseas Tours	66
32. Predictors of Satisfaction with Housing	67

Introduction

The question of how the built environment impacts upon the attitudes and behaviors of people is one which has received increasing attention during the past few years. It has only recently been recognized that the design of buildings limits the range of behavioral options available to those who use them and thus shapes the human experience in numerous ways. That feature of the built environment with the greatest potential for impact is housing.

This report examines the effects of housing on the military family stationed in West Germany. Military families come to West Germany and generally stay about three years. During this time, they are provided housing by the U.S. Army which with the rules and regulations governing assignments of housing leaves little room for personal preference or choice. The overwhelming majority of those military families assigned to the U.S. Army in Europe (USAREUR) are housed in multi-family low rise (stairwell) buildings located in relatively isolated and self-contained military housing areas. Recently in response to shortages of on-post housing, the Army has begun to provide alternatives to stairwell living in the form of leased government housing on the economy. In general, this alternative involves the leasing of a building or portion of a building for the use of military families. These buildings include row houses, duplexes, three and four story low rises and high rises. Most recently, in the military community at Osterholz-Scharmbeck the Army has contracted to build such apartment buildings for all families assigned to the community. Given the variety of alternatives available to communities in meeting housing shortages, what are the effects on residents

of living in particular kinds of housing? Also, are there differences in the experiences of residents living in the different forms of traditional housing, i.e., stairwell building on post?

In order to answer these questions, it is important to classify the available building types along a variety of architectural dimensions. First, there is single family attached housing in the form of on-post duplexes and off-post duplexes and rowhouses. On-post duplexes have traditionally been reserved for officers, but off-post single family housing has been made available to NCOs as well as officers. Multi-family low rise buildings differ with regard to height and length reflecting more and less dense living situations. There exists an almost equal distribution of three and four story buildings and also buildings with two and three entrances or stairwells. Thus, these buildings can contain twelve, sixteen, eighteen, or twenty-four apartments. These building types are available both on and off post, but again assignment to either on or off-post housing is not a matter of choice but rather a matter of availability at the time the family arrives in Germany. Finally, off-post housing includes a number of high rise buildings ranging from eight stories to twenty stories tall.

Thus, the range of housing in USAREUR varies quite a bit with regard to its residential density and crowding. Although there is some controversy about the aversiveness of crowding and density (e.g., Altman, 1975; Freedman, 1975), the bulk of the research conducted to date clearly suggests that density and crowding have a negative impact on individuals (for a review see Aiello & Baum, 1979).

While little research has been done comparing single family dwellings to multiple-family residences, a number of studies have compared low rise and high rise buildings. In general, it has been found that satisfaction and social cohesion are less in residents of high rise buildings as compared to those living in low rise buildings. Some of the factors found to differ include pro-social behaviors and cooperation, (Bickman, Teger, Gabriele, McLaughlin, Berger & Sunaday, 1973), perceptions of less social support and cohesiveness (Wilcom & Holahan, 1976) and generally less satisfaction (Holahan & Wilcox, 1979).

While a number of attitudes and behaviors have been shown to be affected by the experience of living in buildings like those described above (see also Mercer, 1975, Barker, 1968), it is important to note that not all individuals are equally affected by the built environment (see Studer, 1970). As Onibokum (1976) has pointed out, problems and dissatisfaction with housing may only partly be due to the architectural design and also partly due to the social, cultural and psychological state of the residents. One of these "resident" characteristics which has been identified as relevant to studies of housing is social class. For example, Fried and Gleicher (1961) have pointed out that individuals of different social classes can perceive and use the same environment in different ways. Similarly, ethnic group differences can be observed in how individuals interact with aspects of built environments (see Baxter, 1970). Another factor which can affect the individual's response to the built environment has to do with the extent of the individual's experience with similar environments in the past (see Marris, 1962).

Proshansky (1978) has suggested that coping strategies and self definition are related to one's socialization environment. It may be that these mechanisms do not readily adapt to substantially different environments.

Finally, individuals may, as noted by Glass and Singer (1972), adapt to certain negative aspects of their environment. Thus, in time, individuals may show a kind of habituation to aversive conditions. Studies of reactions to density and crowding have shown both adaptation (Sundstrom, 1975) and non-adaptation (Aiello, Epstein and Karlin, 1975).

Paulus, Cox, McCain and Chandler (1975) found that tolerance for crowding decreased over time in high density situations. Baum, Aiello and Calesnick (1978) also found negative effects as a result of prolonged exposure to high residential density. Finally, Hopstock, Aiello and Baum (1979) suggest that long-term high density generates stress and stress-related symptoms.

These four resident characteristics discussed above were operationalized in the present study in the following way. First, as a rough measure of social class, residents were classified on the basis of the sponsor's rank into two groups: officers and NCOs. Second, residents were classified according to majority and minority group membership with all non-whites being classified as minority group members. Third, the extent of familiarity with military housing was based on the number of overseas tours the resident reported. Finally, the length of time in housing was divided at the one year point so that residents with less than a year in housing could be compared to those with more than one year.

Thus, in the present study, the effects of housing on residents who differed with respect to rank, race, time in housing and number of overseas tours were examined for a variety of attitudes and behaviors as outlined below.

Health

A number of studies have related housing variables (principally density) to the health of the residents. Booth (1975) found that crowding was associated with a number of types of ill health including infectious disease, communicative disease and stress related illness. Similarly, Stokols and Ohlig (1975) found that dormitory crowding resulted in more frequent trips to the student health center. On vessels of the U.S. Navy, Dean, Pugh and Gunderson (1975) found an association between crowding and visits to the dispensary. Other studies which have found a relationship between dwelling density and some measure of ill health include Booth and Welch (1973), Schmitt (1966) and Levy and Herzog (1974). Booth and Johnson (1975) have related crowded household conditions to poorer health among children.

Another health related variable is subjective stress. Mitchell (1971) found that residents in higher density dwellings reported greater subjective stress (unhappiness and worry) than did residents of less dense housing. Other studies which have found that high density housing is associated with high stress include Smith and Haythorn (1972) and Miller (1978).

Social Problems

A number of scientists have asserted that crowding leads to aggression (e.g., Stokols, Rall, Pinner and Schopler, 1973; Sundstrom, 1978;

Zlutnick and Altman, 1972). However, the results of empirical studies have been mixed. Hutt and Vaizey (1966) reported increased aggression with increased density, but Smith and Haythorn (1972) reported less hostility in more crowded rooms. Crime or delinquency has been related to household density in four studies which controlled for socio-economic factors (Booth and Welch, 1973, 1974; Galle, et al, 1972; and Schmitt, 1966). The relationship of neighborhood density to crime has received mixed support. Levy and Herzog (1974) in a study done in Holland found that housing density leads to increases in crime and delinquency, while Freedman, Heshka and Levy (1975) found no relationship between density and crime. Child abuse has been linked to crowded homes in a study by Booth (1975), and family problems (e.g., divorce) have been related to housing density by Levy and Herzog (1974).

Volunteerism

Milgram (1970) theorized that increased population density creates social and cognitive overload which results in reduced altruistic responses to the needs of others. Testing this hypothesis, two studies by Bickman, Teger, Gabriele, McLaughlin, Berger and Sunaday (1973) showed that students living in higher density dormitories demonstrated less helping behavior than students living in less crowded conditions. Similarly, Miller (1982) found that apartment dwellers exhibited less helping behavior in a field experiment than did residents of single family attached housing.

Relations with Neighbors

The social overload which accompanies high density can also lead to a reduction in social interactions with neighbors. A number of studies

have shown that occupants of high rise buildings often suffer from reduced social contacts with neighbors (see Fanning, 1967; Hird, 1967) and high density dwellings have been shown by Mitchell (1971) to discourage friendship practices among neighbors. Also, research by Wilcox and Holahan (1976) has indicated that residents of high rise student dormitories report lower levels of social support and cohesion than do residents of low rise dormitories. Finally, the work of Baron, Mandel, Adams and Griffen (1976) demonstrated the relationship between crowding and more negative interpersonal attitudes.

Family Relations

Miller (1978) found that residents of higher density housing expressed less satisfying relationships with both spouse and children. In general, high density housing has been implicated in providing various stressors to family functions. In fact, according to a study conducted by the Department of the Environment (1975) high rise buildings are considered to be generally unsuitable for families with younger children. High rise living situations seem to limit play opportunities for children, and to reduce parents' feelings of safety for their children (Marcus, 1974; Littlewood and Sale, 1972). Also, as Parke (1978) has noted, the sustained parent-child contact typical of high-rise buildings can contribute to parental irritability and family tension.

Self-Evaluation

Self identity and a sense of self worth involve the ability to control one's boundaries in relation to others (Altman, 1975). In order to maintain adequate boundary control, privacy is required. To the extent

that high density housing limits privacy, it may also negatively affect self-esteem. Miller (1978) found that residential density was associated with lower self-evaluation ratings by residents of military family housing.

Satisfaction with Housing

Studies which have examined residents' satisfaction with housing have generally found significantly less satisfaction with highly dense buildings (Baron, et al., 1976; Bickman et al., 1973; Valins and Baum, 1973; Wilcox and Holahan, 1976; Aiello and Baum, 1979; Eoyang, 1974).

Purpose

In summary, the present study is designed to determine how health, the occurrence of social problems, volunteerism, relationships with family and neighbors, attitudes towards oneself and satisfaction with housing are affected by certain aspects of housing. These aspects include spatial density as reflected in the number of dwelling units per building as well as a comparison of housing located in a confined military housing area to housing integrated into the larger German community. Finally, the mediating effects of rank, race, number of overseas tours and length of time in housing will be examined.

Method

Study Participants

Participants in this study were 1106 residents of military family housing in five USAREUR communities. These communities were chosen from the total of thirty-three USAREUR communities based on the following criteria:

1. an adequate mix of both on-post housing and leased housing on the German economy
2. an adequate mix of housing types to include single family attached (duplexes and row houses), multi-family low rises (stairwells and three or four story walk-ups), and multi-family high-rises (over eight story elevator buildings)
3. representative of both USAREUR Corps (V and VII)

Within each housing area, buildings were chosen randomly to allow for a maximum of 500 respondents in each community. Also, within each building, random selection was used to obtain approximately equal numbers of sponsors (the individual affiliated with the U.S. Army) and spouses. One family member (either sponsor or spouse as specified in the sampling plan) from each apartment in a selected building was included in the study.

Procedure

In each building, the residents selected for participation in the study were assembled by the local building coordinator for a meeting with the survey administrator. Nine members of the HumRRO staff served as

survey administrators. In the meeting, participants were told the general purpose of the questionnaire: to assess the effects, behavioral and attitudinal, of housing on the residents, and to identify sources of satisfaction and dissatisfaction with their housing situation. The privacy act was then read to the participants after which the administrator explained how to use the answer sheets and had each participant fill out the identification portion of the questionnaire as explained on pages 2 and 3 of the survey instrument (see Appendix A).

These initial meetings were held early in the evening, and residents were asked to take the questionnaires back to their apartments and complete them that evening. Completed questionnaires were obtained by the survey administrator later that same evening or on the following day. Residents were requested to fill out the questionnaire without discussing the questions or their answers with their spouse prior to completion.

Survey Instrument

The survey instrument contained 268 items. A subset of these, forming the key dependent variables relevant to this report, was organized into the following seven topic areas: (1) health, (2) social problems, (3) volunteerism, (4) neighbor relations, (5) family relations, (6) self-evaluation and (7) satisfaction with housing.

Health. Six items measured health-related behaviors. These included the frequency of outpatient care and hospitalization during the previous three months, a comparative measure of family health, and a scale measuring subjective stress. Outpatient care was divided into sponsor and family trips and was measured along a nine-point scale

ranging from (1) no trips to (9) eight or more trips. The index for the family was created by adding the total number of trips for both spouse and children and then dividing that number by the size of the family not counting the sponsor. Hospitalization was similarly subdivided into sponsor and family hospitalization and was measured along a six-point scale ranging from (0) no time in the hospital to (5) two or more weeks in the hospital. The comparative health question asked respondents to evaluate their family's health now versus before they moved into their current housing on a six-point scale ranging from (1) much better to (6) much worse. Subjective stress was measured using a modified version of the Kerle-Bialek (1961) scale which asked respondents to select an adjective which best described how they had felt during the previous two months. The adjectives ranged from (1) wonderful to (10) frightened.

Social problems. Four categories of social problems were assessed. Respondents were asked to indicate the extent of each problem on a seven-point scale ranging from (1) non-existent to (7) extremely large. Separate assessments were made for the residents' housing area, building and section of the building. Responses to the questions on drug and alcohol abuse were added together and the total divided by two to form a composite index, as were the responses to the theft and vandalism questions. Physical aggression was a single item. An index of family problems was created by adding together the responses to items on marital problems, child abuse, spouse beating and parent-child conflicts. This total was then divided by four in order to form a grand mean.

Volunteerism. A total of seven items assessed the frequency of volunteerism. Respondents indicated how often they gave time to the following agencies along a scale ranging from (1) never to (10) daily. The agencies included: (1) Army Community Service (2) Red Cross, (3) school, (4) chapel, (5) hospital, (6) Dependent Youth Activities, and (7) scouting. Factor analysis indicated that these items formed two factors. The first factor was labelled medical volunteering and included time given to the hospital with a factor loading of .45 and time given to the Red Cross with a factor loading of .83. The second factor, community volunteering, included the other five items with factor loadings ranging from .35 to .61 with an average loading of .46.

In addition, respondents were asked to indicate if they or a member of their family had been responsible for initiating or organizing volunteer activities such as babysitting, car-pooling, child care, recreation activity or resident get-togethers. Responses ranged from (1) yes, more than one of the activities listed to (3) no, none of the activities listed.

Neighbor relations. Attitudes towards neighbors were assessed using an eleven-item semantic differential. This scale ranged from (1) positive evaluation to (7) negative evaluation. Factor analysis indicated that ten of these items formed a single factor accounting for 91.1% of the variance with factor loadings ranging from .61 to .79. Therefore, a composite index was compiled by adding together the ratings on these ten items and dividing by ten. The item excluded from the index was formal/informal. Appendix A contains this semantic differential.

Ten items assessed cooperation between neighbors. These included asking for and offering help, chatting and discussing issues of mutual interest, and child care. These items were accompanied by seven-point scales ranging from (1) more than once a day to (7) seldom or never. Two indices were created from these data. First, a frequency with which one or more of these activities took place on at least a weekly basis was computed by counting the number of times a respondent reported participating in a cooperative interaction on a basis ranging from (1) a few times a day to (4) one-two times a week. A second index was created by computing a grand mean of all the cooperative items using the full scale.

Six items assessed conflict between neighbors. These included conflicts over laundry, building maintenance, children's activities, noise, parking or family conduct. These items were also accompanied by seven-point scales ranging from (1) more than once a day to (7) seldom or never. Again, two indices were created in the same manner as the indices of cooperation described above.

One final item assessed neighbor relations. Respondents were asked to compare the frequency with which they socialized with neighbors on a scale ranging from (1) much more now than before I moved into my present housing to (5) much less than before.

Family relations. Respondents were asked to indicate how their current housing affected their ability to live family roles on a scale ranging from (1) adds significantly to (7) detracts significantly. The responses for the roles of parent and spouse were added and divided by two to obtain a grand mean for family roles.

Four items assessed family activities around the house. These included establishing house rules for children, setting up a schedule for errands, setting standards of cleanliness, and rearranging furniture. These items were accompanied by a five-point scale ranging from (1) much more now than before living in their current housing to (5) much less than before. These items were added together and the total divided by four in order to form a composite index.

Relations with one's spouse were assessed by two items. The first asked respondents to indicate whether time with their spouse was (1) much more satisfying now in Germany than it had been in the States to (5) much less satisfying than before. The frequency of arguing with spouse was indicated on a five-point scale ranging from (1) much more now than before to (5) much less than before. Also, respondents were asked to assess their relationship with their children on a scale ranging from (1) much more positive here to (5) much more negative here.

Eight items assessed general family relations. These included: (1) support for one another, (2) not sharing feelings, (3) fighting, (4) blowing off steam, (5) unity and cohesion, (6) doing things together, (7) intruding and (8) worrying about others' opinions of the family. These items were coded to reflect positive relations (7) to negative relations (1). Each of these activities was accompanied by two scales. The first asked how often the activity took place prior to moving into their current housing, and the second asked how often it had taken place since moving into their current housing. The scales ranged from very

much to very little. In order to compare now versus then, the sum of the "now" items was subtracted from the sum of the "then" items which yielded an index of decline versus improvement in family relations.

Self-evaluation. Attitudes towards one's self were assessed using an eleven-item semantic differential ranging from (1) positive evaluation to (7) negative evaluation. Factor analysis indicated that ten of these items formed a single factor accounting for 83.6% of the variance. Factor loadings ranged from .44 to .78 with an average loading of .63. Therefore, a composite self-evaluation score was created by adding together the responses to each of these items and dividing by ten. The item excluded was the formal/informal dimension. Appendix A contains the semantic differential.

Satisfaction with housing. Fourteen items assessed satisfaction with housing. These included one question which assessed overall satisfaction on a scale ranging from (1) very satisfied to (7) very dissatisfied and thirteen items which assessed particular aspects of their housing on a scale ranging from (1) very satisfied to (7) very dissatisfied, cannot get along at all. Factor analysis indicated that these items formed two factors. The first factor included overall satisfaction plus satisfaction with the lighting, ventilation, efficiency, plumbing, upkeep, noise, safety, and floor plan of the apartment as well as the physical appearance and safety of the housing area. Factor loadings ranged from .47 to .68 with an average loading of .55. The second factor included overall satisfaction, satisfaction with housing convenience plus satisfaction with the apartment's size,

convenience, efficiency and floor plan. Factor loadings ranged from .43 to .89 with an average loading of .59. The first factor included mostly structural aspects of the dwelling and will be termed structural satisfaction. A composite index of structural satisfaction was created by adding together the response to those items and dividing by eleven. The second factor will be termed satisfaction with housing. A composite index of this form of satisfaction was also created by adding together the responses to those items and dividing by six.

Results

Residents of military family housing who participated in this study lived in one of eight different types of buildings. These were:

1. Single family attached (duplexes and rowhouses)
2. Multi-family low rise, 3 floors, off-post
3. Multi-family low rise, 4 floors, off-post
4. Multi-family low rise, 3 floors, 2 stairwells, on-post
5. Multi-family low rise, 3 floors, 3 stairwells, on-post
6. Multi-family low rise, 4 floors, 2 stairwells, on-post
7. Multi-family low rise, 4 floors, 3 stairwells, on-post
8. Multi-family high rise (over eight floors)

To determine the effects of housing on residents an analysis of variance was performed comparing the responses to the questionnaire of those residents in each of the eight types of buildings. Subsequent analyses compared residents in various groupings representing different ways of conceptualizing the housing experience. First, an analysis was performed which compared the responses of residents in single family

attached (SFA) buildings to those in multi-family low rises (MFLR) to those in high rise (HR) buildings. Second, analysis of variance compared the responses of those residents who lived in two entrance, on-post stairwell buildings to those living in three entrance, on-post stairwell buildings. The third analysis compared three versus four floor on-post stairwell buildings. Fourth, a comparison between multi-family low rises off post to similar stairwell buildings on post was performed. Finally, all multi-family low rise buildings both on and off post were classified by height (three versus four floors) and an analysis of variance was performed comparing them.

In addition to the main effects of building type, the interaction of building and resident characteristics was analyzed. Four resident characteristics were included. These were rank of respondent or respondent's spouse (officer versus NCO), race of respondent (majority versus minority group member), length of time the respondent had lived in his/her present housing (less than one year versus over one year) and number of overseas tours the respondents had experienced (one versus two versus three or more). Because the focus of this report was on how housing affects attitudes and behavior and not on how rank, race, etc. affect attitudes and behaviors, the resident characteristics were only considered to the extent that they interacted with housing. Thus, no main effects of resident characteristics on the dependent variables are reported. To insure that the main effects of housing were independent of any resident characteristics a Chi Square analysis was performed on the distribution of all four resident characteristics within each building

type. The percentage of residents who lived in each type of housing are presented below. the only marginally significant departure ($p < .10$) from an equal distribution was on the number of overseas tours. Somewhat fewer first tour families were assigned to single family attached housing and somewhat fewer 3+ tour families were assigned to high rise buildings.

Resident Characteristics	Type of Housing		
	<u>Single family attached</u>	<u>Multi-Family Low Rise</u>	<u>High Rise</u>
<u>Rank</u>			
Officer	10.5	79.4	10.1
NCO	13.6	71.5	14.9
<u>Race</u>			
Minority	13.3	68.7	18.0
Majority	12.0	72.2	15.8
<u>Time in Housing</u>			
less than 1 year	5.4	86.8	7.8
over 1 year	7.7	82.9	9.4
<u>Number of Overseas Tours</u>			
one	11.7	69.1	19.2
two	15.9	63.4	20.7
three or more	14.9	67.8	17.3

The effects of each of the classifications of building type and the interaction of building type and respondent characteristics on residents' health, the occurrence of social problems, volunteerism, inter-personal

relations with both neighbors and family members, evaluations of one's self and satisfaction with housing were analyzed.

In order to determine the relative impact that building type and resident characteristics had on the dependent variables, a stepwise multiple regression analysis was performed. Thus, the amount of variance accounted for by first building and then resident characteristics will be presented for each variable where analysis of variance indicated a significant main (building) or interaction (resident characteristic X building) effect.

Health

Analysis of variance indicated no significant difference on the frequency of the sponsor's outpatient visits to hospital/dispensary as a result of building type. However, the results did indicate that family members residing in single-family attached housing made fewer outpatient visits to the hospital/dispensary ($\bar{X} = 2.48$) than did residents of either multi-family low rises ($\bar{X} = 3.01$) or high rises ($\bar{X} = 3.17$), $F(2, 981) = 2.84$, $p < .05$. No other significant main or interaction effects on frequency of outpatient care were found. Regression analysis indicated that building type (SFA vs MFLR vs HR) accounted for 1% of the variance in the number of out-patient visits.

Table 1 presents the residents' mean estimates of time spent in the hospital. Analysis of variance indicated marginally significant effects of building type on both sponsor's hospitalization, $F(7, 976) = 1.74$, $p < .09$ as well as family members' hospitalization, $F(7, 976) = 1.74$, $p < .09$. Additional analyses indicated that sponsors living in on-post

Table 1

Mean Estimates of the Extent
of Hospitalization by Sponsors and Families

<u>Building Type</u>	<u>n</u>	<u>Hospitalization</u>	
		<u>Sponsor</u>	<u>Family</u>
1. Single Family, Attached	142	1.05	.85
2. MFLR, 3 Floors, Off Post	46	.96	.56
3. MFLR, 4 Floors, Off Post	55	1.25	.87
4. MFLR, 3 Floors, 2 Stairwells	217	1.02	.67
5. MFLR, 3 Floors, 3 Stairwells	147	.98	.60
6. MFLR, 4 Floors, 2 Stairwells	55	.97	.65
7. MFLR, 4 Floors, 3 Stairwells	132	.99	.72
8. Multi-Family High Rise	190	1.01	.64

stairwell buildings spent more time in the hospital ($\bar{X} = .82$) than did those living in similar off-post buildings ($\bar{X} = .72$), $F(1, 651) = 3.69$, $p < .05$. Hospitalization of family members was reportedly less for residents of three story stairwell buildings ($\bar{X} = .68$) than for those living in four story stairwell buildings ($\bar{X} = .83$), $F(1, 651) = 3.35$, $p < .05$. No other main or interaction effects on hospitalization were found. Table 2 presents the results of the regression analysis on predictors of hospitalization.

On-post vs off-post buildings accounted for a small (.03) but significant proportion of the variance, $F(1, 840) = 11.53$, $p < .001$, in the hospitalization of sponsors while the number of apartments/building accounted for a small (.02) but significant proportion of the variance in the hospitalization of family members, $F(1, 849) = 11.53$, $p < .001$.

Analysis of variance indicated that residents of on-post stairwell buildings rated their family's health as poorer ($\bar{X} = 3.71$) than did residents of similar off-post buildings ($\bar{X} = 3.47$), $F(1, 559) = 5.66$, $p < .025$. No other main or interaction effects on ratings of family health were found. Regression analysis indicated that building location accounted for 19.6% of the variance in the ratings of family health.

The final measure of residents' health was the subjective stress scale. Table 3 presents the mean stress ratings for residents of each building type. Analysis of variance indicated a significant effect of building type on stress, $F(7, 976) = 2.33$, $p < .03$. Examination of these means shows that residents of single family attached buildings ($\bar{X} = 3.51$) and of three story stairwells ($\bar{X} = 3.83$) reported significantly

Table 2

Predictors of Time Spent in the Hospital
by Sponsors and Family Members

Sponsors Hospitalization

<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
1. Number of Apts/Bldg	< .01	< .01	.05
2. On-post vs Off-post MFLR	.17	.03	.15

Hospitalization of Family Members

<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
1. Number of Apts/Bldg	.12	.02	.07
2. 3 vs 4 Floor Stairwells	.04	.001	.11

Table 3
Mean Ratings of Subjective Stress

<u>Building Type</u>	<u>n</u>	<u>X Ratings</u>
1. Single Family, Attached	142	3.51
2. MFLR, 3 Floors, Off Post	46	3.39
3. MFLR, 4 Floors, Off Post	55	5.30
4. MFLR, 3 Floors, 2 Stairwells	217	3.67
5. MFLR, 3 Floors, 3 Stairwells	147	4.22
6. MFLR, 4 Floors, 2 Stairwells	55	4.34
7. MFLR, 4 Floors, 3 Stairwells	132	3.93
8. Multi-Family High Rise	190	4.20

less stress than did residents of either four story stairwells ($\bar{X} = 4.35$) or high-rises ($\bar{X} = 4.20$). Analysis of variance also indicated marginally significant differences between residents of single family attached buildings ($\bar{X} = 3.51$) and residents living in either multi-family low rise buildings ($\bar{X} = 4.02$) or high rise buildings ($\bar{X} = 4.20$), $F(2, 928) = 1.77$, $p < .17$. No other main or interaction effects on stress were found. Table 4 presents the results of the regression analysis on predictors of subjective stress. None of the classifications of building type accounted for more than one-percent of the variance in ratings of subjective stress.

Social Problems

Drug and alcohol abuse. Table 5 presents the mean frequency ratings of problems of drug and alcohol abuse in the housing area, building and section of building by residents of each building type.

Analysis of variance indicated a significant effect of building type on drug abuse in the housing area, $F(7, 976) = 4.33$, $p < .001$. Secondary analysis indicated that residents of single family housing reported less drug and alcohol abuse ($\bar{X} = 2.68$) than did residents of multi-family low rises ($\bar{X} = 3.23$) or high rises ($\bar{X} = 3.47$), $F(2, 981) = 8.16$, $p < .001$. Also, residents of two entrance stairwell buildings reported less drug and alcohol abuse in the housing area ($\bar{X} = 3.03$) than did residents of three entrance buildings ($\bar{X} = 3.51$), $F(1, 550) = 8.16$, $p < .01$. Regression analysis indicated that the best predictor of drug and alcohol abuse in the housing area was the number of entranceways to a building which accounted for 28% of the variance (see Table 6).

Table 4

Predictors of Subjective Stress

<u>Predictor</u>	<u>R</u>	<u>R</u> ²	<u>Beta</u>
Number of Apts/Bldg	.07	.01	.03
SFA vs MFLR vs HR	.04	.01	.04
3 vs 4 Floor Stairwells	.09	.01	.05

Table 5

Mean Frequency Ratings of
Drug and Alcohol Abuse

<u>Building Type</u>	<u>n</u>	<u>Location</u>		
		<u>Housing Area</u>	<u>Bldg.</u>	<u>Section</u>
1. Single Family, Attached	142	2.68	na	na
2. MFLR, 3 Floors, Off Post	46	2.76	2.13	1.51
3. MFLR, 4 Floors, Off Post	55	3.12	2.48	2.27
4. MFLR, 3 Floors, 2 Stairwells	217	3.03	2.03	1.86
5. MFLR, 3 Floors, 3 Stairwells	147	3.44	2.09	1.84
6. MFLR, 4 Floors, 2 Stairwells	55	3.00	2.03	1.85
7. MFLR, 4 Floors, 3 Stairwells	132	3.59	2.52	2.19
8. Multi-Family High Rise	190	3.47	2.92	2.28

Table 6

Predictors of Drug and Alcohol Abuse

<u>Housing Area</u>			
<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
1. Number of Apts/Bldg	.11	.01	.03
2. SFA vs MFLR vs HR	.14	.02	.07
3. 2 vs 3 Entrances	.28	.08	.19

<u>Building</u>			
<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
1. Number of Apts/Bldg	.17	.03	.03
2. MFLR vs HR	.16	.03	.05
3. 3 vs 4 Floor Stairwells	.45	.21	.45

<u>Section</u>			
<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
1. Number of Apts/Bldg	.14	.02	.01
2. MFLR vs HR	.15	.02	.05
3. 3 vs 4 Floor Stairwells	.37	.14	.22

Drug abuse in the building was also significantly affected by building type, $F(6, 787) = 26.81, p < .001$. Residents of multi-family low rises ($\bar{X} = 2.19$) reported significantly less abuse than did residents of high rise buildings ($\bar{X} = 2.92$), $F(1, 792) = 15.02, p < .001$. Also, residents of three story stairwell buildings reported significantly less drug and alcohol abuse ($\bar{X} = 2.06$) than did residents of four story buildings ($\bar{X} = 2.40$), $F(1, 650) = 9.18, p < .01$. Regression analysis indicated that the best predictor of drug and alcohol abuse in the building was the height of the stairwell which accounted for 21% of the variance (see Table 6).

Analysis of variance indicated a significant effect of building type on drug abuse in the respondents' section of the building, $F(6, 787) = 13.89, p < .001$. Residents of high rise buildings reported more drug and alcohol abuse ($\bar{X} = 2.28$) than did residents of multi-family low rises ($\bar{X} = 1.93$), $F(1, 792) = 13.93, p < .001$. Also, residents of three story stairwell buildings reported less drug and alcohol abuse in their section of the buildings ($\bar{X} = 1.82$) than did residents of four story buildings ($\bar{X} = 2.13$), $F(1, 650) = 9.19, p < .01$. No other main or interaction effects on drug and alcohol abuse were found. Regression analysis indicated that the best predictor of drug and alcohol abuse in the section was the height of the stairwell building which accounted for 14% of the variance (see Table 6).

Crimes against property. Table 7 presents the mean frequency ratings of theft and vandalism in the housing area, building and section of building by residents of each building type.

Table 7

Mean Frequency Ratings of
Crimes Against Property

<u>Building Type</u>	<u>n</u>	<u>Location of Crime</u>		
		<u>Housing Area</u>	<u>Bldg.</u>	<u>Section</u>
1. Single Family, Attached	142	2.18	na	na
2. MFLR, 3 Floors, Off Post	46	1.77	1.28	1.15
3. MFLR, 4 Floors, Off Post	55	3.56	2.55	2.46
4. MFLR, 3 Floors, 2 Stairwells	217	3.22	2.09	1.91
5. MFLR, 3 Floors, 3 Stairwells	147	3.31	2.25	2.01
6. MFLR, 4 Floors, 2 Stairwells	55	3.12	1.93	1.65
7. MFLR, 4 Floors, 3 Stairwells	132	3.33	2.54	2.21
8. Multi-Family High Rise	190	3.65	3.19	2.35

Analysis of variance indicated a significant effect of building type on the frequency of crimes against property in the housing area, $F(7, 976) = 11.82, p < .001$. Secondary analysis indicated that residents of single family attached buildings reported less crime in their housing area ($\bar{X} = 2.18$) when compared to residents of multi-family low rises ($\bar{X} = 3.18$) who reported less than did residents of high rise buildings ($\bar{X} = 3.65$), $F(2, 981) = 25.54, p < .001$. Also, residents of on-post stairwell buildings reported greater frequency of crime ($\bar{X} = 3.26$) than did residents of similar off-post buildings ($\bar{X} = 2.74$), $F(1, 650) = 7.82, p < .01$. Finally, residents of four story stairwell buildings reported greater frequency of crime ($\bar{X} = 3.33$) than did residents of three story buildings ($\bar{X} = 3.09$), $F(1, 650) = 3.91, p < .05$.

The occurrence of crime in the building was also significantly affected by building type, $F(6, 787) = 3.78, p < .001$. Residents of multi-family low rises ($\bar{X} = 2.19$) reported significantly less crime than residents of high-rise buildings ($\bar{X} = 3.19$), $F(1, 792) = 5.50, p < .02$. In addition, residents of on-post stairwell buildings reported significantly more crime ($\bar{X} = 2.23$) than did residents of similar buildings off post ($\bar{X} = 1.98$), $F(1, 650) = 4.02, p < .05$. Also, residents of three story stairwell buildings reported less crime ($\bar{X} = 2.06$) than did residents of four story buildings ($\bar{X} = 2.41$), $F(1, 650) = 9.55, p < .01$. Finally, residents of buildings with two entrances reported less crime (2.06) than did residents of buildings with three entrances (2.39), $F(1, 549) = 5.14, p < .025$.

Analysis of variance indicated a significant effect of building type

on the occurrence of crime in the residents' section of the building, $F(6, 787) = 11.41$, $p < .001$. Residents of multi-family low rises ($\bar{X} = 1.97$) reported less crime than did residents of high rise buildings ($\bar{X} = 2.35$), $F(1, 792) = 20.91$, $p < .001$. Also, residents of three story stairwell buildings reported less crime ($\bar{X} = 1.86$) than did residents of four story buildings ($\bar{X} = 2.14$), $F(1, 650) = 6.35$, $p < .02$. Finally, residents of buildings with two entrances reported less crime ($\bar{X} = 1.86$) than did residents of buildings with three entrances ($\bar{X} = 2.11$), $F(1, 549) = 3.82$, $p < .05$. No other main or interaction effects on crimes against property were found. Table 8 presents the results of the multiple regression analysis. None of the building classifications accounted for more than 2% of the variance.

Family problems. Table 9 presents the mean frequency ratings of family problems in the housing area, building and section of the building by residents of each type of building.

Analysis of variance indicated a significant effect of building type on the occurrence of family problems in the housing area, $F(7, 976) = 4.85$, $p < .001$. Secondary analysis indicated that residents of single family attached housing reported fewer family problems ($\bar{X} = 2.47$) than did residents of either multi-family low rises, ($\bar{X} = 3.13$) or high rise buildings ($\bar{X} = 3.03$), $F(2, 981) = 8.44$, $p < .001$. Also, residents of on-post stairwell buildings reported more family problems ($\bar{X} = 3.19$) than did residents of similar buildings off post ($\bar{X} = 2.79$), $F(1, 650) = 5.37$, $p < .02$. Finally residents of buildings with two entrances reported fewer family problems ($\bar{X} = 2.97$) than did residents of buildings with three entrances ($\bar{X} = 3.41$), $F(1, 549) = 7.53$, $p < .01$.

Table 8
Predictors of Crimes Against Property

<u>Housing Area</u>			
<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
Number of Apts/Bldg	.09	.01	.08
SFA vs MFLR vs HR	.01	<.01	< .01
On-post vs Off-post MFLR	.09	<.01	.02
3 vs 4 Floor Stairwells	.06	<.01	.09
<u>Building</u>			
<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
Number of Apts/Bldg	.10	.01	.13
MFLR vs HR	.09	.01	.10
On-post vs Off-post MFLR	.04	<.01	.05
3 vs 4 Floor Stairwells	.01	<.01	.07
2 vs 3 Entrances	.04	<.01	.10
<u>Section</u>			
<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
Number of Apts/Bldg	.13	.02	.01
MFLR vs HR	.09	.01	.10
3 vs 4 Floor Stairwells	.01	<.01	.07
2 vs 3 Entrances	.01	<.01	.09

Table 9

Mean Frequency Ratings of
Family Problems of Others

<u>Building Type</u>	<u>n</u>	<u>Location</u>		
		<u>Housing Area</u>	<u>Bldg.</u>	<u>Section</u>
1. Single Family, Attached	142	2.47	na	na
2. MFLR, 3 Floors, Off Post	46	2.46	1.93	1.66
3. MFLR, 4 Floors, Off Post	55	3.06	2.33	2.14
4. MFLR, 3 Floors, 2 Stairwells	217	2.98	2.04	1.86
5. MFLR, 3 Floors, 3 Stairwells	147	3.39	2.27	1.97
6. MFLR, 4 Floors, 2 Stairwells	55	2.95	1.91	1.82
7. MFLR, 4 Floors, 3 Stairwells	132	3.42	2.52	2.18
8. Multi-Family High Rise	190	3.03	2.64	2.16

The occurrence of family problems in the building was also significantly affected by building type, $F(6, 787) = 5.03, p < .001$. Residents of three story stairwell buildings reported fewer family problems ($\bar{X} = 2.11$) than did residents of four story stairwell buildings ($\bar{X} = 2.34$), $F(1, 650) = 4.63, p < .05$. Also, residents of buildings with two entrances reported fewer family problems ($\bar{X} = 2.01$) than did residents of buildings with three entrances ($\bar{X} = 2.39$), $F(1, 549) = 8.53, p < .01$.

Analysis of variance indicated a significant effect of building type on the occurrence of family problems in the residents' section of the building, $F(6, 787) = 21.68, p < .001$. Residents of multi-family low rise ($\bar{X} = 1.96$) reported fewer family problems than did residents of high rise buildings ($\bar{X} = 2.16$), $F(1, 792) = 11.59, p < .001$. Also, residents of three story stairwell buildings reported fewer family problems in their section ($\bar{X} = 1.88$) than did residents of four story stairwell buildings ($\bar{X} = 2.09$), $F(1, 650) = 4.35, p < .05$. No other main or interaction effects on the occurrences of family problems were found. The results of the regression analysis are presented in Table 10. Most of the R^2 's were less than .02 except for the amount of variance in family problems in the section explained by the height of the stairwell building (14%).

Physical aggression. Table 11 presents the mean frequency ratings of the incidence of physical aggression in the housing area, building and section of the building for residents of each type of building.

Analysis of variance indicated a significant effect of building type on the incidence of physical aggression in the housing area, $F(7, 976) = 4.81, p < .001$. Residents of single family attached buildings reported

Table 10

Predictors of Family Problems

<u>Housing Area</u>			
<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
Number of Apts/Bldg	<.01	<.01	.04
SFA vs MFLR vs HR	.03	<.01	<.01
On-post vs Off-post MFLR	.09	.01	.07
2 vs 3 Entrances	.05	<.01	.03
<u>Building</u>			
<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
Number of Apts/Bldg	.03	<.01	.04
3 vs 4 Floor Stairwells	.13	.02	.04
2 vs 3 Entrances	.14	.02	.07
<u>Section</u>			
<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
Number of Apts/Bldg	.13	.02	.01
MFLR vs HR	.12	.02	.02
3 vs 4 Floor Stairwells	.38	.14	.32

Table 11

Mean Ratings of the Frequency
of Physical Aggression

<u>Building Type</u>	<u>n</u>	<u>Location</u>		
		<u>Housing Area</u>	<u>Bldg.</u>	<u>Section</u>
1. Single Family, Attached	142	2.19	na	na
2. MFLR, 3 Floors, Off Post	46	2.24	2.13	1.63
3. MFLR, 4 Floors, Off Post	55	3.02	2.53	2.32
4. MFLR, 3 Floors, 2 Stairwells	217	2.79	1.81	1.69
5. MFLR, 3 Floors, 3 Stairwells	147	3.15	2.09	1.70
6. MFLR, 4 Floors, 2 Stairwells	55	2.96	2.22	1.88
7. MFLR, 4 Floors, 3 Stairwells	132	2.89	2.23	1.88
8. Multi-Family High Rise	190	3.21	2.69	2.18

fewer incidents of physical aggression ($\bar{X} = 2.20$) than did residents of multi-family low rises ($\bar{X} = 2.89$) who in turn reported fewer incidents than residents of high rise buildings ($\bar{X} = 3.21$), $F(2, 904) = 12.19$, $p < .001$. Regression analyses indicated that no building classification accounted for over 10% of the variance in ratings of aggression in the housing area (see Table 12).

The incidence of physical aggression in the building was also significantly affected by building type, $F(6, 787) = 20.29$, $p < .001$. Residents of multi-family low rise buildings reported fewer incidents of physical aggression ($\bar{X} = 2.07$) than did residents of high-rise buildings ($\bar{X} = 2.69$), $F(1, 792) = 11.04$, $p < .001$. Also, residents of three story stairwell buildings reported fewer incidents ($\bar{X} = 1.94$) than did residents of four story buildings ($\bar{X} = 2.30$), $F(1, 558) = 7.73$, $p < .01$. Finally, analysis of variance indicated a marginally significant effect of on/off post housing location on the incidence of physical aggression, $F(1, 558) = 2.90$, $p < .09$. Residents of off-post stairwell-type buildings reported fewer incidents of physical aggression ($\bar{X} = 2.65$) than did residents of on-post stairwell buildings ($\bar{X} = 2.93$). Table 12 presents the results of the multiple regression analysis of prediction of physical aggression in the buildings. The differences due to height of the building and building location each accounted for over 13% of the variance.

Analysis of variance indicated a significant effect of building type on the incidence of physical aggression in the residents' section of the building, $F(6, 787) = 3.71$, $p < .01$. Residents of multi-family low rises ($\bar{X} = 1.75$) reported somewhat fewer incidents than residents of high

Table 12
Predictors of Physical Aggression

<u>Housing Area</u>			
<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
Number of Apts/Bldg	.09	.01	.01
SFA vs MFLR vs HR	.10	.01	.02

<u>Building</u>			
<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
Number of Apts/Bldg	.11	.01	.04
MFLR vs HR	.13	.02	.01
3 vs 4 Floor Stairwells	.36	.13	.21
On-post vs Off-post MFLR	.38	.15	.27

<u>Section</u>			
<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
Number of Apts/Bldg	.22	.05	.17
MFLR vs HR	.17	.03	.11
3 vs 4 Floor Stairwells	.27	.07	.17

rise buildings ($\bar{X} = 2.18$), $F(1, 792) = 2.56$, $p < .10$. Also, residents of three story stairwell buildings reported fewer incidents ($\bar{X} = 1.69$) than did residents of four story buildings ($\bar{X} = 1.97$), $F(1, 558) = 6.38$, $p < .02$. No other main or interaction effects on the incidence of physical aggression were found. The regression analysis presented in Table 12 indicates that the three building classification methods which showed significant ANOVA results accounted for 3% to 7% of the variance in ratings of physical aggression.

Volunteerism

Table 13 presents the mean amount of time donated by residents of the different building types to both community and medical volunteer programs. Analysis of variance indicated a significant effect of building type on the extent of volunteering for community agencies, $F(7, 976) = 2.82$, $p < .01$. Secondary analysis indicated that residents of single family attached buildings gave more time to volunteer activities ($\bar{X} = 10.50$) than did residents of multi-family low rises ($\bar{X} = 9.68$) who, in turn, gave more time than did residents of high rise buildings ($\bar{X} = 8.88$), $F(2, 981) = 3.13$, $p < .05$. Also residents of on-post stairwell buildings gave more time to community volunteer activities ($\bar{X} = 9.91$) than did residents of similar buildings off post ($\bar{X} = 8.45$), $F(1, 650) = 4.18$, $p < .05$. No significant differences were found on the amount of time given to medical volunteer activities.

Table 14 presents the mean responses to the question regarding initiation of volunteer activities in the resident's neighborhood. Analysis of variance indicated a significant effect of building type on

Table 13

Mean Time Contributed to
Volunteer Activities

<u>Building Type</u>	<u>n</u>	<u>Type of Volunteer Activity</u>	
		<u>Community</u>	<u>Medical</u>
1. Single Family, Attached	142	10.50	3.19
2. MFLR, 3 Floors, Off Post	46	8.33	3.17
3. MFLR, 4 Floors, Off Post	55	8.55	2.91
4. MFLR, 3 Floors, 2 Stairwells	217	9.53	3.06
5. MFLR, 3 Floors, 3 Stairwells	147	11.07	2.89
6. MFLR, 4 Floors, 2 Stairwells	55	9.55	2.67
7. MFLR, 4 Floors, 3 Stairwells	132	9.37	3.28
8. Multi-Family High Rise	190	8.89	2.87

Table 14

Mean Ratings of Residents' Initiation
of Neighborhood Volunteer Activities

<u>Building Type</u>	<u>n</u>	<u>X Ratings</u>
1. Single Family, Attached	142	1.44
2. MFLR, 3 Floors, Off Post	46	1.54
3. MFLR, 4 Floors, Off Post	55	1.54
4. MFLR, 3 Floors, 2 Stairwells	217	1.49
5. MFLR, 3 Floors, 3 Stairwells	147	1.63
6. MFLR, 4 Floors, 2 Stairwells	55	1.63
7. MFLR, 4 Floors, 3 Stairwells	132	1.59
8. Multi-Family High Rise	190	1.54

initiation of volunteer activities, $F(7, 976) = 2.23, p < .03$.

Residents of single family attached buildings initiated more volunteer activities ($\bar{X} = 1.44$) than did residents of either multi-family low rise ($\bar{X} = 1.56$) or high rise buildings ($\bar{X} = 1.54$), $F(2, 975) = 3.13, p < .05$. Also, residents of stairwell buildings with two entrances initiated more volunteer activities ($\bar{X} = 1.51$) than did residents of stairwell buildings with three entrances ($\bar{X} = 1.61$), $F(1, 451) = 5.08, p < .025$. No other main or interaction effects on the extent of volunteering were found.

Table 15 presents the results of the regression analysis for predictors of both community agency volunteering and initiation of volunteer activities. Two differences were notable. First, the location of the multi-family low-rise building (on or off post) accounts for 14% of the variance in the amount of volunteer time residents give to community agencies. Second, the size of the stairwell building (two vs three entranceways) accounts for eleven percent of the variance in the initiation of volunteer activities.

Neighbor Relations

Table 16 presents the mean attitude ratings of residents in each building type towards their neighbors. Analysis of variance indicated a marginally significant effect of building type, $F(7, 976) = 1.63, p < .12$. Analysis of variance also indicated that residents of three story stairwell buildings reported more positive attitudes towards their neighbors ($\bar{X} = 2.65$) than did residents of four story stairwell buildings ($\bar{X} = 2.93$), $F(1, 650) = 6.13, p < .02$.

Table 17 presents the mean ratings of residents of the extent of

Table 15

Predictors of Volunteerism

Community Agency Volunteerism

<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
Number of Apts/Bldg	.22	.05	.08
SFA vs MFLR vs HR	.22	.05	.10
On-post vs Off-post MFLR	.38	.14	.24

Initiation of Volunteer Activities

<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
Number of Apts/Bldg	.16	.03	.07
SFA vs MFLR vs HR	.16	.03	.09
2 vs 3 Entrances	.32	.11	.19

Table 16

Mean Attitudes Towards Neighbors

<u>Building Type</u>	<u>n</u>	<u>Means</u>
1. Single Family, Attached	142	2.63
2. MFLR, 3 Floors, Off Post	46	2.58
3. MFLR, 4 Floors, Off Post	55	2.87
4. MFLR, 3 Floors, 2 Stairwells	217	2.60
5. MFLR, 3 Floors, 3 Stairwells	147	2.75
6. MFLR, 4 Floors, 2 Stairwells	55	2.76
7. MFLR, 4 Floors, 3 Stairwells	132	3.03
8. Multi-Family High Rise	190	2.90

Table 17

Mean Ratings of the Evaluation
of Interactions With Neighbors

<u>Building Type</u>	<u>n</u>	<u>Interaction Type</u>	
		<u>Cooperation</u>	<u>Conflict</u>
1. Single Family, Attached	142	5.19	5.69
2. MFLR, 3 Floors, Off Post	46	5.17	6.23
3. MFLR, 4 Floors, Off Post	55	5.48	6.27
4. MFLR, 3 Floors, 2 Stairwells	217	5.42	6.47
5. MFLR, 3 Floors, 3 Stairwells	147	5.36	6.25
6. MFLR, 4 Floors, 2 Stairwells	55	5.32	5.99
7. MFLR, 4 Floors, 3 Stairwells	132	5.37	6.11
8. Multi-Family High Rise	190	5.22	6.13

cooperation or conflict with neighbors. Analysis of variance indicated no significant difference due to building type on the extent of cooperative interactions. However, analysis of variance did indicate a significant effect of building type on the extent of conflict with neighbors, $F(7, 976) = 3.90, p < .001$. Residents of single family attached buildings reported fewer conflicts with neighbors ($\bar{X} = 5.69$) than did residents of either multi-family low rises ($\bar{X} = 6.27$) or high rise buildings ($\bar{X} = 6.13$), $F(2, 981) = 9.67, p < .001$. Also residents of three story stairwell buildings reported fewer conflicts with neighbors ($\bar{X} = 6.12$) than did residents of four story stairwell buildings ($\bar{X} = 6.36$).

Table 18 presents the number of weekly incidents of cooperation or conflict residents of each building type had with neighbors. Analysis of variance indicated a significant effect of building type on the number of weekly cooperative interactions, $F(7, 976) = 2.49, p < .02$. Residents of high rise buildings had fewer cooperative interactions ($\bar{X} = 2.87$) than did residents of either single family attached buildings ($\bar{X} = 2.33$) or multi-family low rise buildings ($\bar{X} = 2.23$), $F(2, 981) = 6.87, p < .001$.

Analysis of variance indicated no overall significant effect of building type on the number of weekly conflicts with neighbors, $F(7, 976) = 1.01, p = n.s.$ However, secondary analysis indicated that residents of three story stairwell buildings reported fewer weekly conflicts with neighbors ($\bar{X} = .18$) than did residents of four story buildings ($\bar{X} = .30$), $F(1, 650) = 4.34, p < .25$.

Analysis of variance indicated no main effect of overall building type on time spent socializing with neighbors. However, residents who

Table 18

Mean Frequency of Weekly Contact
with Neighbors

<u>Building Type</u>	<u>n</u>	<u>Type of Contact</u>	
		<u>Cooperation</u>	<u>Conflict</u>
1. Single Family, Attached	142	2.33	.23
2. MFLR, 3 Floors, Off Post	46	2.63	.19
3. MFLR, 4 Floors, Off Post	55	2.29	.29
4. MFLR, 3 Floors, 2 Stairwells	217	2.29	.13
5. MFLR, 3 Floors, 3 Stairwells	147	2.06	.22
6. MFLR, 4 Floors, 2 Stairwells	55	1.98	.27
7. MFLR, 4 Floors, 3 Stairwells	132	2.25	.31
8. Multi-Family High Rise	190	2.87	.30

lived in stairwell buildings with two entranceways reported more time spent socializing with neighbors ($\bar{X} = 2.95$) than did residents of stairwell buildings with three entrances ($\bar{X} = 3.14$), $F(1, 451) = 3.75$, $p < .05$. Also, analysis of variance indicated a significant Building Type x Time in Housing interaction, $F(7, 791) = 2.37$, $p < .02$. Table 19 presents these means. During the first year, residents in single attached housing ($\bar{X} = 3.00$), four story multi-family low rises ($\bar{X} = 3.32$) and high rise buildings ($\bar{X} = 3.35$) socialized less than did residents in three story multi-family low rise buildings ($\bar{X} = 2.95$). In general, this pattern reversed itself for those residents who had been in housing for over one year. No other main or interaction effects on measures of neighbor-relations were found.

Table 20 presents the results of the multiple regression analysis of the predictors of those measures of family relations for which analyses of variance indicated significant effects of building type. The amount of variance explained ranges from less than one percent to nineteen percent, the latter R^2 being found for the amount of conflict between neighbors living in three or four story stairwells.

Family Relations

Table 21 presents the mean ratings of residents' ability to perform family roles in each building type. Analysis of variance indicated a significant effect of building type on role performance, $F(7, 976) = 6.38$, $p < .01$. Residents of single family attached buildings reported more positive effects of housing ($\bar{X} = 3.12$) than did residents of multi-family low rises ($\bar{X} = 3.68$) who, in turn, reported more positive effects

Table 19

Mean Time Spent Socializing with Neighbors
As a Function of Time in Housing

<u>Building Type</u>	<u>n</u>	Time in Housing	
		<u>Less Than 1 Year</u>	<u>Over 1 Year</u>
1. Single Family, Attached	142	3.06	2.87
2. MFLR, 3 Floors, Off Post	46	2.72	3.08
3. MFLR, 4 Floors, Off Post	55	3.54	3.13
4. MFLR, 3 Floors, 2 Stairwells	217	2.93	3.00
5. MFLR, 3 Floors, 3 Stairwells	147	3.03	3.16
6. MFLR, 4 Floors, 2 Stairwells	55	3.08	2.76
7. MFLR, 4 Floors, 3 Stairwells	132	3.32	3.01
8. Multi-Family High Rise	190	3.35	2.95

Table 20
Predictors of Neighbor Relations

<u>Attitudes towards Neighbors</u>			
<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
Number of Apts/Bldg	.02	< .01	.01
3 vs 4 Floor Stairwells	.07	.01	.05

<u>Conflict with Neighbors</u>			
<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
Number of Apts/Bldg	.27	.07	.08
SFA vs MFLR vs HR	.16	.03	.03
3 vs 4 Floor Stairwell	.44	.19	.32

<u>Number of Weekly Cooperative Incidents</u>			
<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
Number of Apts/Bldg	.26	.07	.16
SFA vs MFLR vs HR	.25	.06	.16

<u>Number of Weekly Conflicts</u>			
<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
3 vs 4 Story Stairwells	.16	.03	.11

<u>Time Socializing</u>			
<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
2 vs 3 Entrances	.18	.03	.07
<u>Predictors</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
Number of Apts/Bldg	.13	.02	.05
Time in Building	.25	.07	.22

Table 21

Mean Effects of Housing on Residents'
Ability to Perform Family Roles

<u>Building Type</u>	<u>n</u>	<u>Mean Ratings</u>
1. Single Family, Attached	142	3.12
2. MFLR, 3 Floors, Off Post	46	3.27
3. MFLR, 4 Floors, Off Post	55	3.94
4. MFLR, 3 Floors, 2 Stairwells	217	3.77
5. MFLR, 3 Floors, 3 Stairwells	147	3.89
6. MFLR, 4 Floors, 2 Stairwells	55	3.50
7. MFLR, 4 Floors, 3 Stairwells	132	3.43
8. Multi-Family High Rise	190	4.03

than did residents of high rises ($\bar{X} = 4.03$), $F(2, 981) = 15.50$, $p < .001$.

Analysis of variance indicated a main effect of building type on the comparative frequency of family activities, $F(7, 976) = 17.87$, $p < .001$. Table 22 presents these means. Residents of single family attached housing reported more time spent on family activities ($\bar{X} = 2.03$) than did residents of multi-family low rises ($\bar{X} = 2.55$) who reported more than residents of high rises ($\bar{X} = 3.84$), $F(2, 981) = 29.86$, $p < .001$. Also, residents of three story stairwells reported more time spent on family activities ($\bar{X} = 2.39$) than did residents of four story stairwells ($\bar{X} = 2.82$), $F(1, 614) = 14.78$, $p < .001$ and residents of two entrance stairwells reported more time spent on family activities ($\bar{X} = 2.29$) than residents of three entrance stairwells ($\bar{X} = 2.2$), $F(1, 517) = 8.78$, $p < .01$. Finally, residents of on-post stairwells reported less time spent on family activities ($\bar{X} = 3.06$) than did residents of similar buildings off post ($\bar{X} = 2.46$), $F(1, 614) = 18.03$, $p < .001$. Analysis of variance also indicated a significant Building Type x Rank interaction, $F(7, 880) = 1.98$, $p < .05$. Table 23 presents these means. Officers and NCOs living in single family attached housing did not differ from one another on the amount of time spent on family activities. In multi-family low rise buildings, officers reported spending more time than did NCOs on family activities. This pattern reversed itself in high rise buildings where officers spent considerably less time in family activities than did NCOs. Table 24 presents the results of the regression analyses on predictions of role performance and the frequency of family activities.

Table 22

Mean Ratings of the Comparative Frequency
of Family Activities

<u>Building Type</u>	<u>n</u>	<u>Mean Ratings</u>
1. Single Family, Attached	142	2.03
2. MFLR, 3 Floors, Off Post	46	2.49
3. MFLR, 4 Floors, Off Post	55	3.54
4. MFLR, 3 Floors, 2 Stairwells	217	2.20
5. MFLR, 3 Floors, 3 Stairwells	147	2.64
6. MFLR, 4 Floors, 2 Stairwells	55	2.63
7. MFLR, 4 Floors, 3 Stairwells	132	2.60
8. Multi-Family High Rise	190	3.04

Table 23

Mean Frequency Ratings of Family Activities
By Officers and NCOs

<u>Building Type</u>	<u>n</u>	<u>Officers</u>	<u>NCOs</u>	<u>Differential</u>
1. Single Family, Attached	142	1.95	2.05	.10
2. MFLR, 3 Floors, Off Post	46	2.08	2.69	.61
3. MFLR, 4 Floors, Off Post	55	3.52	3.70	.18
4. MFLR, 3 Floors, 2 Stairwells	217	2.02	2.39	.37
5. MFLR, 3 Floors, 3 Stairwells	147	2.48	2.68	.20
6. MFLR, 4 Floors, 2 Stairwells	55	2.07	2.71	.64
7. MFLR, 4 Floors, 3 Stairwells	132	2.11	2.61	.50
8. Multi-Family High Rise	190	3.39	2.98	-.41

Table 24
Predictors of Family Relations: Roles and Activities

<u>Role Performance</u>			
<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
Number of Apts/Bldg	.19	.04	.11
3 vs 4 Floor Stairwells	.17	.03	.09

<u>Frequency of Family Activities</u>			
<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
Number of Apts/Bldg	.21	.04	.09
3 vs 4 Floor Stairwells	.36	.13	.23
2 vs 3 Entrances	.40	.16	.30
On-post vs Off-post MFLR	.37	.14	.24
SFA vs MFLR vs HR	.19	.04	.08
Rank (officer vs NCO)	.36	.13	.32

Building classifications account for between 3 and 4% of the variance in role performance and up to 16% of the variance in family activity frequency. Relatively high proportions of the variance in family activities were accounted for by height and width of stairwell buildings (relative density) and also by the location of multi-family low rises (on post vs off post).

Table 25 presents the mean ratings of how satisfying time spent with one's spouse was and how much time was spent in arguing with one's spouse. Analysis of variance indicated a significant effect of building type on how satisfying was the time spent with one's spouse, $F(7, 976) = 2.62$, $p < .02$. Residents of single family housing reported more satisfaction with spouse ($\bar{X} = 3.11$) than did residents of multi-family low rises ($\bar{X} = 3.40$) who, in turn, reported higher satisfaction than did residents of high rise buildings ($\bar{X} = 3.55$), $F(2, 943) = 5.29$, $p < .01$. The lowest satisfaction ratings were reported by residents of four story stairwell buildings off post ($\bar{X} = 2.61$).

Analysis of variance also indicated a significant effect of building type on the amount of time spent arguing with one's spouse, $F(7, 976) = 1.99$, $p < .05$. Residents in single family attached buildings spent less time arguing with their spouses ($\bar{X} = 3.08$) than did residents of either multi-family low rise ($\bar{X} = 2.88$) or high rise buildings ($\bar{X} = 2.87$), $F(2, 944) = 2.67$, $p < .06$. Table 26 presents the results of the regression analysis of predictors of spousal relations. Both the number of apartments/buildings and the breakdown between single-family attached, multi-family low rises and high-rise buildings accounted to 12% of the variance.

Table 25

Mean Ratings of Relations with Spouse

<u>Building Type</u>	<u>n</u>	<u>$\bar{X}$</u> <u>Satisfaction</u>	<u>$\bar{X}$</u> <u>Time Arguing</u>
1. Single Family, Attached	142	3.11	3.08
2. MFLR, 3 Floors, Off Post	46	3.45	2.89
3. MFLR, 4 Floors, Off Post	55	3.73	2.61
4. MFLR, 3 Floors, 2 Stairwells	217	3.47	2.83
5. MFLR, 3 Floors, 3 Stairwells	147	3.34	2.89
6. MFLR, 4 Floors, 2 Stairwells	55	3.22	3.94
7. MFLR, 4 Floors, 3 Stairwells	132	3.27	3.04
8. Multi-Family High Rise	190	3.55	2.87

Table 26
Predictors of Family Relations: Spousal Interactions

<u>Satisfaction with Time with Spouse</u>			
<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
Number of Apts/Bldg	.34	.12	.17
SFA vs MFLR vs HR	.34	.12	.19

<u>Time Arguing with Spouse</u>			
<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
Number of Apts/Bldg	.03	<.01	.04
SFA vs MFLR vs HR	<.01	<.01	.05

Table 27 presents the mean ratings of residents in each building type regarding the quality of parent-child interactions. Analysis of variance indicated a significant effect of building type, $F(7, 794) = 4.14$, $p < .001$. Parent-child relations were rated as most positive in single family attached housing and least positive in high rise buildings and four story stairwell buildings off post.

Table 27 also contains the results of the regression analysis of the predictors of parent - child interactions. Both the number of apartments in a building and the breakdown into single-family attached, multi-family low rises and high rise building accounted for small but significant proportions ($p < .001$) of the variance (6-8%).

Table 28 presents the mean ratings of family relations both before and after residents moved to their current buildings. Also presented are the mean difference scores between the family relations ratings before and after. Analysis of variance indicated no significant difference of building type on family relations before ($F < 1$). However, there were significant differences on the ratings of family relations after, $F(7, 976) = 3.01$, $p < .01$ and on the difference scores, $F(9, 976) = 2.62$, $p < .01$. Secondary analysis indicated that residents of single family housing reported higher ratings of family relations ($\bar{X} = 5.13$) than residents of either multi-family low rises ($\bar{X} = 4.77$) or high rise buildings ($\bar{X} = 4.67$), $F(2, 981) = 3.74$, $p < .024$. In general, residents reported less positive family relations after moving to USAREUR than before. This decline was less for residents of single family attached housing ($\bar{X} = -.15$) than for residents of multi-family low rises ($\bar{X} = -.41$) who reported smaller declines than did residents of high rise

Table 27

Mean Ratings of the Quality of
Parent-Child Interactions

<u>Building Type</u>	<u>n</u>	<u>$\bar{X}$ Ratings</u>
1. Single Family, Attached	142	2.71
2. MFLR, 3 Floors, Off Post	46	3.13
3. MFLR, 4 Floors, Off Post	55	3.39
4. MFLR, 3 Floors, 2 Stairwells	217	3.07
5. MFLR, 3 Floors, 3 Stairwells	147	3.11
6. MFLR, 4 Floors, 2 Stairwells	55	2.98
7. MFLR, 4 Floors, 3 Stairwells	132	3.05
8. Multi-Family High Rise	190	3.14

Predictors of Parent-Child Interaction

<u>Predictor</u>	<u>R</u>	<u>R^2</u>	<u>Beta</u>
Number of Apts/Bldg	.28	.08	.14
SFA vs MFLR vs HR	.25	.06	.12

Table 28

Mean Ratings of Family Relations
Before and After Moving to Current Housing

<u>Building Type</u>	<u>n</u>	<u>Family Relations</u>		
		<u>Before</u>	<u>After</u>	<u>Differential</u>
1. Single Family, Attached	142	5.28	5.13	.15
2. MFLR, 3 Floors, Off Post	46	5.17	4.80	.37
3. MFLR, 4 Floors, Off Post	55	5.39	4.82	.57
4. MFLR, 3 Floors, 2 Stairwells	217	5.23	4.79	.44
5. MFLR, 3 Floors, 3 Stairwells	147	5.29	4.79	.50
6. MFLR, 4 Floors, 2 Stairwells	55	5.13	4.87	.26
7. MFLR, 4 Floors, 3 Stairwells	132	4.94	4.64	.30
8. Multi-Family High Rise	190	5.25	4.67	.58

Predictors of Family Relations

<u>Predictors</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
Number of Apts/Bldg	.21	.05	.12
SFA vs MFLR vs HR	.22	.05	.15

buildings ($\bar{X} = -.58$), $F(2, 981) = 6.02$, $p < .01$. No other main or interaction effects on measures of family relations were found. Table 28 also contains the results of the regression analysis on predictors of family relations after arrival in USAREUR as compared to the ratings of family relations prior to arrival. Two building classifications each accounted for 50% of the variance, (see Table 28).

Self-Evaluation

Analysis of variance indicated no significant effects of building type or interaction between building type and residents' characteristics on residents' self-evaluation ratings.

Satisfaction with Housing

Table 29 presents the mean ratings of both structural and housing satisfaction by residents of each building type. Analysis of variance indicated a significant effect of building type on structural satisfaction, $F(7, 976) = 22.28$, $p < .001$. Residents of single family attached buildings reported greater satisfaction ($\bar{X} = 2.23$) than did residents of multi-family low rises ($\bar{X} = 2.66$) who reported more satisfaction than residents of high rise buildings ($\bar{X} = 3.09$), $F(2, 981) = 31.08$, $p < .001$. Also, residents of three story stairwell buildings reported greater satisfaction ($\bar{X} = 2.52$) than residents of four story buildings ($\bar{X} = 2.89$), $F(1, 650) = 16.11$, $p < .001$, and residents of two entrance stairwells reported greater satisfaction ($\bar{X} = 2.39$) than did residents of three entrance stairwells ($\bar{X} = 2.71$), $F(1, 549) = 15.21$, $p < .001$. Analysis of variance also indicated a significant Building Type x Rank interaction on ratings of structural satisfaction, $F(7, 927) = 2.08$, $p < .05$. Table 30 presents these means. In general, officers reported

Table 29

Mean Satisfaction Ratings

<u>Building Type</u>	<u>n</u>	<u>Type of Satisfaction</u>	
		<u>Structural</u>	<u>Housing</u>
1. Single Family, Attached	142	2.23	2.28
2. MFLR, 3 Floors, Off Post	46	2.68	2.57
3. MFLR, 4 Floors, Off Post	55	3.64	3.28
4. MFLR, 3 Floors, 2 Stairwells	217	2.32	2.65
5. MFLR, 3 Floors, 3 Stairwells	147	2.76	2.90
6. MFLR, 4 Floors, 2 Stairwells	55	2.68	3.02
7. MFLR, 4 Floors, 3 Stairwells	132	2.67	3.00
8. Multi-Family High Rise	190	3.09	3.09

Table 30

Mean Structural Satisfaction Ratings
of Officers and NCOs

<u>Building Type</u>	<u>n</u>	<u>Officers</u>	<u>NCOs</u>	<u>Differential</u>
1. Single Family, Attached	142	2.15	2.25	.10
2. MFLR, 3 Floors, Off Post	46	2.33	2.84	.51
3. MFLR, 4 Floors, Off Post	55	3.63	3.73	.10
4. MFLR, 3 Floors, 2 Stairwells	217	2.16	2.48	.32
5. MFLR, 3 Floors, 3 Stairwells	147	2.42	2.87	.45
6. MFLR, 4 Floors, 2 Stairwells	55	2.28	2.73	.45
7. MFLR, 4 Floors, 3 Stairwells	132	2.27	2.67	.40
8. Multi-Family High Rise	190	3.42	3.03	-.39

higher satisfaction ratings for all housing types except for single family attached and high rise buildings.

On the ratings of satisfaction with housing overall, analysis of variance indicated a significant effect of building type on satisfaction with housing, $F(9, 976) = 16.44, p < .001$. Residents of single family attached buildings reported higher satisfaction with housing ($\bar{X} = 2.28$) than did residents of multi-family low rises ($\bar{X} = 2.86$) who reported higher satisfaction ratings than did residents of high rise buildings, $F(2, 981) = 37.56, p < .001$. Also, residents of three story stairwell buildings reported greater overall satisfaction with housing ($\bar{X} = 2.73$) than did residents of four story stairwell buildings ($\bar{X} = 3.06$), $F(1, 650) = 22.47, p < .001$. In addition, residents of buildings with two entrances reported greater housing satisfaction ($\bar{X} = 2.72$) than did residents of buildings with three entrances ($\bar{X} = 2.94$), $F(1, 549) = 5.21, p < .025$. Finally, analysis of variance indicated a significant Building Type x Number of Overseas Tours interaction on satisfaction with housing, $F(14, 927) = 1.81, p < .05$. In general, residents with three or more overseas tours reported greater satisfaction with housing. The only exception to this occurred for residents of four story off-post stairwell buildings (see Table 31).

Table 32 presents the results of the regression analysis on predictors of housing satisfaction. Building classification accounted for up to 17% of the variance in structured satisfaction with the size of stairwell buildings (3 vs 4 floors and 2 vs 3 entranceways accounting for most of the variance. Similarly, those same two breakdowns accounted for

Table 31

Mean Housing Satisfaction Ratings As a Function
of Building and Number of Overseas Tours

<u>Building Type</u>	<u>n</u>	<u>Number of Overseas Tours</u>		
		<u>First</u>	<u>Second</u>	<u>Three or more</u>
1. Single Family, Attached	142	2.45	2.19	2.27
2. MFLR, 3 Floors, Off Post	46	2.73	2.33	2.28
3. MFLR, 4 Floors, Off Post	55	3.22	3.07	3.49
4. MFLR, 3 Floors, 2 Stairwells	217	2.67	2.66	2.62
5. MFLR, 3 Floors, 3 Stairwells	147	2.72	3.01	2.93
6. MFLR, 4 Floors, 2 Stairwells	55	3.28	2.90	2.72
7. MFLR, 4 Floors, 3 Stairwells	132	2.84	3.09	3.05
8. Multi-Family High Rise	190	3.05	3.25	2.98

Table 32
Predictors of Satisfaction with Housing

<u>Structural Satisfaction</u>			
<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
SFA vs MFLR vs HR	.12	.01	.03
3 vs 4 Floor Stairwell	.40	.16	.31
2 vs 3 Entrances	.41	.17	.32
Number of Apts/Bldg	.10	.01	.01
Rank (off vs NCO)	.30	.09	.30

<u>Overall Housing Satisfaction</u>			
<u>Predictor</u>	<u>R</u>	<u>R²</u>	<u>Beta</u>
SFA vs MFLR vs HR	.13	.02	.02
3 vs 4 Floor Stairwells	.34	.11	.22
2 vs 3 Entrances	.36	.13	.26
Number of Apts/Bldg	.12	.02	.02
Number of Overseas Tours	.37	.13	.37

a higher proportion of the variance (11-13%) in overall housing satisfaction than other building classifications.

Discussion

Previous research has suggested that housing density which can lead to perceptions of crowding is a major determinant of residents' attitudes and behaviors. Thus, in the discussion, those "effects" associated with each type of housing will be described. Specifically, this includes single family housing (the least dense of all the alternatives), high rise buildings (the most dense of the alternatives), and two comparisons of density within multi-family low rises (height and length of building). Also, the difference between multi-family low rises situated on and off post will be described.

Single Family Attached Housing

Single family housing which is situated on post consists of duplex apartments. These apartments are generally located in a part of the housing area somewhat removed from the multi-family low rises and, thus, form a kind of separate neighborhood. The duplexes and row houses situated off post were, in the present study, located in areas separate from other types of military family housing. Overall, this type of housing showed the most positive effects of all those studied. Specifically, residents of single family housing reported fewer visits by family members to the hospital and less subjective stress than residents of other types of buildings. With regard to social problems, residents of single family housing reported significantly fewer problems in their neighborhood and building of drug and alcohol abuse, crimes against property,

family problems and physical aggression. Helping behavior, in the form of giving time to volunteer community activities and initiation of volunteer activities in the neighborhood, was more frequent among residents of single family attached housing. These individuals also reported fewer conflicts with neighbors. On the items measuring family relations, residents of single family attached housing reported more positive effects of housing on their ability to perform family roles, more time spent in family activities, more satisfying relations with one's spouse and children and more positive family relations, generally. Finally, these residents reported greater satisfaction with housing than residents of other types of housing.

Three Versus Four Story Stairwell Buildings

One of the operationalizations of density used in this study was the height of the buildings. This comparison includes both on-post and off-post multi-family low rises. In the off-post situation, the three and four story buildings are generally situated in different locations. Similarly, three and four story stairwell buildings on post are usually situated in somewhat separate locations although the distance between the two types may only be a block.

Hospitalization of family members and ratings of stress were lower for residents of three story stairwell buildings. with regard to social problems, residents of three story stairwells reported less drug and alcohol abuse in both their building and their stairwell than did residents of four story buildings. Also, residents of three story buildings reported less crime in their housing area and less crime, fewer family

problems and fewer incidents of aggression in their buildings, as well as their stairwell, than had residents of four-story buildings. No differences were found regarding volunteerism. Residents of three story buildings reported more positive attitudes towards neighbors and less conflict with neighbors than did residents of four story buildings. On the measures of family relations, residents of three story buildings reported more family activities than did residents of four story buildings. Finally, satisfaction with housing is significantly greater for residents of three story buildings.

Two Versus Three Entrances

A second operationalization of density is the length of a building. Multi-family low rise buildings with two entrances contain either twelve or sixteen apartments while those with three entrances contain either eighteen or twenty-four apartments. These types of buildings are located only in military housing areas (on-post) and again are usually situated in somewhat separated sections of the housing area. No health effects were associated with the length of the building. However, the occurrence of social problems was associated with building length. Drug and alcohol abuse in the neighborhood and building, crime in the building and stairwell, family problems in the neighborhood and building were also associated with the larger, three entrance buildings. Initiation of volunteer activities was more frequent among residents of the smaller buildings with two entrances. Also, residents of the buildings with two entrances were more likely to socialize with neighbors and participate in family activities than were residents of the buildings with three entrances. Finally, satisfaction with housing was higher for residents

of the less dense buildings (one-two entrances).

High Rise Buildings

High rise buildings in which military families reside are all located outside the military housing areas. This alternative is associated with greatest density and, as the literature suggests, is the least positive experience for the residents. Residents in high rise buildings report more frequent visits to the hospital and higher levels of stress.

Drug and alcohol abuse, crimes against property, and physical aggression in the neighborhood, building and section of the building all occur relatively more often in high rise buildings. Also, family problems in the building are more common in high rises. Volunteerism is less for residents of high rises as are the number of cooperative interactions with neighbors. Family relations are rated as less positive by residents of high rise buildings. High rise dwellers report less ability to enact family roles, fewer family activities, especially for offices, less satisfying interactions with the resident's spouse and children and an overall significant decline in family relations after moving into their high rise apartment. Thus, ratings of housing satisfaction were quite low among residents of this type of housing.

On-Post Versus Off-Post Housing

The final comparison presented in this report allows us to examine the multi-family low rise apartment building alternative rather directly. This is important since alternative housing would inevitably be built or leased off-post. Are there effects, positive or negative, associated with living away from the military housing areas? It is conceivable that

off-post housing could be so inconveniently located as to produce no benefits. However, the data from this study, which examined a number of such buildings currently leased by the U.S. Army, suggest that the experience is generally positive or at least does not differ from the on-post experience along the dimensions tested here.

Hospitalization was more extensive and family health ratings poorer for residents of on-post housing. Most measures of social problems showed no differences. However, on crimes against property in the building and stairwell, family problems in the neighborhood, and aggression in the building, the residents of off-post housing reported fewer incidents than did those living on post. On the other hand, volunteerism was less frequent among residents of off-post housing, a finding which may reflect their lack of proximity to the volunteer agencies included in the survey. No differences were found on any of the measures of neighbor relations. However, residents of off-post multi-family low rise buildings report more time spent on family activities. Finally, satisfaction with housing does not differ between residents of off-post and on-post housing.

Summary of Findings

In summary, the results of this study suggest that leased government housing on the German economy can provide an attractive alternative to stairwell living as long as the buildings are not of the high rise variety. Also, the findings suggest that a number of positive attitudinal and behavioral effects are associated with the less dense types of stairwell buildings. These include those buildings with two rather than three stairwells and those buildings which are three as opposed to four stories tall.

References

- Aiello, J. R. & Baum, A. Residential Crowding and Design. Plenum Press: New York, 1979.
- Aiello, J. R., Epstein, Y. M. & Karlin, R. A. Effects of crowding on electrodermal activity. Sociological Symposium, 1975, 14, 43-58.
- Altman, I. The environment and social behavior. Monterey, California: Brooks, Cole, 1975.
- Barker, R. G. Ecological psychology: Concepts and methods for studying the environment of human behavior. Stanford University Press, Stanford, California, 1968.
- Baron, R. M., Mandel, D. R., Adams, C. A., & Griffen, L. M. Effects of social density in university residential environments. Journal of Personality and Social Psychology, 1976, 34, 434-466.
- Baum, A., Aiello, J. R., & Calesnick, L. E. Crowding and personal control: Social density and the development of learned helplessness. Journal of Personality and Social Psychology, 1978, 36, 1000-1011.
- Baxter, J. Interpersonal spacing in natural settings. Sociometry, 33: 444-456, 1970.
- Bickman, L., Teger, A., Gabriele, T., McLaughlin, C., Berger, M., & Sunaday, E. Dormitory density and helping behavior. Environment and Behavior, 1973, 5, 464-491.
- Booth, A. Final Report: Urban crowding project. Ottawa: Ministry of State for Urban Affairs, 1975.
- Booth, A. & Cowell, J. Urban crowding and health. Journal of Health and Social Behavior, 1978.
- Booth, A. & Johnson, D. R. The effect of crowding on child health and development. American Behavioral Scientist, 1975, 18, 736-749.
- Booth, A., & Welch, S. The effects of crowding: A cross-national study. Unpublished manuscript, Ministry of State for Urban Affairs, Ottawa, Nebraska, 1974.
- Booth, A., & Welch, S. Crowding and urban crime rates. Paper presented at the meeting of the Midwest Sociological Association, Omaha, Nebraska, 1974.
- Dean, L. M., Pugh, W. M. & Gunderson, E. K. E. Spatial and perceptual components of crowding: Effects on health and satisfaction. Environment and Behavior, 1975, 7 (2), 225-237.

References (continued)

- Department of the Environment. The social effects of living off the ground. Housing Development Directorate Occasional Papers 1/75. London: HM Stationery Office, 1975.
- Eoyang, C. K. Effects of group size and privacy in residential crowding. Journal of Personality and Social Psychology, 1974, 30, 389-392.
- Fanning, D. M. Families in flats. British Medical Journal, 1967, 18, 382-386.
- Freedman, J. L., Heshka, S., & Levy, A. Population density and pathology: Is there a relationship? Journal of Experimental Social Psychology, 1975, 11, 539-552.
- Freedman, J. L. Crowding and Behavior, San Francisco, CA: W. H. Freeman and Company, 1975.
- Fried, M. & Gleicher, P. Some sources of residential satisfaction in an urban slum. Journal of the American Institute of Planners, 27: 305-315, 1961.
- Galle, O. R., Gove, W. R. & McPherson, J. M. Population density and pathology: What are the relations for man? Science, 1972, 176, 23-30.
- Glass, D., & Singer, J. Urban Stress. New York: Academic Press, 1972.
- Hird, J. P. Vertical living: Health aspects. Royal Society of Health Journal, 1969, 86, 171-172.
- Holahan, C. J. & Wilcox, B. L. Environmental satisfaction in high- and low-rise residential settings: a Lewinian perspective. Residential Crowding and Design, 1979, 127-140.
- Hopstock, P. J., Aiell, J. R., & Baum, A. Residential crowding research. Residential Crowding and Design, 1979, 9-21.
- Hutt, C. & Vaizey, M. J. Differential effects of group density on social behavior. Nature, 1966, 209, 1371-1372.
- Levy, L. & Herzog, A. N. Effects of population density and crowding on health and social adaptation. Journal of Health and Social Behavior, 1974, 15, 228-240.
- Littlewood, J., & Sale, R. Children at play: A look at where they play and what they do on housing estates. London: Department of Environment, 2 Marsham St., SWL, 1972.

References (continued)

- Marcus, C. C. Children's play behavior in a low rise inner-city housing development. In D. Carson (Ed.), Man-environment interactions: Evaluation and applications. Vol 12. Childhood city. Milwaukee, Wisconsin. Environmental Design Research Association, 1974.
- Marris, P. Family and social class in an African city. Northwestern University Press, Evanston, Illinois, 1962.
- Mercer, C. Living in Cities. Baltimore: Penguin, 1975.
- Milgram, S. The experience of living in cities. Science, 1970, 167, 1461-1468.
- Miller, R. L. The effects of housing on the military resident (GRC Tech. Rep. CR-179). McLean, Virginia: General Research Corporation, 1978.
- Miller, R. L. Urban helpfulness as a function of type of residence. Paper presented at the 20th International Congress of Applied Psychology. Edinburgh, Scotland, 1982.
- Mitchell, R. E. some social implications of high density housing. American Sociological Review, 1971, 36, 18-29.
- Onibokun, A. G. Social system correlates of residential satisfaction. Environment and Behavior, 1976, 8 (3), 323-344.
- Parke, R. D. Parent-infant interaction: Progress, paradigms, and problems. In G. P. Sackett (Ed.), Observing behavior. Vol 1. Theory and applications in mental retardation. Baltimore: University Press, 1978.
- Proshansky, H. The city and self-identity. Environment and Behavior, 1978, 10, 147-169.
- Schmitt, R. C. Density, health and social disorganization. American Institute of Planners Journal, 1966, 32, 38-40.
- Smith, S. & Haythorn, W. W. Effects of compatability, crowding, group size, and leadership seniority on stress, anxiety, hostility, and annoyance in isolated groups. Journal of personality and Social Psychology, 1972, 22, 67-69.
- Stokols, D. & Ohlig, W. The experience of crowding under different social climates. Paper presented at the Annual Conference of the American Psychological Association, Chicago, 1975.
- Stokols, D., Rall, M., Pinner, B., & Schopler, J. Physical, social, and personal determinants of the perception of crowding. Environment and Behavior, 1973, 5, 87-115.

References (continued)

- Studer, R. The organization of spatial stimuli. In L. Pastalan and D. Carson (Eds.), The spatial behavior of older people. Ann Arbor: University of Michigan Press, 1970.
- Sundstrom, E. Toward an interpersonal model of crowding. Sociological Symposium, 1975, 14, 129-144.
- Sundstrom, E. Crowding as a sequential process: Review of research on the effects of population density on humans. In A. Baum and Y. Epstein (Eds.), Human response to crowding. John Wiley and Sons: New York, 1978.
- Valins, S., & Baum, A. Residential group size, social interaction, and crowding. Environment and Behavior, 1973, 5, 421-439.
- Wilcox, B. L., & Holahan, C. J. Social ecology of the megadorm in university student housing. Journal of Education Psychology, 1976, 68, 453-458.
- Zlutnick, A., & Altman, I. Crowding and human behavior. In J. Wohlwill and D. Carson (Eds.), Environment and the social sciences. Washington, D.C.: American Psychological Association, 1972.

Appendix A
Housing Questionnaire



Survey Questionnaire

A SURVEY OF RESIDENT'S ATTITUDES AND
OPINIONS ABOUT MILITARY FAMILY HOUSING

Prepared by

HumRRO:USAREUR Field Office
Housing Research Work Unit

R. L. Miller, Ph.D.
Project Director

September 1980

HUMAN RESOURCES RESEARCH ORGANIZATION

300 N. Washington . Alexandria, Virginia

Prepared under

Contract No. MDA 903-78-C-2042
U.S. Army Research Institute for the
Behavioral and Social Sciences
USAREUR Field Unit

DATA REQUIRED BY THE PRIVACY ACT OF 1974
(5 U.S.C. 552a)

TITLE OF FORM A Survey of Resident's Attitudes and Opinions About Military Family Housing	PRESCRIBING DIRECTIVE AR 70-1
--	---

1 AUTHORITY

10 USC Sec 4503

2. PRINCIPAL PURPOSE(S)

The data collected with the attached form are to be used for research purposes only.

3 ROUTINE USES

This is an experimental personnel data collection form developed by the U.S. Army Research Institute for the Behavioral and Social Sciences pursuant to its research mission as prescribed in AR 70-1. When identifiers (name or Social Security Number) are requested they are to be used for administrative and statistical control purposes only. Full confidentiality of the responses will be maintained in the processing of these data.

4 MANDATORY OR VOLUNTARY DISCLOSURE AND EFFECT ON INDIVIDUAL NOT PROVIDING INFORMATION

Your participation in this research is strictly voluntary. Individuals are encouraged to provide complete and accurate information in the interests of the research, but there will be no effect on individuals for not providing all or any part of the information. This notice may be detached from the rest of the form and retained by the individual if so desired.

FORM

Privacy Act Statement - 28 Sep 75

DA Form 4368-R, 1 May 75

Please mark your answers on the answer sheet only. Do NOT write in the questionnaire booklets unless the question specifically requires you to do so.

Step 1. On the top left corner of the answer sheet, there is a boxed-in area. Write your sponsor's Social Security Number in the boxes and mark in the corresponding number in each column. For example, if sponsor's SSN is 999-99-9999, then that area should look like this:

Social Security Number	Unit	Battalion	Company	M	O	S
9999999999				B	7	R
00 00 00 00 00 00 00 00 00	1	00 00 00 00	0A	00 00 0A 0K 0U		
01 01 01 01 01 01 01 01 01	2	01 01 01 01	0B	01 01 0B 0L 0V		
02 02 02 02 02 02 02 02 02	3	02 02 02 02	0C	02 02 0C 0M 0W		
03 03 03 03 03 03 03 03 03		03 03 03 03	0D	03 03 0D 0N 0X		
04 04 04 04 04 04 04 04 04	Job	04 04 04 04	0E	04 04 0E 0O 0Y		
05 05 05 05 05 05 05 05 05	01	05 05 05 05	0F	05 05 0F 0P 0Z		
06 06 06 06 06 06 06 06 06	02	06 06 06 06		06 06 06 0Q		
07 07 07 07 07 07 07 07 07	03	07 07 07 07		07 07 07 0R		
08 08 08 08 08 08 08 08 08		08 08 08 08		08 08 08 0S		
09 09 09 09 09 09 09 09 09		09 09 09 09		09 09 09 0T		

Step 2. In the next column, you will see Unit and Job. Please fill the space which best describes what kind of unit the sponsor works in and the kind of job the sponsor does. Use the following codes:

- 1 = Combat arms (Inf., Armor)
- 2 = Combat support (Arty., Eng., Sig., M.P., M.I., ADA, Chemical)
- 3 = Combat service support (Medical, Maint., Supply, Finance Trans., AG)

For Unit:

If sponsor is in a combat arms unit, mark the space next to 1 under UNIT.

For Job:

If sponsor's job in the unit is combat service support, mark the space next to 3 under JOB. See above example.

Step 3. In the same way, fill in sponsor's Company and Primary MOS. Leave the battalion identification blank. For company designation:

COMPANY:

- A = Line Company, Battery or Troop. For example: A Company or F Troop
- B = HHC Headquarters Company, Battery or Troop
- C = CSC Combat Support Company Battery or Troop
- D = Other Specialized Company
- E = Not a member of a Company, Battery or Troop

Step 4. Please look at your answer sheet. Each row has a number. When answering the questionnaire, please be sure that the number on the answer sheet is the same as the number of the question. Each of the numbered rows has ten oval spaces marked a to k. The oval space you fill in should also have the same letter as the answer you provided for the question. Note that not all questions have possible answers that range from a to k. Now, continue on with the questionnaire.

The following is an example of how to answer the questionnaire.

1. Before you came overseas, where did you expect to live in Germany?

- a. In a military housing area
- b. In leased (economy) housing provided by the Army
- c. In housing on the economy that I found on my own

If you expected leased (economy) housing provided by the Army, mark the oval space next to b in row 1. See below.

1 ☒ a ☐ b ☐ c ☐ d ☐ e ☐ f ☐ g ☐ h ☐ i ☐ k
2 ☐ a ☐ b ☐ c ☐ d ☐ e ☐ f ☐ g ☐ h ☐ i ☐ k
3 ☐ a ☐ b ☐ c ☐ d ☐ e ☐ f ☐ g ☐ h ☐ i ☐ k

NOTE: In general, all questions in the questionnaire refer to you, the person who answers the questionnaire. When a question refers specifically to your sponsor, it will be so indicated.

If any question or how to answer it is not clear, do not mark any answer on the answer sheet. Our staff member, who will come later to collect the questionnaire and answer sheet, will be available to answer any question you might have.

1. Before you came overseas, where did you expect to live in Germany?
 - a. In a military housing area
 - b. In leased (economy) housing provided by the Army
 - c. In housing on the economy that I found on my own
2. What type of housing did you expect to have in Germany?
 - a. High-rise apartment
 - b. Stairwell apartment
 - c. Row house
 - d. Duplex
 - e. Single family house
 - f. Other
3. How adequate was the information you received about housing before you came to Germany?
 - a. Received no information
 - b. Less than adequate information
 - c. Adequate information
 - d. More than adequate information
4. What type of housing did you live in at your last assignment (if more than one, mark only that in which you lived the longest).
 - a. High-rise
 - b. Stairwell
 - c. Row house
 - d. Duplex
 - e. Single family house
 - f. Other
5. Was the housing at your last assignment
 - a. Military housing
 - b. Economy housing

6. What type of housing did you live in while growing up (if more than one, indicate that in which you lived the longest).
- a. Large apartment complex - high-rise
 - b. Large apartment complex - stairwell
 - c. Small apartment building
 - d. Row house
 - e. Duplex
 - f. Single family house
 - g. Other
7. What type of neighborhood did you live in while growing up (if more than one, indicate that in which you lived the longest).
- a. Inner-city of a large metropolitan area
 - b. Suburb in a large metropolitan area
 - c. Inner-city of a small metropolitan area
 - d. Suburb in a small metropolitan area
 - e. Middle sized town
 - f. Small town
 - g. Suburb of middle sized town
 - h. Rural area, farm, country
8. After arrival in your present community, where did you stay before moving into your current housing?

Type of housing

- a. Transient billets
- b. Economy housing
- c. Temporary housing
- d. Hotel/gasthaus
- e. With friends
- f. Moved immediately to current housing

9. After arrival in your present community, how long did you reside in temporary housing before moving into your current housing?

Length of stay

- | | |
|----------------------|-------------------|
| a. Less than 1 week | f. 4 - 5 months |
| b. 1 week to 1 month | g. 5 - 6 months |
| c. 1 - 2 months | h. 6 - 12 months |
| d. 2 - 3 months | i. Over 12 months |
| e. 3 - 4 months | k. Does not apply |

10. How long have you lived in your present housing?

- | | |
|-------------------------|--------------------------|
| a. Less than 1 month | d. 12 months - 18 months |
| b. 1 - 6 months | e. 18 months - 24 months |
| c. 6 months - 12 months | f. Over 24 months |

11. How many floors does your current building have?

- | | | |
|------|------|-------|
| a. 1 | d. 4 | g. 7 |
| b. 2 | e. 5 | h. 8 |
| c. 3 | f. 6 | i. 9+ |

12. In your section of the building (stairwell, hall, entrance, etc.) how many apartments per floor are there?

- | | | |
|------|------|-------|
| a. 1 | d. 4 | g. 7 |
| b. 2 | e. 5 | h. 8 |
| c. 3 | f. 6 | i. 9+ |

13. How did you obtain your present housing? Did you get what you actually wanted?

- Was assigned to it without having a chance to make a choice, and did not get what I actually wanted.
- Was assigned to it without having a chance to make a choice, but got what I actually wanted.
- Was given the chance to make a choice, but did not get what I wanted.
- Was given the chance to make a choice and got what I wanted.

14. Are there any safety/construction hazards within your apartment?

a. Yes

b. No

If yes, please describe: _____

15. Are there any safety/construction hazards in your building (outside your apartment)? If you live in a row house, duplex, or any other place which is not a part of a larger building do not answer this question.

a. Yes

b. No

If yes, please describe: _____

16. Are there any safety/construction hazards in your neighborhood/housing area?

a. Yes

b. No

If yes, please describe: _____

When your housing has needed a repair job, how satisfactory has the service been in terms of responsiveness and adequacy of the work?

17. Responsiveness

a. Responded quickly

b. Responded satisfactorily

c. Responded slowly

d. Did not respond

18. Adequacy

a. Job well done

b. Job done O.K.

c. Job done poorly

d. Job not done

19. How good is military police protection in your housing area?

Very
Good

Very
Poor Don't
Know

_____ : _____ : _____ : _____ : _____ : _____ : _____ : _____
a b c d e f g h

20. How good is German police protection in your housing area?

Very
Good

Very
Poor Don't
Know

_____ : _____ : _____ : _____ : _____ : _____ : _____ : _____
a b c d e f g h

21. How good is military fire protection in your housing area?

Very
Good

Very
Poor Don't
Know

_____ : _____ : _____ : _____ : _____ : _____ : _____ : _____
a b c d e f g h

22. How good is German fire protection in your housing area?

Very
Good

Very
Poor Don't
Know

_____ : _____ : _____ : _____ : _____ : _____ : _____ : _____
a b c d e f g h

23. In general, how satisfied are you with your current housing?

Very
Satisfied

Very
Unsatisfied

_____ : _____ : _____ : _____ : _____ : _____ : _____ : _____
a b c d e f g

How satisfied or dissatisfied are you with the following aspects of your apartment?

	<i>Very satisfied</i>	<i>Satisfied</i>	<i>Neutral</i>	<i>Dissatisfied but able to get along</i>	<i>Dissatisfied have trouble getting along</i>	<i>Dissatisfied cannot get along at all</i>
24. Apartment Size	a	b	c	d	e	f
25. Convenience	a	b	c	d	e	f
26. Efficiency	a	b	c	d	e	f
27. Lighting	a	b	c	d	e	f
28. Ventilation	a	b	c	d	e	f
29. Plumbing	a	b	c	d	e	f
30. Upkeep of Structure	a	b	c	d	e	f
31. Noise	a	b	c	d	e	f
32. Safety of Structure	a	b	c	d	e	f
33. Floor Plan	a	b	c	d	e	f

How satisfied or dissatisfied are you with the following aspects of your housing area?

Very satisfied
Satisfied
Neutral
Dissatisfied but able to cope
Dissatisfied, have trouble coping
Dissatisfied, cannot cope at all

34. Physical Appearance

a b c d e f

35. Safety

a b c d e f

36. Convenience

a b c d e f

37. How does your present housing compare to that to which you are entitled?

- a. Better than that to which I am entitled
- b. The same as that to which I am entitled
- c. Not as good as that to which I am entitled

38. Have you, or any member of your family, been directly responsible for having the following arrangements or facilities started in your building or housing area?

Car pooling to shopping centers
Babysitting arrangements
Building parties, picnics, etc.
Organized child care (nursery, preschool)
Recreational activities

- a. Yes, more than one of the items listed above
b. Yes, one of the items listed above
c. No, none of the items listed above
39. How much of a problem are outside noises from traffic, an air field, or an artillery range near your part of your housing area?

No
Problem

Large
Problem

_____ : _____ : _____ : _____ : _____ : _____ : _____ :
a b c d e f g

40. Where do you usually go when you want to be alone?

- a. To a friend's home in my section of the building
b. To a friend's home in my building but not in my section
c. To a friend's home in my housing area
d. To a friend's house outside of my housing area
e. To a place where I usually do not know the people (bar, movie house, rec. center, etc.)
f. To the chapel
g. For a walk or a ride
h. To a separate room in my house
i. Nowhere really, I just stay home

41. If you stay in your house when you want to be alone, how easy is it for you to obtain privacy?

easy

difficult

_____ : _____ : _____ : _____ : _____ : _____ : _____ :
a b c d e f g

42. How easy is it for you to obtain privacy when you leave your house to be alone?

easy _____ difficult

a b c d e f g

43. In general, how is your family's health compared to what it was before you moved to your current housing?

- a. Much better
- b. Somewhat better
- c. No change
- d. Better for some, worse for others
- e. Somewhat worse
- f. Much worse

44. How many times have you gone to the hospital/dispensary in the last three (3) months as an outpatient?

- | | | |
|------|------|--------------|
| a. 0 | d. 3 | g. 6 |
| b. 1 | e. 4 | h. 7 |
| c. 2 | f. 5 | i. 8 or more |

45. Have you been hospitalized in the last three (3) months, and if so, for how long? (If more than once, add all together.)

- a. No, have not been
- b. Yes, for overnight
- c. Yes, for 2-3 days
- d. Yes, about a week
- e. Yes, longer than 1 week, but less than 2 weeks
- f. Two weeks or longer

46. How many times has your spouse gone to the hospital/dispensary in the last three (3) months as an outpatient?

- | | | |
|------|------|-----------------------------------|
| a. 0 | d. 3 | g. 6 |
| b. 1 | e. 4 | h. 7 |
| c. 2 | f. 5 | i. 8 or more |
| | | j. Does not apply;
not married |

47. Has your spouse been hospitalized in the last three (3) months, and if so, for how long? (If more than once add all together.)

- | | |
|-----------------------|---|
| a. No, has not been | e. Yes, longer than 1 week, but less than two weeks |
| b. Yes, for overnight | f. Yes, two weeks or more |
| c. Yes, for 2-3 days | g. Does not apply; not married |
| d. Yes, about 1 week | |

48. How many times have all of your children, added together, gone to the hospital/dispensary in the last three (3) months as outpatients?

- | | |
|------|-------------------------------------|
| a. 0 | f. 5 |
| b. 1 | g. 6 |
| c. 2 | h. 7 |
| d. 3 | i. 8 or more |
| e. 4 | k. Does not apply, have no children |

49. Have any of your children been hospitalized in the last three (3) months, and if so, for how long? (Add all hospital stays together.)

- | | |
|-----------------------|---|
| a. No, have not been | e. Yes, longer than 1 week, but less than two weeks |
| b. Yes, for overnight | f. Yes, two weeks or more |
| c. Yes, for 2-3 days | g. Does not apply; have no children |
| d. Yes, about 1 week | |

What means of transportation aside from a POV are available to you at your housing area?

50. Military bus

- a. Not available
- b. Available, and adequate for most transportation needs
- c. Adequate for many transportation needs
- d. Adequate for some transportation needs
- e. Adequate for few transportation needs
- f. Generally inadequate

51. German bus/street car

- a. Not available
- b. Frequent and reasonable
- c. Frequent but expensive
- d. Occasional and reasonable
- e. Occasional but expensive

52. Taxi

- a. Use often
- b. Use some
- c. Use seldom
- d. Never used

53. Car pool

- a. Available for most transportation needs
- b. Available for many transportation needs
- c. Available for some transportation needs
- d. Available for few transportation needs
- e. Generally not available

How convenient is it for you to get to the military community facilities?
If you do not have children, or your children do not go to school leave
question 56 blank.

- | | | convenient | | | inconvenient | | |
|-----|--|------------|-------|-------|--------------|-------|-------|
| 54. | Shopping center | _____ | _____ | _____ | _____ | _____ | _____ |
| | | a | b | c | d | e | f |
| 55. | Hospital/
dispensary | _____ | _____ | _____ | _____ | _____ | _____ |
| | | a | b | c | d | e | f |
| 56. | School
(your
children
attend) | _____ | _____ | _____ | _____ | _____ | _____ |
| | | a | b | c | d | e | f |
| 57. | Clubs | _____ | _____ | _____ | _____ | _____ | _____ |
| | | a | b | c | d | e | f |
| 58. | Movie
houses | _____ | _____ | _____ | _____ | _____ | _____ |
| | | a | b | c | d | e | f |
| 59. | Gym
facilities | _____ | _____ | _____ | _____ | _____ | _____ |
| | | a | b | c | d | e | f |
| 60. | Recreation
center | _____ | _____ | _____ | _____ | _____ | _____ |
| | | a | b | c | d | e | f |
| 61. | Bank | _____ | _____ | _____ | _____ | _____ | _____ |
| | | a | b | c | d | e | f |
| 62. | Post office | _____ | _____ | _____ | _____ | _____ | _____ |
| | | a | b | c | d | e | f |
| 63. | Laundrette
(outside of
building) | _____ | _____ | _____ | _____ | _____ | _____ |
| | | a | b | c | d | e | f |
| 64. | Restaurants | _____ | _____ | _____ | _____ | _____ | _____ |
| | | a | b | c | d | e | f |

65. Do you have a telephone in your home?

- a. Yes
- b. No

66. How long does it take you to get to work? (If you do not work outside the home, mark k, does not apply, in your answer sheet.)

- a. Less than 10 minutes d. Up to 45 minutes
b. Between 10 to 20 minutes e. Up to 1 hour
c. Between 20 to 30 minutes f. More than 1 hour

67. By what means do you usually get to work? (If you do not work outside the home, mark k, does not apply, on your answer sheet.)

- | | |
|---------------|---|
| a. Walk | f. Military bus |
| b. Bicycle | g. German bus/street car |
| c. Motor bike | h. Commuter train (OEG,
intercity train) |
| d. Car pool | i. Taxi |
| e. POV | k. Does not apply |

68. Consider the various roles in life that you personally occupy: spouse, parent, worker, hobbyist, etc., for you personally, which role is most significant in your life?

- | | |
|-----------|-----------------------------|
| a. Spouse | d. Hobbyist |
| b. Parent | e. Other _____
(specify) |
| c. Worker | |

Does your current housing in any way affect your ability to live the following roles?

	adds significantly		no effect		detracts significantly		does not apply	
	a	b	c	d	e	f	g	h
69. Spouse	_____	_____	_____	_____	_____	_____	_____	_____
70. Parent	_____	_____	_____	_____	_____	_____	_____	_____
71. Worker	_____	_____	_____	_____	_____	_____	_____	_____
72. Hobbyist	_____	_____	_____	_____	_____	_____	_____	_____

This section contains questions about your feelings toward others and yourself. Please indicate on the answer sheet the extent to which you agree with each statement.

- | | agree | do not
agree |
|---|---------------------------|-----------------|
| 73. In the long run people get the respect they deserve in this world | a : b : c : d : e : f : g | |
| 74. Chance and luck do not play an important role in my life | a : b : c : d : e : f : g | |
| 75. Unfortunately, a person's worth often goes unnoticed | a : b : c : d : e : f : g | |
| 76. Many times I feel that I have little influence over the things that happen to me | a : b : c : d : e : f : g | |
| 77. Human nature being what it is, there must always be war and conflict | a : b : c : d : e : f : g | |
| 78. There is usually only one best way to solve most problems | a : b : c : d : e : f : g | |
| 79. Becoming a success is a matter of hard work, luck has little or nothing to do with it | a : b : c : d : e : f : g | |
| 80. I usually maintain my own opinions even though many other people may have a different point of view | a : b : c : d : e : f : g | |
| 81. What young people need most of all is strict discipline by their parents | a : b : c : d : e : f : g | |
| 82. I do not enjoy having to adapt myself to new and unusual situations | a : b : c : d : e : f : g | |

Agree

Do Not
Agree

83. A few strong leaders could make our country better than all the laws and talk. _____:_____:_____:_____:_____:_____:_____:
a b c d e f g
84. One main trouble today is that people talk too much and work too little. _____:_____:_____:_____:_____:_____:_____:
a b c d e f g
85. People can be trusted. _____:_____:_____:_____:_____:_____:_____:
a b c d e f g
86. An insult to your honor should not be forgotten. _____:_____:_____:_____:_____:_____:_____:
a b c d e f g
87. I dislike having to learn new ways of doing things. _____:_____:_____:_____:_____:_____:_____:
a b c d e f g
88. Most people who do not get ahead just do not have enough will power. _____:_____:_____:_____:_____:_____:_____:
a b c d e f g
89. What is lacking in the world today is the old kind of friendship that lasts a lifetime. _____:_____:_____:_____:_____:_____:_____:
a b c d e f g
90. With everything in such a state of disorder, it's hard for a person to know where he stands from one day to the next. _____:_____:_____:_____:_____:_____:_____:
a b c d e f g
91. The trouble with the world today is that most people really don't believe in anything. _____:_____:_____:_____:_____:_____:_____:
a b c d e f g
92. I often feel awkward and out of place. _____:_____:_____:_____:_____:_____:_____:
a b c d e f g
93. People were better off in the old days when everyone knew just how he/she was expected to act. _____:_____:_____:_____:_____:_____:_____:
a b c d e f g

How often do you contribute your time in helping out in the following service organizations?

	<i>Never</i>	<i>About once a year</i>	<i>Few times a year</i>	<i>About every other month</i>	<i>About once a month</i>	<i>2 - 3 times a month</i>	<i>About once a week</i>	<i>2 - 3 times a week</i>	<i>4 - 5 times a week</i>	<i>Daily</i>
94. ACS	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>	<u>f</u>	<u>g</u>	<u>h</u>	<u>i</u>	<u>k</u>
95. Red Cross	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>	<u>f</u>	<u>g</u>	<u>h</u>	<u>i</u>	<u>k</u>
96. School (PTA, Teacher's Aid, etc.)	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>	<u>f</u>	<u>g</u>	<u>h</u>	<u>i</u>	<u>k</u>
97. Chapel (S.S., programs)	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>	<u>f</u>	<u>g</u>	<u>h</u>	<u>i</u>	<u>k</u>
98. Hospital	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>	<u>f</u>	<u>g</u>	<u>h</u>	<u>i</u>	<u>k</u>
99. DYA (Dependent Youth Activ.)	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>	<u>f</u>	<u>g</u>	<u>h</u>	<u>i</u>	<u>k</u>
100. Scouts	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>	<u>f</u>	<u>g</u>	<u>h</u>	<u>i</u>	<u>k</u>

To the best of your knowledge, how large are each of the following problems for Americans in your housing area, the building in which you live and in that section of the building in which you live (stairwell, floor, hallway, etc.). If you live in a row house, duplex, or other place which is not a part of a larger building, leave the questions about "building" and "section of building" blank.

		Non- existent					Extremely Large
<u>Drug usage</u>							
101.	Housing area	_____	:	_____	:	_____	:
		a		b		c	
102.	Building	_____	:	_____	:	_____	:
		a		b		c	
103.	Section of building	_____	:	_____	:	_____	:
		a		b		c	
<u>Alcoholism</u>							
104.	Housing area	_____	:	_____	:	_____	:
		a		b		c	
105.	Building	_____	:	_____	:	_____	:
		a		b		c	
106.	Section of building	_____	:	_____	:	_____	:
		a		b		c	
<u>Child abuse</u>							
107.	Housing area	_____	:	_____	:	_____	:
		a		b		c	
108.	Building	_____	:	_____	:	_____	:
		a		b		c	
109.	Section of building	_____	:	_____	:	_____	:
		a		b		c	
<u>Physical Aggression</u>							
110.	Housing area	_____	:	_____	:	_____	:
		a		b		c	
111.	Building	_____	:	_____	:	_____	:
		a		b		c	
112.	Section of building	_____	:	_____	:	_____	:
		a		b		c	

non-
existent

extremely
large

Theft

113. Housing area : : : : : :
 a b c d e f g
114. Building : : : : : :
 a b c d e f g
115. Section of building : : : : : :
 a b c d e f g

Parent-child conflicts

116. Housing area : : : : : :
 a b c d e f g
117. Building : : : : : :
 a b c d e f g
118. Section of building : : : : : :
 a b c d e f g

Vandalism

119. Housing area : : : : : :
 a b c d e f g
120. Building : : : : : :
 a b c d e f g
121. Section of building : : : : : :
 a b c d e f g

Crowding

122. Housing area : : : : : :
 a b c d e f g
123. Building : : : : : :
 a b c d e f g
124. Section of building : : : : : :
 a b c d e f g
125. Your apartment : : : : : :
 a b c d e f g

non-
existent

extremely
large

Marital problems

126. Housing area : : : : : :
 a b c d e f g
127. Building : : : : : :
 a b c d e f g
128. Section of building : : : : : :
 a b c d e f g

Spouse beating

129. Housing area : : : : : :
 a b c d e f g
130. Building : : : : : :
 a b c d e f g
131. Section of building : : : : : :
 a b c d e f g

Please indicate the extent to which the statements below are true for the people who live in your building. If none of your neighbors have children, leave question 133 blank.

None / Very few / Some / About half / Quite a few / Most / All / I do not know

- | | | | | | | | | | |
|------|--|---|---|---|---|---|---|---|---|
| 132. | My neighbors have the same beliefs about what is right/wrong as I do. | a | b | c | d | e | f | g | h |
| 133. | Parents in my building have similar child rearing practices as I do. | a | b | c | d | e | f | g | h |
| 134. | My neighbors have the same political opinions as I do. | a | b | c | d | e | f | g | h |
| 135. | My neighbors have attitudes toward their job that are similar to mine. | a | b | c | d | e | f | g | h |
| 136. | My neighbors have religious beliefs similar to mine. | a | b | c | d | e | f | g | h |
| 137. | My neighbors have similar hobbies or interests as I have. | a | b | c | d | e | f | g | h |

How often do the following events occur?

	<i>Few times a day</i>	<i>About once a day</i>	<i>About every other day</i>	<i>1 - 2 times a week</i>	<i>Less than once a week</i>	<i>Less than once a month</i>	<i>Seldom or never</i>
138. A neighbor drops in to chat	<u> a </u>	<u> b </u>	<u> c </u>	<u> d </u>	<u> e </u>	<u> f </u>	<u> g </u>
139. A neighbor drops in to <u>ask</u> for some help	<u> a </u>	<u> b </u>	<u> c </u>	<u> d </u>	<u> e </u>	<u> f </u>	<u> g </u>
140. A neighbor drops in to discuss housing maintenance scheduling problems, etc.	<u> a </u>	<u> b </u>	<u> c </u>	<u> d </u>	<u> e </u>	<u> f </u>	<u> g </u>
141. A neighbor drops in to discuss disputes in the building/housing area	<u> a </u>	<u> b </u>	<u> c </u>	<u> d </u>	<u> e </u>	<u> f </u>	<u> g </u>
142. A neighbor drops in to complain about your (or any member of your family's) conduct in the building/housing area	<u> a </u>	<u> b </u>	<u> c </u>	<u> d </u>	<u> e </u>	<u> f </u>	<u> g </u>

How often do the following events occur?

	More than once a day	Daily	3 - 4 times a week	2 - 3 times a week	Less than once a week	Less than once a month	Seldom or never	Not applicable
143. You ask for help from a neighbor	a	b	c	d	e	f	g	h
144. You offer help to a neighbor	a	b	c	d	e	f	g	h
145. You or your spouse baby-sit for a neighbor's child	a	b	c	d	e	f	g	h
146. Your child is taken care of by a neighbor	a	b	c	d	e	f	g	h
147. Conflicts over laundry schedule in which you or your spouse are involved	a	b	c	d	e	f	g	h
148. Conflicts over building or yard care in which you or your spouse are involved	a	b	c	d	e	f	g	h
149. Conflicts with neighbors over children activities	a	b	c	d	e	f	g	h
150. Conflicts with neighbors over noise	a	b	c	d	e	f	g	h
151. Social get-togethers among neighbors	a	b	c	d	e	f	g	h
152. Conflicts with neighbors over parking in which you or your spouse are involved	a	b	c	d	e	f	g	h
153. Tenants meetings to discuss building related issues	a	b	c	d	e	f	g	h
154. Please leave row 154 blank on your answer sheet.								
155. Please mark the oval space next to <u>k</u> on the answer sheet row 155.								

By now you should have completed the first answer sheet. Please turn to the second one and fill in the boxed-in area the same way you did on the first answer sheet (sponsor's SSN, Unit, Job, Company and MOS).

Now proceed with the questionnaire.

1. Please mark on row 1 the oval space next to k.

Please stop for a minute and think about how many close friends you have. How many of them live in the following locations? If you live in a row house, a duplex, or other place which is not a part of a large building, leave the questions about section of building and building blank.

	none	one	two	three	four	five	six	seven	eight	nine or more
2. Your stairwell/ section of building	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>	<u>f</u>	<u>g</u>	<u>h</u>	<u>i</u>	<u>k</u>
3. Your building	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>	<u>f</u>	<u>g</u>	<u>h</u>	<u>i</u>	<u>k</u>
4. Your housing area	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>	<u>f</u>	<u>g</u>	<u>h</u>	<u>i</u>	<u>k</u>
5. Your community	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>	<u>f</u>	<u>g</u>	<u>h</u>	<u>i</u>	<u>k</u>
6. Outside your community but in Germany	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>	<u>f</u>	<u>g</u>	<u>h</u>	<u>i</u>	<u>k</u>
7. Outside of Germany	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>	<u>f</u>	<u>g</u>	<u>h</u>	<u>i</u>	<u>k</u>

How often do your friends who live in your building, housing area or outside of your housing area visit you? If you live in a row house, duplex, or other place which is not a part of a large building, leave the question about building blank.

- | | <i>Very seldom</i> | <i>Less than once a month</i> | <i>1 - 2 times a month</i> | <i>About once a week</i> | <i>2 - 3 times a week</i> | <i>Almost daily</i> |
|----------------------------------|--------------------|-------------------------------|----------------------------|--------------------------|---------------------------|---------------------|
| 8. Friends in building | a | b | c | d | e | f |
| 9. Friends in housing area | a | b | c | d | e | f |
| 10. Friends outside housing area | a | b | c | d | e | f |

How often do you visit your friends who live in your building, housing area, and outside of your housing area? If you live in a row house, duplex, or other place which is not a part of a larger building, leave the question about building blank.

- | | <i>Very seldom</i> | <i>Less than once a month</i> | <i>1 - 2 times a month</i> | <i>About once a week</i> | <i>2 - 3 times a week</i> | <i>Almost daily</i> |
|----------------------------------|--------------------|-------------------------------|----------------------------|--------------------------|---------------------------|---------------------|
| 11. Friends in building | a | b | c | d | e | f |
| 12. Friends in housing area | a | b | c | d | e | f |
| 13. Friends outside housing area | a | b | c | d | e | f |

14. Are your interactions with your children more or less satisfactory here than in the States?

- a. Much more positive here
- b. Little more positive here
- c. About the same here as in the States
- d. Somewhat more negative here
- e. Much more negative here
- f. Does not apply, do not have children

15. Is your time with your spouse more or less satisfying here than it was in the States?
- a. Much more satisfying in Germany
 - b. Somewhat more satisfying in Germany
 - c. About the same as in the States
 - d. Somewhat less satisfying in Germany
 - e. Much less satisfying in Germany
 - f. Does not apply, not married
16. Do you have more or fewer financial problems, debts, etc. here than you had in the States?
- a. Much more here
 - b. A little more here
 - c. About the same here as in the States
 - d. A little less here
 - e. Much less here
 - f. Do not have financial problems
17. Do you have more or fewer work related problems here than you had in the States? For example, dissatisfaction with work, difficulties in your relationship with your boss or fellow workers, etc.
- a. Much more here
 - b. A little more here
 - c. About the same here as in the States
 - d. A little less here
 - e. Much less here
 - f. Do not have work related problems

In the following list are a series of activities. Please indicate whether you engage in these activities more or less now than before you moved to your present housing. If you are not married, or do not have children, leave the questions about spouse and/or children blank.

	<i>Much more now than before</i>	<i>More now than before</i>	<i>No difference</i>	<i>Less now than before</i>	<i>Much less than before</i>
18. Ignore noise	a	b	c	d	e
19. Concerned about main- tenance of apartment	a	b	c	d	e
20. Monitoring or decreas- ing own noise level	a	b	c	d	e
21. Go out	a	b	c	d	e
22. Rearrange furniture now and then	a	b	c	d	e
23. Establish "house rules" for children	a	b	c	d	e
24. Establish standards for cleanliness for apartment	a	b	c	d	e
25. Set up a schedule for errands, daily tasks, etc.	a	b	c	d	e
26. Spend time alone	a	b	c	d	e
27. Argue with spouse	a	b	c	d	e
28. Socialize with neighbors	a	b	c	d	e

Please indicate the extent to which the following statements have been true for your family before and after you moved to your present apartment.

	very much		very little
<u>Family members help and support each other</u>			
29. Before moving here	a	b	c
	d	e	f
	g		
30. Since we've been here	a	b	c
	d	e	f
	g		
<u>Family members often keep feelings to themselves</u>			
31. Before moving here	a	b	c
	d	e	f
	g		
32. Since we've been here	a	b	c
	d	e	f
	g		
<u>We fight a lot with each other</u>			
33. Before moving here	a	b	c
	d	e	f
	g		
34. Since we've been here	a	b	c
	d	e	f
	g		
<u>It is hard to "blow off steam" at home without upsetting somebody</u>			
35. Before moving here	a	b	c
	d	e	f
	g		
36. Since we've been here	a	b	c
	d	e	f
	g		
<u>There is a feeling of unity and cohesion in our family</u>			
37. Before moving here	a	b	c
	d	e	f
	g		
38. Since we've been here	a	b	c
	d	e	f
	g		

Please indicate the extent to which the following statements have been true for your family before and after you moved to your present apartment.

very
much

very
little

Family members help
and support each other

29. Before moving here : : : : : :
 a b c d e f g

30. Since we've been here : : : : : :
 a b c d e f g

Family members often
keep feelings to
themselves

31. Before moving here : : : : : :
 a b c d e f g

32. Since we've been here : : : : : :
 a b c d e f g

We fight a lot with
each other

33. Before moving here : : : : : :
 a b c d e f g

34. Since we've been here : : : : : :
 a b c d e f g

It is hard to "blow
off steam" at home
without upsetting
somebody

35. Before moving here : : : : : :
 a b c d e f g

36. Since we've been here : : : : : :
 a b c d e f g

There is a feeling
of unity and cohesion
in our family

37. Before moving here : : : : : :
 a b c d e f g

38. Since we've been here : : : : : :
 a b c d e f g

very
much

very
little

We do a lot together

39. Before moving here

_____ : _____ : _____ : _____ : _____ : _____ : _____
a b c d e f g

40. Since we've been here

_____ : _____ : _____ : _____ : _____ : _____ : _____
a b c d e f g

Family members intrude
often on each other

41. Before moving here

_____ : _____ : _____ : _____ : _____ : _____ : _____
a b c d e f g

42. Since we've been here

_____ : _____ : _____ : _____ : _____ : _____ : _____
a b c d e f g

We worry about our
neighbors knowing what
is going on in our
family

43. Before moving here

_____ : _____ : _____ : _____ : _____ : _____ : _____
a b c d e f g

44. Since we've been here

_____ : _____ : _____ : _____ : _____ : _____ : _____
a b c d e f g

45. Listed below are aspects of your housing which are ranked from mostly yours to mostly not yours. Draw a line separating those aspects of your housing toward which you feel a sense of ownership and those toward which you do not feel a sense of ownership. First read the list and then see the example on the next page.

1. Your bedroom
2. Your apartment
3. The area outside your apartment
4. Your stairwell/section of building
5. Area in front of entrance to your stairwell/section of building
6. Your building
7. The area around your building
8. Your neighborhood
9. Your housing area
10. Your community

Mark on your answer sheet as follows:

- a. The line should go between items 1 and 2
- b. The line should go between items 2 and 3
- c. The line should go between items 3 and 4
- d. The line should go between items 4 and 5
- e. The line should go between items 5 and 6
- f. The line should go between items 6 and 7
- g. The line should go between items 7 and 8
- h. The line should go between items 8 and 9
- i. The line should go between items 9 and 10
- k. The line should go underneath item 10

For example, if you feel a sense of ownership toward your bedroom, apartment, area outside your apartment but no sense of ownership toward your section of building and the other following aspects, draw the line between 3 and 4.

1. Your bedroom
2. Your apartment
3. The area outside your apartment

4. Your stairwell/section of building
5. Area in front of entrance to your stairwell/section of building
6. Your building
7. The area around your building
8. Your neighborhood
9. Your housing area
10. Your community

Then mark the oval space next to c on your answer sheet on row #45.

Mark on your answer sheet as follows:

- a. The line should go between items 1 and 2
- b. The line should go between items 2 and 3
- c. The line should go between items 3 and 4
- d. The line should go between items 4 and 5
- e. The line should go between items 5 and 6
- f. The line should go between items 6 and 7
- g. The line should go between items 7 and 8
- h. The line should go between items 8 and 9
- i. The line should go between items 9 and 10
- k. The line should go underneath item 10

Below are pairs of words which could be used to describe people; in this case, yourself and your neighbors. Mark in your answer sheet how well each word describes you and your neighbors - ranging from a (if the word to the left describes you/your neighbors best) to g (if the word to the right describes you/your neighbors best).

MYSELF

46.	Strong	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	Weak
		a	b	c	d	e	f	g
47.	Generous	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	Stingy
		a	b	c	d	e	f	g
48.	Formal	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	Informal
		a	b	c	d	e	f	g
49.	Good	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	Bad
		a	b	c	d	e	f	g
50.	Superior	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	Inferior
		a	b	c	d	e	f	g
51.	Patient	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	Impatient
		a	b	c	d	e	f	g
52.	Cooperative	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	Uncooperative
		a	b	c	d	e	f	g
53.	Honest	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	Dishonest
		a	b	c	d	e	f	g
54.	Friendly	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	Unfriendly
		a	b	c	d	e	f	g
55.	Supportive	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	Unsupportive
		a	b	c	d	e	f	g
56.	Calm	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	Excitable
		a	b	c	d	e	f	g

Now rate your neighbors in the same way that you rated yourself.

57.	Strong	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	Weak
		a	b	c	d	e	f	g
58.	Generous	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	Stingy
		a	b	c	d	e	f	g
59.	Formal	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	Informal
		a	b	c	d	e	f	g
60.	Good	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	Bad
		a	b	c	d	e	f	g
61.	Superior	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	Inferior
		a	b	c	d	e	f	g
62.	Patient	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	Impatient
		a	b	c	d	e	f	g
63.	Cooperative	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	Uncooperative
		a	b	c	d	e	f	g
64.	Honest	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	Dishonest
		a	b	c	d	e	f	g
65.	Friendly	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	Unfriendly
		a	b	c	d	e	f	g
66.	Supportive	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	Unsupportive
		a	b	c	d	e	f	g
67.	Calm	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	Excitable
		a	b	c	d	e	f	g

68. Please read the following list of words and circle the 1 word or phrase which best describes how you have felt in the last two months. (If you moved to your current housing less than two months ago, describe how you have felt since moving to your current housing).
- | | |
|------------------|----------------------|
| a. Steady | f. Terrible |
| b. Wonderful | g. Worried |
| c. Uncomfortable | h. Frightened |
| d. Nervous | i. Fine |
| e. Unsafe | k. doesn't bother me |
69. What impact do you think living with Germans in the same building has or would have on your life in Germany?
- a. Very positive
 - b. Positive
 - c. No effect
 - d. Negative
 - e. Very negative
70. Have you taken any German language class here or in the States? Indicate highest class level.
- a. Gateway Level 1 Phase I or equivalent
 - b. Gateway Level 1 Phase II or equivalent
 - c. Gateway Level 1 Phase III or equivalent
 - d. Gateway Level 2 Phase I or equivalent
 - e. Gateway Level 2 Phase II or equivalent
 - f. Gateway Level 2 Phase III or equivalent
 - g. Gateway Level 3, any phase or equivalent
 - h. Gateway Level 4, any phase or equivalent
 - i. Gateway Level 5, any phase or equivalent
 - k. None at all

71. Have you attended any classes, seminars, or lectures on German culture since you came here?

- | | |
|----------|-----------------|
| a. No | f. Five |
| b. One | g. Six |
| c. Two | h. Seven |
| d. Three | i. Eight |
| e. Four | k. Nine or more |

72. How often do you encounter situations in your contacts with Germans in which you feel helpless, out of control, in violation of their customs, or misunderstood?

Seldom	:	:	:	:	:	:	very often			
a	:	b	:	c	:	d	:	e	:	:

73. In relating to Germans you have contacts with, how much does language present a problem for you?

- a. Very serious
- b. Serious
- c. Somewhat serious
- d. Not particularly serious
- e. Not serious at all

74. How often do you participate in the activities of clubs which are for Americans only?
- a. Not a member of any such club
 - b. A member but never participate in activities
 - c. Participate very little, about once a year
 - d. Participate few times a year
 - e. Participate about once a month
 - f. Participate 2 - 3 times a month
 - g. Participate about once a week
 - h. Participate few times a week
75. How often do you participate in activities of clubs which are for both Americans and Germans?
- a. Not a member of any such club
 - b. A member but never participate in activities
 - c. Participate very little, about once a year
 - d. Participate few times a year
 - e. Participate about once a month
 - f. Participate 2 - 3 times a month
 - g. Participate about once a week
 - h. Participate few times a week
76. How often do you participate in informal gatherings for both Americans and Germans?
- a. Never participate
 - b. Participate very little, about once a year
 - c. Participate few times a year
 - d. Participate about once a month
 - e. Participate 2 - 3 times a month
 - f. Participate about once a week
 - g. Participate few times a week

77. How often do you obtain information regarding German events, performances, etc. from German sources (media, people, organizations)?
- a. Daily
 - b. 3 - 4 times a week
 - c. 1 - 2 times a week
 - d. 2 - 3 times a week
 - e. About once a month
 - f. Less than once a month
 - g. Few times a year
 - h. About once a year
 - i. Never
78. How often do you go to a German gasthaus to eat or drink?
- a. Never
 - b. About once a year
 - c. About once every 6 months
 - d. About once every 2-3 months
 - e. Monthly
 - f. Twice a month
 - g. Almost every week
 - h. Several times a week
 - i. Daily
79. If you go to a German gasthaus, how are you generally treated?
- a. Generally much better than the German customers
 - b. Generally somewhat better than the German customers
 - c. Generally about the same as the German customers
 - d. Sometimes better and sometimes worse than the German customers
 - e. Generally somewhat worse than the German customers
 - f. Generally much worse than the German customers
 - g. Does not apply since I have never been to any
80. If you use German public transportation (bus, strassenbahn, OEG, taxi, etc.), how are you generally treated?
- a. Generally much better than the German customers
 - b. Generally somewhat better than the German customers
 - c. Generally about the same as the German customers
 - d. Sometimes better and sometimes worse than the German customers
 - e. Generally somewhat worse than the German customers
 - f. Generally much worse than the German customers
 - g. Does not apply since I have never used any

81. How often do you personally shop on the German economy?

- a. Never
- b. About once a year
- c. About once every 6 months
- d. About once every 2-3 months
- e. Monthly
- f. Twice a month
- g. Almost every week
- h. Several times a week
- i. Daily

82. If you shop on the economy, how are you generally treated?

- a. Generally much better than the German customers
- b. Generally somewhat better than the German customers
- c. Generally about the same as the German customers
- d. Sometimes better and sometimes worse than the German customers
- e. Generally somewhat worse than the German customers
- f. Generally much worse than the German customers
- g. Does not apply since I have never done so

83. Do you have any friends who are Germans, and if so, how many?

- | | |
|-------|-----------------|
| a. No | f. 5 |
| b. 1 | g. 6 |
| c. 2 | h. 7-10 |
| d. 3 | i. More than 10 |
| e. 4 | |

84. Listed below are nine statements about Germans. They range from very positive to very negative. Read each and then indicate which one you most agree with.

- a. The German people are the finest in the world.
- b. I admire the German people very much.
- c. The more I know about the German people, the better I like them.
- d. The Germans on the whole are very pleasant people.
- e. German people are no better and no worse than any other people.
- f. I suppose Germans are alright but I never liked them.
- g. I don't trust the Germans.
- h. There is nothing about the Germans that I could ever like.
- i. I hate all the Germans.

85. Indicate which one of the nine statements listed below best described how you feel about America.

- a. It is an ideal society without any flaws.
- b. It is of real value to the civilized world.
- c. It is improving in the benefit to its citizens.
- d. It does more good than harm.
- e. Its good and bad points balance each other.
- f. It is not as great as it once was.
- g. It does more harm than good.
- h. It is detrimental to the civilized world
- i. It has positively no value.

86. Indicate which one of the nine statements listed below best describes how you feel about West Germany?

- a. It is an ideal society without any flaws.
- b. It is of real value to the civilized world.
- c. It is improving in the benefit to its citizens.
- d. It does more good than harm.
- e. Its good and bad points balance each other.
- f. It is not as great as it once was.
- g. It does more harm than good.
- h. It is detrimental to the civilized world.
- i. It has positively no value.

87. Indicate which one of the statements below you think best reflects what Germans think about America and the U.S. Army in Europe.

- a. Both America and the U.S. Army in Europe are approved of.
- b. America is approved of but the U.S. Army in Europe is not.
- c. The U.S. Army in Europe is approved of but America is not.
- d. Neither America nor the U.S. Army in Europe is approved of.

88. The following questions deal with your familiarity with the German language, German customs and events. Please answer the best you can.

What does "Das Wetter wird besser" mean?

- a. It is nice weather outside.
- b. I have seen better weather than this.
- c. The weather will get better.
- d. You could not ask for better weather than this.
- e. I don't know.

89. What does "Entschuldigen, haben Sie Feuer?" mean?

- a. Excuse me, where is the light?
- b. I am sorry, could you help me find the light?
- c. Could you please give me a light?
- d. Excuse me, do you have a light?
- e. I don't know.

90. You are trying to pass through a crowded bus in order to get off. What would you say?

- a. Lassen Mir vorbei.
- b. Entschuldigen, lassen Mir durch.
- c. Aus en Weg.
- d. Verzeihung.
- e. I don't know.

91. You have just been introduced to a German person. What do you say?

- a. Say, "Wie geht es Ihnen?"
- b. Say, "Wie geht's?"
- c. Say, "Guten Tag, Herr/Frau."
- d. Shake hands and say, "Wie geht es Ihnen?"
- e. Shake hands and say, "Wie geht's?"
- f. Shake hands and say, "Guten Tag, Herr/Frau."
- g. I don't know.

92. You have been invited to German friends/acquaintances for 7:00 p.m. dinner. Would you . . .
- a. come a few minutes earlier?
 - b. come between 7:00 and 7:15 p.m.?
 - c. come between 7:00 and 8:00 to join pre-dinner drinks?
 - d. come around 8:00 and avoid pre-dinner drinks?
 - e. I don't know.
93. You decide to bring the German hostess flowers. How would you do it?
- a. Get an uneven number of roses and hand them nicely wrapped.
 - b. Get an uneven number of flowers, but not roses.
 - c. Get an even number of flowers, but not roses.
 - d. Get an uneven number of flowers, but not roses and hand them unwrapped.
 - e. Get an even number of roses and hand them unwrapped.
 - f. I don't know.
94. If you had presents for some German friends, would you drop by on Christmas Day to deliver them?
- a. Yes, but I would call them first.
 - b. No, Christmas Day is used in Germany for visiting relatives.
 - c. Yes, but I would not call first in order to surprise them.
 - d. No, I would send my presents by mail.
 - e. I don't know.
95. On what German holiday do lantern parades take place?
- a. St. Martin's Day
 - b. Easter Sunday
 - c. On the first day of spring
 - d. For the occasion of a castle illumination
 - e. I don't know.

a : b : c : d : e : f : g

very crowded not at all crowded

a	b	c	d	e	f	g	h
very crowded						not at all crowded	does not apply

a. Yes

b. No

a. Yes

b. No

a. Yes

b. No

- a. Ignore them
- b. Say hello and walk on by
- c. Stop and ask them why they are there
- e. Does not apply

102. Is there a space just outside your apartment but inside your building which mostly belongs to you?

- a. Yes, more than one
- b. Yes, one
- c. None
- d. Does not apply

103. Is there an area outside your building which you feel is mostly yours?

- a. Yes
- b. No

104. What is the rank structure in your building?

- a. Field Grade Officers
- b. Company Grade Officers
- c. Warrant Officers
- d. Mixed Officers
- e. Senior NCOs
- f. Junior NCOs
- g. Mixed NCOs
- h. Mixed Officers and NCOs

Please write in the name of your housing area and your building number.
If you live on the economy, please write your address.

Name of housing area _____ no. of bldg. _____

Economy address _____

105. What is your rank? If dependent, give sponsor's rank.

- | | |
|----------------|----------|
| a. 05 or above | f. E8-E9 |
| b. 04 | g. E6-E7 |
| c. 03 | h. E5 |
| d. 01-02 | i. E4 |
| e. WO1-CW4 | k. E1-E3 |

106. How long have you been in the military? (If dependent, indicate how long your spouse has been in the military since your marriage.)

- | | |
|----------------------|----------------|
| a. Less than 2 years | f. 11-14 years |
| b. 2-3 years | g. 14-17 years |
| c. 3-5 years | h. 17-20 years |
| d. 5-8 years | i. 20+ years |
| e. 8-11 years | |

107. How many tours of duty have you (or spouse since you married) had outside the U.S.? Include this tour.

- | | |
|------|--------------|
| a. 1 | f. 6 |
| b. 2 | g. 7 |
| c. 3 | h. 8 |
| d. 4 | i. 9 or more |
| e. 5 | |

108. Sex:

- a. Male
- b. Female

109. Age:

- | | |
|----------|----------|
| a. 18-21 | f. 34-36 |
| b. 22-24 | g. 37-39 |
| c. 25-27 | h. 40-42 |
| d. 28-30 | i. 42+ |
| e. 31-33 | |

110. Of which ethnic or racial group do you consider yourself:

- a. Black, Afro-American
- b. Spanish or Latin American, Chicano, Puerto Rican, Cuban, Hispanic
- c. Oriental, Asian American
- d. Native American, Indian
- e. White, Caucasian

111. Education (check only one; if you are in school now, see lines g through i):

- a. 8th grade or below
- b. Some high school
- c. High school diploma (or equivalent)
- d. Some college
- e. College degree (BA)
- f. Advanced college degree (MA, Ph.D.)

If a student currently

- g. Completing high school (or equivalent)
- h. Completing college (BA)
- i. Studying toward an advanced college degree

112. What is your marital status?

- | | |
|---------------------------------|------------|
| a. Married - living with spouse | d. Widowed |
| b. Separated | e. Single |
| c. Divorced | |

113. If married, how many years have you been married?

- | | |
|----------------|-----------------------|
| a. 1-3 years | f. 19-22 years |
| b. 4-6 years | g. 23-26 years |
| c. 7-10 years | h. 27-30 years |
| d. 11-14 years | i. More than 30 years |
| e. 15-18 years | |

114. How many dwellings have you resided in since you joined the military? .
If dependent, indicate the number of dwellings you have resided in with
your spouse during spouse's military service.

- | | |
|------|---------------|
| a. 1 | f. 6 |
| b. 2 | g. 7 |
| c. 3 | h. 8 |
| d. 4 | i. 9 |
| e. 5 | k. 10 or more |

115. How many children do you have living with you?

- | | |
|---------|-------|
| a. None | f. 5 |
| b. 1 | g. 6 |
| c. 2 | h. 7 |
| d. 3 | i. 8+ |
| e. 4 | |

116. Do you have any other relatives living with you (parent, brother/sister, etc.)?
If yes, how many?

- | | |
|---------|--------------|
| a. None | d. 3 |
| b. 1 | e. 4 or more |
| d. 2 | |