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Technical Report 856

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# Family Adaptation to Relocation: An Empirical Analysis of Family Stressors, Adaptive Resources, and Sense of Coherence

Gary L. Bowen

School of Social Work  
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July 1989



United States Army Research Institute  
for the Behavioral and Social Sciences

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| <p>This research supports the Army Family Action Plan by investigating ways to improve "family wellness" during a critical period of family stress--the adaptation to relocation overseas.</p> <p>The report is based on a secondary analysis of the "1000 Army Families Dataset," which was collected in 1983. Compared with earlier analyses of this dataset, additional concepts were specified to determine their relative influence on family adaptation and separate analyses were conducted for: (a) enlisted members, (b) spouses of enlisted members, (c) officers, and (d) spouses of officers.</p> <p>Although the results of the investigation are not directly comparable across the four sample subgroups, the findings clearly support the importance of congruency of expectations and actual experiences about life in Europe on the level of family adaptation. This factor emerged as the best predictor of family adaptation for all four subgroups. Specifically, family adaptation was highest in families where the actual experiences (e.g., the job,</p> <p style="text-align: right;">(Continued)</p> |       |                                                 |                                                                                                   |                                                                                                            |                               |
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housing, and schools), were the same or better than expected before arrival in Europe.

In addition, the level of community support (e.g., the extent to which individuals in the community can be relied on in times of trouble and the extent to which the community is perceived as a good place in which to live and raise children) also emerged as an important predictor of family adaptation for each of the subgroups. For all subgroups, the greater the community support, the higher the level of adaptation.

Additional variables predictive of the family adaptation for selected subgroups included recent and post-move stressor events. For enlisted soldiers and their spouses, satisfaction with housing emerged as a significant predictor; for officers and their spouses, the ability to plan for military assignments and to have some say over the timing and location of the assignments was positively associated with level of family adaptation.

The findings strongly suggest that the Army can enhance family adaptation to USAREUR with a number of specific actions. The greatest increase in adaptation level can be achieved by enabling families to get accurate information about where they are going. This could be accomplished through better orientation programs, training of family "sponsors," and relocation literature. Adaptation can also be increased with improvements in informal community networks. This could be accomplished through leaders in the soldiers' units or through the family service providers at the soldiers' installations.

Relocation stress can also be reduced by giving soldiers adequate time to handle personal and family affairs before they assume a demanding work schedule. This (also recommended by WRAIR based on their research) should reduce the "pile up of stressors" that add to the "normal" stressors inherent in any relocation.

Finally, the Army should examine its practices that cause undue competition between the Army and the family for the soldier's time, energy, and commitment. This research indicates that this competition is particularly hard on the adaptation of the spouses of officers. Therefore, its reduction may well pay dividends, not only for the families, but for the effective functioning of the units that these officers lead.

All of these recommendations have been provided to our sponsor, the U.S. Army Community and Family Support Center, through briefings and earlier draft reports.

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Analysis of Family Stressors, Adaptive Resources,  
and Sense of Coherence**

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**July 1989**

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## FOREWORD

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The Army Family Research Program (AFRP) is a 5-year integrated research program started in November 1986 in response to research mandated by both the 1983 CSA "White Paper on the Army Family" and the subsequent CSA "Army Family Action Plans (1984-1988)." The objective of the research is to support the "Army Family Action Plan" through research products that will (1) determine the demographic characteristics of Army families, (2) identify positive motivators and negative detractors to soldiers remaining in the Army, (3) develop pilot programs to improve family adaptation to Army life, and (4) increase operational readiness.

The research is being conducted by the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) with assistance from Research Triangle Institute, Caliber Associates, and HUMPRO. It is funded by Army research and development funds.

The Army sponsor for this effort, the Army Community and Family Support Center (CFSC), reviewed and approved an earlier draft of this report. Their comments indicate that this report on factors influencing adaptation to an overseas location will be useful in revising Army programs and policies.



EDGAR M. JOHNSON  
Technical Director

## ACKNOWLEDGMENTS

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Grateful appreciation is expressed to Dr. Hamilton McCubbin and his associates, whose earlier work using the 1,000 Army Family Dataset provided a strong theoretical and empirical foundation for the present analysis. Special acknowledgment goes to Dr. Cathy A. Stawarski of the Human Resources Research Organization, who worked under the direction of the author in setting up the dataset for analysis, constructing measures, and performing the analysis. Dr. Stawarski also provided earlier drafts of sections of the manuscript and critical feedback on the current manuscript. A special thanks is also provided to M. C. Devilbiss of the U.S. Army Research Institute and Dr. Bob Sadacca of the Human Resources Research Organization for their valuable comments on an earlier version of this report. Dr. Sadacca was particularly helpful in the interpretation of the regression analysis. Dr. D. Bruce Bell and Dr. Arthur C. F. Gilbert reviewed the manuscript and provided considerable help with their suggestions for the final revision. Although the helpful contribution and feedback from these individuals are recognized, responsibility for the contents of the report lies solely with the author.

FAMILY ADAPTATION TO RELOCATION: AN EMPIRICAL ANALYSIS OF FAMILY STRESSORS,  
ADAPTIVE RESOURCES, AND SENSE OF COHERENCE

EXECUTIVE SUMMARY

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Requirement:

This research supports the Army Family Action Plan by investigating ways to improve "family wellness" during a critical period of family stress—the adaptation to relocation overseas.

Procedure:

The report is based on a secondary analysis of the "1000 Army Families Dataset," which was collected in 1983. Compared with earlier analyses of this dataset, additional concepts were specified to determine their relative influence on family adaptation and separate analyses were conducted for: (a) enlisted members, (b) spouses of enlisted members, (c) officers, and (d) spouses of officers.

Findings:

Although the results of the investigation are not directly comparable across the four sample subgroups, the findings clearly support the importance of congruency of expectations and actual experiences about life in Europe on the level of family adaptation. This factor emerged as the best predictor of family adaptation for all four subgroups. Specifically, family adaptation was highest in families where the actual experiences (e.g., the job, housing, and schools), were the same or better than was expected before arrival in Europe.

In addition, the level of community support (e.g., the extent to which individuals in the community can be relied on in times of trouble and the extent to which the community is perceived as a good place in which to live and raise children) also emerged as an important predictor of family adaptation for each of the subgroups. For all subgroups, the greater the community support, the higher the level of adaptation.

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#### Utilization of Findings:

The findings strongly suggest that the Army can enhance family adaptation to USAREUR with a number of specific actions. The greatest increase in adaptation levels can be achieved by enabling families to get accurate information about where they are going. This could be accomplished through better orientation programs, training of family "sponsors," and relocation literature. Adaptation can also be increased with improvements in informal community networks. This could be accomplished through leaders in the soldiers' units or through the family service providers at the soldiers' installations.

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Finally, the Army should examine its practices that cause undue competition between the Army and the family for the soldier's time, energy, and commitment. This research indicates that this competition is particularly hard on the adaptation of the spouses of officers. Therefore, its reduction may well pay dividends, not only for the families, but for the effective functioning of the units that these officers lead.

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FAMILY ADAPTATION TO RELOCATION: AN EMPIRICAL ANALYSIS OF FAMILY STRESSORS,  
ADAPTIVE RESOURCES, AND SENSE OF COHERENCE

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# FAMILY ADAPTATION TO RELOCATION: AN EMPIRICAL ANALYSIS OF FAMILY STRESSORS, ADAPTIVE RESOURCES, AND SENSE OF COHERENCE

## Introduction

In recent years, the U.S. military has become increasingly interested in better understanding how families adapt to the demands of military life (Bowen & Scheirer, 1986). This interest parallels the substantial increase in the proportion of service members with family responsibilities as well as the recognition by military leadership of the link between the ability of families to adapt successfully to the demands of military life and military preparedness (Bowen, 1987). A better understanding of the factors that help distinguish different levels of family adaptation to specific organizational demands is essential to policy and program developers who attempt to enhance variables that promote family adaptation and thereby contribute to military mission accomplishment.

Of the multiple demands placed upon families by the military organization, perhaps no demand has as many implications for the family system as relocation, especially relocation to a foreign country (Orthner & Bowen, 1982; McCubbin & Patterson, 1983; Rodriguez, 1984). Relocation often imposes multiple hardships on the family system, including financial strains, employment disruption for the spouse of the military member, and loss of support networks. Although relocation may also present new opportunities to the family system and can stimulate adaptive changes, even under the best of conditions, the family system may experience a significant degree of stress and disruption, often resulting in the deterioration of health, decreased emotional well being, high marital discord, and a decline in life satisfaction (Anderson & Stark, 1988; Rodriguez, 1984).

Given the potential negative effect that relocation can have on the family system, it is important to identify the factors that mitigate the effect of this stressor effect on the level of family adaptation. Only then can relocation policies and services be developed based on facts rather than assumptions and geared toward supporting families in adapting positively to the demands associated with relocation.

There is an expanding research on family stress and adaptation in both the military and the civilian sector (Antonovsky, 1987; Boss, 1987; Bowen, 1987; Hill, 1949, 1958; Lavee, McCubbin, & Olson, 1987; McCubbin & McCubbin, 1987; McCubbin & Patterson, 1983; Segal, 1986). From this research, it is possible to identify at least three broad categories of factors that may mediate the effects of situational life events, like relocation, on the level of family resiliency and adaptation: (a) the presence and pile-up of additional family stressors; (b) the availability of adaptive resources at the personal, family, and community level; and (c) the family's overall sense of coherence about their situation.

Based on secondary analysis of survey data on 983 officer and enlisted families in the U.S. Army who had experienced a recent relocation to West Germany (McCubbin & Patterson, 1983), this report attempts to identify the

critical factors that may be important to successful family adaptation to an overseas location. Paralleling the classification scheme noted above, these factors are divided into three broad categories: (a) family stressors, (b) family adaptive resources, and (c) sense of coherence.

The present research augments the prior research by McCubbin and associates using this dataset in several important ways. First, in the present research, separate models were developed for both members and their respective spouses. In the past analysis, McCubbin and associates elected to combine husband and wife data in constructing independent and dependent variables for analysis rather than developing separate models for members and spouses.<sup>1</sup> In many cases, it is difficult to distinguish if the variables are based on member data, spouse data, or mean scores based on a composite of member and spouse data.<sup>2</sup> Also, based on secondary analysis of the dataset, additional variables were entered as indicators of family adaptive resources as well as indicators of sense of coherence, including the congruency of expectations and experiences of life in West Germany. These additional variables were examined as predictors of family adaptation together with many of the same variables as examined by McCubbin and associates (e.g., pre-move and post-move stressors, coping skills, family support, community support, predictability of work and family). Finally, based on the work of Bowen (Bowen, 1985, 1986) as well as that of McCubbin and Patterson (1983) which suggests variations in family outcomes by the rank of the service member, these models were further specified based on the member's rank (i.e., enlisted versus officer) creating four distinct groups for analysis: (a) enlisted members, (b) spouses of enlisted members, (c) officers, and (d) spouses of officers. McCubbin and associates (Lavee, McCubbin, & Patterson, 1985; McCubbin & Lavee, 1986) have limited their past analysis largely to enlisted families.

For purposes of this research and based on the work of McCubbin and associates (McCubbin & McCubbin, 1987), family stressors were defined as life events, transitions, or situations which have the potential to change the functioning and interaction of the family system and which may require concerted actions by a family member or members. These stressors can enter a family system on a number of levels: (a) on the individual level, (b) on the relationship level between family members, and (c) on the interactional level of family members with systems external to the family, including the work

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<sup>1</sup>The validity of the construction of mean family scores from individual-level survey data is a controversial issue in family social science (Walters, Pittman, & Norrell, 1984). In recent years, the practice of aggregating individual scores into family scores has drawn increasing criticism (e.g., White, 1984).

<sup>2</sup>This difficulty is due partially to the construction of the survey instruments. Some measures were included in either the member's or the spouse's version of the survey while other measures were included in both. The rationale for this design is not clear.

environment. It is important to note, however, that individual stressors are not assumed to necessarily result in stressor events for the family system.

Consistent with the work of McCubbin and Patterson (1983), family adaptive resources were defined as those capabilities and assets from which family members may draw upon for meeting demands and needs. A multidimensional concept, family adaptive resources were conceptualized on three levels: (a) individual characteristics of family members, such as educational, financial, or psychological assets; (b) family system resources, such as the level of family member support for one another; and (c) community resources, such as perceived supportiveness of friends and frequency of religious attendance. These three levels of adaptive resources were conceptualized as interdependent and complementary; a supply of capabilities at one level are assumed to offset lack of capabilities at another level.

From the research of Antonovsky and associates (Antonovsky, 1987; Antonovsky & Sourani, 1988), sense of coherence was defined broadly as the degree to which family members perceive their life as having a degree of order, predictability and manageability. Family members with a high sense of coherence tend to view the world as a rational place, one in which it is possible to predict, understand, and control events that are constantly affecting one's life (Antonovsky & Sourani, 1988).

Finally, consistent with the literature on family stress and coping (Antonovsky & Sourani, 1988; Lazarus & Folkman, 1984; McCubbin & Patterson, 1983), family adaptation was defined broadly as a composite of the overall adjustment of family members at three levels: (a) the individual level, (b) the family level, and (c) the community level at which both family members and the family system reside, participate, and respond to organizational and family demands.

Based on the earlier work of McCubbin and associates (Lavee, McCubbin & Patterson, 1985; McCubbin & Lavee, 1986; McCubbin & Patterson, 1983), it was hypothesized that factors related to the presence and pile-up of additional family stressors would negatively influence family adaptation to the relocation experience. On the other hand, it was hypothesized that factors related to the availability of adaptive resources and a high sense of coherence would positively influence family adaptation to the relocation experience.

### Method

#### Source of Data

The initial sample of 1,227 officer and enlisted families was drawn in May, 1983 from the total population of U.S. Army families who had recently experienced a relocation from the United States to West Germany. A stratified, representative sample was obtained by selecting families from three different sized West German communities and four types of Army units (i.e., combat, combat support, combat service support, and military command headquarters). For a more comprehensive discussion of the sampling design employed in the research, the reader should consult McCubbin and Patterson (1983).

Military members were asked to explain the purposes of the research to their spouses and to request their participation. Servicemembers and their spouses were asked to complete the questionnaires independently. These questionnaires were designed to assess their experiences and attitudes related to relocation and adaptation to living as an Army family in a foreign country. Survey questionnaires were completed at home and returned to the research team within 24 hours. Although participation was completely voluntary, 84% of husband and wife couples who were selected to participate in the survey returned completed questionnaires ( $N = 1,036$ ) (McCubbin & Patterson, 1983). However, 53 of these couples were further deleted from the dataset because of missing data, because the questionnaire of one spouse in the couple was missing, or because the military member was female, resulting in a final sample of 983 officer and enlisted intact families in which the husband was in the Army and the wife was a civilian.

Table 1 contains a summary of the descriptive characteristics of the sample families by rank. Based on comparative analysis of the sample profile with Army manpower statistics, McCubbin and Patterson (1983) described this sample as representative of married military personnel with accompanied spouses in the U.S. Army in Europe as well as approximating the profile of married personnel across the U.S. Army.<sup>3</sup>

### Measures

Measures were constructed for each major conceptual domain: (a) Family Stressors, (b) Family Adaptive Resources, (c) Sense of Coherence, and (d) Family Adaptation. Measures of Family Stressors focused on general life stressors, move-related stressors, and stressors specifically related to family life in the Army. Measures of Family Adaptive Resources included a focus on resources at the personal, family, and community levels. Measures of Sense of Coherence related to the perceptions of members and their spouses to the level of predictability and controllability of their life in the Army as well as the degree to which their experiences with life in West Germany were congruent with their expectations. Last, the measure of Family Adaptation was comprised of measures that focused on the level of personal adaptation, satisfaction with family life in West Germany, and adaptation to Army life.

Each measure used in the analysis was selected based on one or both of two criteria. One criterion was that the measure had been determined to be a valid and reliable measure in an earlier analysis by McCubbin and associates. The other criterion was that it was determined to be a theoretically and empirically meaningful measure through literature review and empirical

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<sup>3</sup>Based on the sample profile, it is more correct to conclude that this sample was representative of married male military personnel with accompanied civilian spouses in the U.S. Army in Europe and approximated the profile of male married personnel with civilian spouses across the U.S. Army. The sample excludes all servicewomen with civilian husbands as well as all dual military couples.

Table 1

Demographic Characteristics of Sample (Expressed in Percentages)

| Characteristic                                 | <u>Enlisted</u>    |                    | <u>Officer</u>     |                    |
|------------------------------------------------|--------------------|--------------------|--------------------|--------------------|
|                                                | Members<br>(n=790) | Spouses<br>(n=769) | Members<br>(n=160) | Spouses<br>(n=151) |
| Age:                                           |                    |                    |                    |                    |
| < 26 years                                     | 35                 | 44                 | 7                  | 13                 |
| 26-40 years                                    | 60                 | 52                 | 74                 | 72                 |
| 40 and above years                             | 5                  | 4                  | 19                 | 15                 |
| Education:                                     |                    |                    |                    |                    |
| Less than high school                          | 3                  | 20                 | 0                  | 0                  |
| High school grad or equivalent                 | 54                 | 43                 | 0                  | 13                 |
| Some college                                   | 36                 | 24                 | 3                  | 31                 |
| College graduate or above                      | 7                  | 13                 | 97                 | 56                 |
| Race:                                          |                    |                    |                    |                    |
| White                                          | 62                 | 62                 | 92                 | 94                 |
| Black                                          | 23                 | 19                 | 4                  | 3                  |
| Hispanic                                       | 10                 | 9                  | 1                  | 1                  |
| Other                                          | 5                  | 10                 | 3                  | 2                  |
| Years Married                                  |                    |                    |                    |                    |
| <3                                             | 37                 | 37                 | 21                 | 21                 |
| 4-10                                           | 43                 | 43                 | 28                 | 28                 |
| 11 and >                                       | 20                 | 20                 | 51                 | 51                 |
| Employed <sup>a</sup>                          | --                 | 39                 | --                 | 43                 |
| Grew Up: Military Family <sup>a</sup>          | --                 | 12                 | --                 | 12                 |
| Family Life Cycle: (Oldest Child) <sup>b</sup> |                    |                    |                    |                    |
| Couple                                         | 17                 | --                 | 19                 | --                 |
| Preschool (< than 5)                           | 34                 | --                 | 19                 | --                 |
| School age (6-11)                              | 29                 | --                 | 23                 | --                 |
| Adolescents (12-18)                            | 13                 | --                 | 26                 | --                 |
| Launching (19 and >)                           | 7                  | --                 | 13                 | --                 |
| Rank: <sup>c</sup>                             |                    |                    |                    |                    |
| E1-E4                                          | 25                 | --                 | --                 | --                 |
| E5-E6                                          | 53                 | --                 | --                 | --                 |
| E7-E9                                          | 22                 | --                 | --                 | --                 |
| O1-O3                                          | --                 | --                 | 47                 | --                 |
| O4-O6                                          | --                 | --                 | 53                 | --                 |

NOTE: All percentages have been rounded to the nearest whole number.

<sup>a</sup> Asked of spouses only.

<sup>b</sup> Asked of members only.

<sup>c</sup> Appropriate for members only.

analysis in the research reported in this report.<sup>4</sup> With the exception of the four sub-scales dealing specifically with family stressors which will be described later, negatively worded items on the survey were recoded such that the higher the value, the more positive the interpretation. In the case of composite measures, related items were summed and averaged to create meaningful sub-scale scores.

Following this procedure, a total of 15 predictor measures were selected and/or constructed for enlisted members and officers across the three conceptual domains of family stressors, family adaptive resources, and sense of coherence; 19 predictor measures were selected and/or constructed for the spouses of enlisted members and the spouses of officers across these same three conceptual domains. Twelve of these predictor measures were identical for Army members and spouses. Family adaptation, the criterion variable, was a composite measure of three indices: personal adaptation, satisfaction with family life in West Germany, and adaptation to Army life. Although McCubbin and associates have preferred to construct measures of family adaptation by combining member and spouse indices, separate measures of family adaptation were constructed for members and spouses from these parallel indices.

Of the variables used in the analysis, 12 of the variables for members and 13 of the variables for spouses involved measures consisting of three or more items. Reliability for each composite measure was assessed using the standardized item alpha reliability procedure, PROC IML in SAS (SAS Institute, Inc, 1982). Overall, the reliability for each composite measure was .50 or higher; in most cases, alpha coefficients exceeded .70. Alpha coefficients are reported later with the description of each composite measure.

### Family Stressors

Stressors were measured by four sub-scales which were designed to assess the existence and perceived severity of both general and move-related stressors. General life stressors in the past 12 months prior to moving to West Germany (e.g., a child's illness, the death of a family member, remarriage) were reported by spouses only and included 15 items rated from 0 for "no problem" to 2 for "big problem" (Alpha = .95). Family-related stressors in the past 12 months (e.g., physical abuse, trouble with police) were reported by members only on a 10 dichotomous items where 0 was "no" and one was "yes" (Alpha = .81). The Pre-Move Stressors sub-scale, reported by service members only, consisted of 15 four-point items ranging from 0 for "no problem" to 3 for "major problem." These items concerned events experienced in preparing for the move (e.g., selling a family home, giving up a job) as well as situations experienced during the first three months after arrival in West Germany (e.g., not getting paid on time, delay in finding permanent housing) (Alpha = .96).

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<sup>4</sup>Exploratory factor analysis was conducted through the use of PROC FACTOR in the SAS package. Principal components factor analysis was first specified with a request for only those factors with a minimum eigenvalue of one. Identified factors were then submitted to a varimax rotation. The cutoff for acceptable factor loadings was set at .45.

Post-Move stressors were assessed from spouses only and included 12 four-point items ranging from 0 for "no problem" to 3 for "very major problem." These items dealt with problems such as difficulties in getting a driver's license and learning the language and social customs) (Alpha = .95).

#### Family Adaptive Resources

Family adaptive resources were measured at the individual, family-system and community level. At least two specific measures were obtained at each level.

Individual resources. Individual resources were measured with five indices. Three of these measures were one-item descriptive or demographic variables, the first two of which were answered by spouses only. The first item was "Grew up in a military family" coded as 0 for "no" and 1 for "yes." The second item was employment status of the spouse coded as 0 for "not employed" and 1 for "employed". The third single-item measure, years of education, was reported by both members and spouses on a 9-point scale item ranging from 0 for "grade school" to 8 for "graduate degree." In addition to these measures, there were measures of both coping skills and personal confidence. Coping skills were assessed from both members and spouses and included nine items (e.g., ability to speak the German language, drive in Germany, shop on the economy) which were rated on four-point scale from 0 for "not at all" to 3 for "very well" (Alpha: Members = .96; Spouses = .97). Personal confidence was a nine item scale which measured both the spouse's confidence about her ability to manage the home and family while the member is away on short-term military assignments as well as the member's confidence in his spouse's ability to manage their home and family while he is away. Although worded in an alternative format, these items reflected the same concerns on both the member's and spouse's questionnaires and were evaluated on a 4-point scale, ranging from 0 for "can't do it" to 3 "very well" (Alpha: Member = .96; Spouses = .96).

Family system resources. Family system resources were assessed by four indices. Reported by both members and spouses, Family image was a three-item scale with the items being rated from 0 for "strongly disagree" to 4 for "strongly agree." This scale was designed to reflect an overall positive evaluation of the family (e.g., we feel our family is a success) (Alpha: Members = .50; Spouses = .50). Egalitarian family values were assessed from both members and spouses by 10 items whose values ranged from 0 for "strongly disagree" to 3 for "strongly agree"; this scale was used to measure the degree to which members and spouses believe in sharing family roles and decision-making (Alpha: Members = .93; Spouses a .93). Assessed from spouses only, the measure of Family functioning contained 12 items with values ranging from 0 for "strongly disagree" to 4 for "strongly agree" and measured the level of family cohesion, adaptability, and communication effectiveness

(Alpha = .98).<sup>5</sup> Family support was assessed from both members and spouses and was defined by seven items on a five-point scale with values ranging from 0 for "strongly disagree" to 4 for "strongly agree." These items reflected the degree to which family members listen to one another, understand one another, and exchange love and affection (Alpha: Members = .89; Spouses = .90).

Community resources. Community resources was defined by five scales which reflected social support at the informal (e.g., kinship ties and friendships), quasi-formal (e.g., neighborhood organizations and work), and formal (e.g., housing) levels. The friend support scale consisted of a six 5-point items ranging from 0 for "strongly disagree" to 4 for "strongly agree" which evaluated the perceptions of both members and spouses about their emotional relationship with friends and their level of involvement with them (Alpha: Members = .85; Spouses = .89). Administered to both members and spouses, the Community Support scale was defined by seven items ranging from 0 for "strongly disagree" to 4 for "strongly agree" that measured the extent to which individuals in the community can be relied on in times of trouble, and the degree to which the community is seen as a viable place in which to live and in which to raise children (Alpha: Members = .93; Spouses = .92). Religious attendance was assessed from both members and spouses and included a single item which measured the frequency of attendance from 0 for "infrequently or never" to 4 for "several times a week." A dichotomous item where 0 was for "no" and 1 was for "yes" was used to assess volunteer activity for spouses only to determine their involvement in volunteer work in the community. Satisfaction with housing in West Germany was assessed from both members and spouses by a single item with values ranging from 0 for "very dissatisfied" to 3 for "very satisfied".

#### Sense of Coherence

Sense of coherence was defined by three scales which assessed the perceived degree to which members and spouses felt that they were able to predict and manage the nature of their lives in the Army as well as the congruency of their expectations and experiences about life in West Germany. Both members and spouses responded to each of these scales. Predictability of Army life was defined by a 3-item scale coded 0 for "strongly disagree" to 3 for "strongly agree"; these items measured how well the member and the spouse felt the family could predict the immediate future based on the nature of work and family schedules (Alpha: Members = .72; Spouses = .70). Controllability of Army/family life was assessed by two items which had scale values of 0 for "strongly disagree" to 3 for "strongly agree"; this which measured the perceptions by the member and spouse about their ability to plan for future

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<sup>5</sup>The measure of family functioning was constructed from 12 items from the Family Adaptability and Cohesion Evaluation Scale (FACES-II) (Olson & Portner, 1983). Factor analysis of the FACES II Scale did not reveal a clear adaptability or cohesion factor as reported by Olson and Portner (1983). As a consequence, this new factor was created based on the results from the factor analysis. All items selected for this sub-scale had a minimum factor loading of .50 on the first factor when a two-factor solution was specified.

military assignments in advance and to have some say over the timing and location of future military assignments. Nine dichotomous items having a value of 0 for "worse than expected" and 1 for "about the same or better than expected" was the measure of the congruency of expectations that members and spouses had prior to arrival in West Germany with their actual experiences since arrival (Alpha: Members = .91; Spouses = .91). These items reflected a number of issues, including housing, schools for the kids, time for family togetherness, chance to travel, medical and dental services, and financial security and stability.

### Family Adaptation

The measure of family adaptation was operationalized as a composite measure of three indices which were responded to by both members and spouses. Personal adaptation was a 8-item, 11-point semantic differential scale which asked members and spouses to rate how they had felt during the past months in terms of their own physical and emotional well-being as well as the health of other family members (Alpha: Members = .92; Spouses = .92). Satisfaction with life in West Germany was a single item which measured the level of satisfaction of members and spouses from 1 for "very dissatisfied" to 4 for "very satisfied." Adaptation to Army life was a composite measure involving three sub-dimensions, all measured on four point scales, and included a single item measure of satisfaction with life in West Germany, a 4-item measure of commitment to the mission and lifestyle of the Army (Alpha: Members = .65; Spouses = .52), and a 6-item measure of the degree of Army/family fit--the belief that the Army is responsive to the needs and frustrations of families (Alpha: Members = .87; Spouses = .88). Scores on these three sub-dimensions of adaptation to Army life were summed and averaged to obtain a single measure of overall adaptation to Army life.

In a principal components factor analysis, the summated scores for Personal adaptation, Satisfaction with family life in West Germany, and Adaptation to Army life loaded on the same factor for both members and spouses (factor loadings ranged from .71 to .86). As a consequence, the three indices were recoded to range on a four-point scale, and summed and averaged to obtain a final measure of family adaptation for both member and spouses, ranging from 0 for "not adapted" to 3 for "adapted" (Alpha: Members = .74; Spouses = .69).<sup>6</sup>

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<sup>6</sup>Investigators in family research have struggled with the measurement of family adaptation. In agreement with Lavee and McCubbin (1985), "family adaptation is but a descriptive criterion ... rather than a purely defined construct with an operationalized set of measures" (pp. 1-2). In this research, family adaptation was operationalized in a way generally consistent with the earlier work of McCubbin and associates (Lavee, McCubbin, & Patterson, 1985; McCubbin & Lavee, 1986; McCubbin & Patterson, 1983). However, based on the broad conceptualization of adaptation from the Person-Environment Fit theory of French and associates (French, Caplan, & Harrison, 1982), the recent results of exploratory interviews with Army families and leadership as part of a large-scale study of family adaptation (Styles, 1988), and current efforts by Bowen (1989) to model the adaptation of families in the U.S. Army, the measure of adaptation was broadened to include two additional components: (a) commitment to the mission and lifestyle of the Army, and (b) the degree of Army/family fit. While the results of both correlational and factor analyses generally support this decision, continued efforts are needed at both the conceptual and the operational levels to achieve greater clarity in the measurement this construct.

## Data Analysis and Results

In order to identify critical factors that are associated with successful adaptation of families to an overseas relocation as well as to examine the hypothesized relationships among the three sets of independent variables and the dependent variable as discussed above, forward step-wise multiple regression was performed using the regression program in SAS for each of the four groups: (a) enlisted members, (b) spouses of enlisted members, (c) officers, and (d) spouses of officers. In each regression analysis, the probability level for inclusion of variables into the respective equation was set at .05. In addition, a list-wise deletion of cases with missing data was used.

Only those responses that were obtained from members were included in the member analyses, and only those responses that were obtained from spouses were included in the spouse analyses. As a consequence, the number of predictor variables differed in the member equation and the spouse equation; 15 variables were used for the member model and 19 variables for the spouse model.

The analyses with both members and spouses contained 12 core predictor variables: years of education, coping, skills, family image, egalitarian family values, family support, friend support, community support, religious attendance, satisfaction with housing, predictability of Army life, controllability of Army life and expectations. Additionally, the following three predictor variables were included in the member model only: stressors in the past three months, pre-move stressors, and confidence in spouse. On the other hand, in addition to the 12 core variables, the spouse model statement included 7 variables not included in the member model statement: stressors in the past 12 months, post-move stressors, grew up in a military family, employment status, personal confidence, volunteer activity and family functioning. Although the measure of "personal confidence" concerned the same content on both the member and spouse questionnaires, it was worded in an alternative format (see above). Consequently, it treated as a unique variable in the respective member and spouse models. Table 2 presents the means and standard deviations for the predictor and criterion variables by sample subgroup. In addition, Table 3 presents the bivariate correlation matrix between the predictor variables and the criterion variable by sample subgroup. Given the variation in the predictor variables available for entry into the respective equations for members and spouses, in addition to the use of forward step-wise multiple regression as well as variation in the sample sizes among subgroups in the analysis, caution is advised in attempting to compare the results from the regression analysis between the four sample sub-groups. The entry of predictor variables in a forward step-wise regression analysis are greatly influenced by the respective variables in the equation, their respective order of entry, and sample size. As the results from the analysis which are presented in Table 4 and Table 5 are discussed separately for each of the four sample subgroups.

Table 2

Means and Standard Deviation for Predictor and Criterion Variables

| Variable                                  | Enlisted |      |        |      | Officer |      |        |      |
|-------------------------------------------|----------|------|--------|------|---------|------|--------|------|
|                                           | Member   |      | Spouse |      | Member  |      | Spouse |      |
|                                           | M        | SD   | M      | SD   | M       | SD   | M      | SD   |
| <u>Family Stressors</u>                   |          |      |        |      |         |      |        |      |
| Stressors in past 12 months <sup>b</sup>  | --       | --   | .17    | .21  | --      | --   | .10    | .12  |
| Stressors in past 3 months <sup>a</sup>   | .17      | .14  | --     | --   | .13     | .09  | --     | --   |
| Pre-move stressors <sup>c</sup>           | .77      | .51  | --     | --   | .73     | .44  | --     | --   |
| Post-move stressors <sup>d</sup>          | --       | --   | .76    | .51  | --      | --   | .52    | .38  |
| <u>Family Adaptive Resources</u>          |          |      |        |      |         |      |        |      |
| <u>Individual Resources:</u>              |          |      |        |      |         |      |        |      |
| Grew up in military family <sup>a</sup>   | --       | --   | .11    | .32  | --      | --   | .12    | .32  |
| Employment status of spouse <sup>a</sup>  | --       | --   | .39    | .48  | --      | --   | .43    | .50  |
| Years of formal education <sup>c</sup>    | 3.06     | 1.18 | 2.81   | 1.61 | 6.58    | 1.46 | 4.86   | 1.68 |
| Coping skills <sup>c</sup>                | 1.93     | .60  | 1.59   | .76  | 2.17    | .43  | 2.05   | .51  |
| Personal confidence <sup>c</sup>          | 2.30     | .54  | 2.44   | .48  | 2.57    | .43  | 2.71   | .29  |
| <u>Family System Resources:</u>           |          |      |        |      |         |      |        |      |
| Family image <sup>d</sup>                 | 1.79     | .69  | 1.67   | .66  | 1.52    | .63  | 1.40   | .65  |
| Egalitarian family values <sup>c</sup>    | 1.57     | .44  | 1.67   | .47  | 1.55    | .41  | 1.73   | .52  |
| Family functioning <sup>d</sup>           | --       | --   | 2.99   | .71  | --      | --   | 3.18   | .55  |
| Family support <sup>d</sup>               | 2.89     | .55  | 2.74   | .57  | 2.82    | .47  | 2.67   | .51  |
| <u>Community Resources:</u>               |          |      |        |      |         |      |        |      |
| Friend support <sup>d</sup>               | 2.20     | .64  | 2.39   | .63  | 2.70    | .51  | 2.86   | .51  |
| Community support <sup>d</sup>            | 1.82     | .71  | 1.99   | .65  | 2.50    | .62  | 2.54   | .56  |
| Religious attendance <sup>d</sup>         | .66      | 1.04 | .87    | 1.17 | 1.55    | 1.36 | 1.68   | 1.27 |
| Volunteer activity <sup>a</sup>           | --       | --   | .09    | .29  | --      | --   | .46    | .50  |
| Satisfaction with housing <sup>c</sup>    | 1.40     | .93  | 1.59   | .92  | 1.50    | .96  | 1.60   | .92  |
| <u>Sense of Coherence</u>                 |          |      |        |      |         |      |        |      |
| Predictability of Army life <sup>c</sup>  | .93      | .69  | 1.02   | .69  | 1.39    | .58  | 1.32   | .65  |
| Controllability of Army life <sup>c</sup> | 1.02     | .72  | 1.15   | .73  | 1.45    | .66  | 1.28   | .67  |
| Expectations <sup>a</sup>                 | .63      | .26  | .67    | .26  | .80     | .19  | .81    | .18  |
| <u>Family Adaptation<sup>c</sup></u>      | 1.43     | .60  | 1.53   | .57  | 1.89    | .54  | 1.90   | .45  |

<sup>a</sup> Range: 0-1; <sup>b</sup> Range: 0-2; <sup>c</sup> Range: 0-3; <sup>d</sup> Range: 0-4; <sup>e</sup> Range: 0-8.

NOTE: Variables categorized under Family stressors are coded from low stressors to high stressors. All other variables are coded such that higher mean values reflect more positive evaluations.

Table 3  
Bivariate Zero-Ord. Correlations Between the Predictor Variables and Family Adaptation

| Variable                         | <u>Enlisted</u> |        | <u>Officer</u> |        |
|----------------------------------|-----------------|--------|----------------|--------|
|                                  | Member          | Spouse | Member         | Spouse |
| <u>Family Stressors</u>          |                 |        |                |        |
| Stressors in past 12 months      | --              | .27**  | --             | -.14   |
| Stressors in past 3 months       | -.38**          | --     | -.03           | --     |
| Pre-move stressors               | -.34**          | --     | -.32**         | --     |
| Post-move stressors              | --              | -.40** | --             | -.38** |
| <u>Family Adaptive Resources</u> |                 |        |                |        |
| <u>Individual Resources:</u>     |                 |        |                |        |
| Grew up in military family       | --              | .02    | --             | .13    |
| Employment status of spouse      | --              | .17**  | --             | .08    |
| Years of formal education        | .15**           | .05    | .02            | -.02   |
| Coping skills                    | .29**           | .22**  | .21**          | .17*   |
| Personal confidence              | .35**           | .35**  | .34**          | .30**  |
| <u>Family System Resources:</u>  |                 |        |                |        |
| Family image                     | .11**           | .07    | .10            | .15    |
| Egalitarian family values        | -.03            | -.09*  | .06            | .07    |
| Family functioning               | --              | .24**  | --             | .19*   |
| Family support                   | .15**           | .18**  | .16*           | .35**  |
| <u>Community Resources:</u>      |                 |        |                |        |
| Friend support                   | .35**           | .26**  | .42**          | .25**  |
| Community support                | .53**           | .47**  | .50**          | .36**  |
| Religious attendance             | .01             | .01    | -.08           | -.03   |
| Volunteer activity               | --              | .04    | --             | -.03   |
| Satisfaction with housing        | .32**           | .36**  | .33**          | .18*   |
| <u>Sense of Coherence</u>        |                 |        |                |        |
| Predictability of Army life      | .50**           | .38**  | .50**          | .35**  |
| Controllability of Army life     | .29**           | .22**  | .49**          | .33**  |
| Expectations                     | .65**           | .61**  | .54**          | .46**  |

\*  $p < .05$ ; \*\*  $p < .01$

Table 4

Unstandardized<sup>(b)</sup> and Standardized<sup>(B)</sup> Regression Weights Predicting Family Adaptation

| Variable                                 | Enlisted |      |        |      | Officer |     |        |      |
|------------------------------------------|----------|------|--------|------|---------|-----|--------|------|
|                                          | Member   |      | Spouse |      | Member  |     | Spouse |      |
|                                          | b        | B    | b      | B    | b       | B   | b      | B    |
| <u>Family Stressors</u>                  |          |      |        |      |         |     |        |      |
| Stressors in past 12 months <sup>a</sup> | --       | --   | -.35** | -.13 | --      | --  | ns     | ns   |
| Stressors in past 3 months <sup>b</sup>  | -.52**   | -.12 | --     | --   | ns      | ns  | --     | --   |
| Pre-move stressors <sup>b</sup>          | ns       | ns   | --     | --   | ns      | ns  | --     | --   |
| Post-move stressors <sup>a</sup>         | --       | --   | ns     | ns   | --      | --  | -.24** | -.20 |
| <u>Family Adaptive Resources</u>         |          |      |        |      |         |     |        |      |
| <u>Individual Resources:</u>             |          |      |        |      |         |     |        |      |
| Grew up in military family <sup>a</sup>  | --       | --   | ns     | ns   | --      | --  | ns     | ns   |
| Employment status of spouse <sup>a</sup> | --       | --   | ns     | ns   | --      | --  | .15*   | .16  |
| Years of formal education                | ns       | ns   | ns     | ns   | ns      | ns  | ns     | ns   |
| Coping skills                            | .08*     | .08  | .07**  | .09  | ns      | ns  | ns     | ns   |
| Personal confidence                      | .10*     | .09  | .09*   | .08  | ns      | ns  | ns     | ns   |
| <u>Family System Resources:</u>          |          |      |        |      |         |     |        |      |
| Family image                             | ns       | ns   | ns     | ns   | ns      | ns  | ns     | ns   |
| Egalitarian family values                | -.13**   | -.10 | ns     | ns   | ns      | ns  | ns     | ns   |
| Family functioning <sup>a</sup>          | --       | --   | .11**  | .14  | --      | --  | ns     | ns   |
| Family support                           | .10**    | .09  | ns     | ns   | ns      | ns  | .21**  | .23  |
| <u>Community Resources:</u>              |          |      |        |      |         |     |        |      |
| Friend support                           | .07**    | .07  | ns     | ns   | ns      | ns  | ns     | ns   |
| Community support                        | .11**    | .13  | .16**  | .18  | .23**   | .27 | .22**  | .27  |
| Religious attendance                     | ns       | ns   | ns     | ns   | ns      | ns  | -.05*  | .14* |
| Volunteer activity <sup>a</sup>          | --       | --   | ns     | ns   | --      | --  | ns     | ns   |
| Satisfaction with housing                | .06**    | .09  | .07**  | .11  | ns      | ns  | ns     | ns   |
| <u>Sense of Coherence</u>                |          |      |        |      |         |     |        |      |
| Predictability of Army life              | .17**    | .20  | .10**  | .12  | ns      | ns  | ns     | ns   |
| Controllability of Army life             | ns       | ns   | ns     | ns   | .21**   | .26 | .11*   | .16  |
| Expectations                             | .94**    | .40  | .86**  | .39  | 1.06**  | .38 | .74**  | .29  |
| <u>Intercept</u>                         |          |      |        |      |         |     |        |      |
|                                          | -.50     |      | -.17   |      | .17     |     | -.03   |      |
| <u>Total R<sup>2</sup></u>               |          |      |        |      |         |     |        |      |
|                                          | .59**    |      | .53**  |      | .48**   |     | .48**  |      |
| E                                        | 85.03    |      | 70.24  |      | 40.52   |     | 14.32  |      |
| N                                        | 607      |      | 511    |      | 134     |     | 115    |      |

<sup>a</sup> Variable not included in member survey<sup>b</sup> Variable not included in spouse surveyNote: ns = not significant ( $p \Rightarrow .05$ )\*  $p < .05$ ; \*\*  $p < .01$

Table 5  
Forward Stepwise Regression with Family Adaptation as the Criterion

| Step Variable | Enlisted            |                           |                     | Officers                 |                     |                      |
|---------------|---------------------|---------------------------|---------------------|--------------------------|---------------------|----------------------|
|               | Members<br>(N=607)  | Spouses<br>(N=511)        | Members<br>(N=134)  | Spouses<br>(N=115)       | Members<br>(N=134)  | Spouses<br>(N=115)   |
|               | Cum. R <sup>2</sup> | Variable                  | Cum. R <sup>2</sup> | Variable                 | Cum. R <sup>2</sup> | Variable             |
| 1             | .43                 | Expectations              | .38                 | Expectations             | .33                 | Expectations         |
| 2             | .49                 | Community Support         | .44                 | Community Support        | .43                 | Family Support       |
| 3             | .52                 | Stress In Past 3 Months   | .47                 | Stress In Past 12 Months | .48                 | Post-Move Stressors  |
| 4             | .54                 | Predictability            | .49                 | Family Functioning       |                     | Community Support    |
| 5             | .55                 | Personal Confidence       | .50                 | Coping Skills            |                     | Religious Attendance |
| 6             | .56                 | Egalitarian Family Values | .51                 | Predictability           |                     | Employment Status    |
| 7             | .57                 | Coping Skills             | .52                 | Housing Satisfaction     |                     | Controllability      |
| 8             | .58                 | Family Support            | .53                 | Personal Confidence      |                     |                      |
| 9             | .58                 | Housing Satisfaction      |                     |                          |                     |                      |
| 10            | .59                 | Friend Support            |                     |                          |                     |                      |

NOTE: All variables in the model are significant at least at the .05 level.

### Enlisted Members

Ten of the 15 independent variables considered in the regression analysis for members were identified as significant predictors of the level of family adaptation among enlisted members. Listed by their order of entry into the regression equation, these variables were expectations, community support, stressors in the past three months, predictability of Army life, personal confidence, egalitarian family values, coping skills, family support, satisfaction with housing, and friend support. Together, these predictors accounted for 59% of the variance in the level of family adaptation for enlisted members,  $F(10, 596) = 85.03, p < .001$ .

As hypothesized, the one measure of Family Stressors that entered the equation was negatively associated with family adaptation (i.e., the higher the level of stressors in the past three months, the lower the level of family adaptation). In addition, the two measures of Sense of Coherence that entered the equation (i.e., predictability of Army life and the congruency of expectations and experiences) also influenced the dependent variable in the hypothesized direction: the greater the predictability of Army life and the more congruent the prior expectations and the actual experiences of life in West Germany, the higher the level of family adaptation.

With one exception, the individual (i.e., coping skills and personal confidence), family system (i.e., family support), and community (i.e., friend support, community support, and satisfaction with housing) resources that entered the regression equation were consistent with the relationship hypothesized: the greater the adaptive resource, the higher the level of family adaptation. The one exception was the family system resource of egalitarian family values. For enlisted members, the more traditional in family values, the higher their level of family adaptation.

Of these 10 significant predictors of family adaptation, the best predictor was expectations (a Sense of Coherence measure). It is particularly noteworthy that of the total variance explained by the 10 significant predictors of family adaptation (59%), nearly three-quarters of this explained variance was explained by this variable. The level of community support, the second variable to enter the equation, explained another six percent of the total variance in the dependent variable beyond the influence of expectations. The other eight variables that entered the equation accounted for the remaining 10% of the total explained variance.

### Spouses of Enlisted Members

Out of the list of 19 independent variables considered in the regression analysis for spouses, eight were isolated as significant predictors of the level of family adaptation among spouses of enlisted members. Listed by their order of entry into the regression equation, these variables were expectations, community support, stressors in the past 12 months, family functioning, coping skills, predictability of Army life, satisfaction with housing, and personal confidence. In combination, these predictors explained 53% of the variance in the criterion variable of family adaptation for the spouses of enlisted member,  $F(8, 502) = 70.24, p < .001$ .

As hypothesized, the one measure of Family Stressors that entered the equation was negatively associated with the level of family adaptation (i.e., the higher the level of stressors in the past 12 months, the lower the family adaptation). In addition, the five measures of Family Adaptive Resources and the two measures of Sense of Coherence that entered the equation were consistent with expectations: the greater the adaptive resource and the sense of coherence, the higher the level of family adaptation. Specifically, the individual (i.e., coping skills, personal confidence), family system (i.e., family functioning), and community (i.e., community support, satisfaction with housing) resources that were isolated in the analysis had a positive influence on the level of level of adaptation. Similarly, the two Sense of Coherence measures (i.e., congruency of expectations and experiences and predictability of Army life) also had a positive effect on the dependent variable.

The best predictor of family adaptation among the spouses of enlisted members was expectations (a Sense of Coherence measure). Of the total variance explained (53%), approximately 70% of this variance was explained by this variable. The level of community support, the second variable to enter the equation, explained another six percent of the total variance in the dependent variable beyond the influence of expectations. The other six variables that entered the equation accounted for the remaining nine percent of the total explained variance.

#### Officers

Only three of the 15 independent variables considered in the regression analysis for members were identified as significant predictors of the level of family adaptation of officers. Listed by their order of entry into the regression equation, these variable were expectations, community support, and controllability of Army life. Together, these predictors explained 48% of the variance in the level of family adaptation for officers,  $F(3, 130) = 40.52$ ,  $p < .001$ .

The one measure of Community Resources (i.e., community support) and the two measures of Sense of Coherence (i.e., expectations and controllability of Army life) that entered the regression equation each influenced the dependent variable in the manner hypothesized: the greater the level of community support, the more congruent the prior expectations and the actual experiences of life in West Germany, and the more control that officers felt in their ability to plan and influence future military assignments, the greater the level of family adaptation.

Of the three significant predictors of family adaptation, the best predictor was expectations (a Sense of Coherence measure). It accounted for nearly 70% of the total variance explained by the three significant predictors (48%). The remaining two variables, community support and controllability of Army life, accounted for the remaining 15% of total explained variance.

#### Spouses of Officers

Out of the list of 19 independent variables considered in the regression analysis for spouses, seven were identified as significant predictors of the

level of family adaptation among spouses of officers. Listed by their order of entry into the regression equation, these variables were expectations, family support, post-move stressors, community support, religious attendance, employment status, and controllability of Army life. In combination, these predictors accounted for 48% of the variance in the level of family adaptation for spouses of officers,  $F(7, 107) = 14.32, p < .001$ .

As hypothesized, the measure of Family Stressors that entered the equation was negatively associated with family adaptation (i.e., the higher the level of post-move stressors, the lower the level of family adaptation). In addition, the two measures of Sense of Coherence that entered the equation (i.e., expectations and controllability of Army life) also influenced the dependent variable in the hypothesized direction: the more congruent prior expectations and the actual experiences of life in West Germany and the more control that spouses felt in their ability to plan and influence future military assignments, the higher the level of family adaptation.

With one exception, the individual (i.e., employment status), family system (i.e., family support), and community (i.e., community support) resources that entered the regression equation were consistent with the relationship hypothesized: the greater the adaptive resource (i.e., being employed and being part of both a cohesive and supportive family system and community), the higher the level of family adaptation. The one exception was the Community Resource measure of religious attendance. For officer spouses, the greater the religious attendance, the lower the level of family adaptation. This finding parallels a recent finding by Bowen and Janofsky (1988) for spouses of enlisted members in the U.S. Army.

Of the seven significant predictors of family adaptation, the best predictor was expectations (a Sense of Coherence measure). This predictor alone accounted for one-half of the total variance explained by the variables which entered the equation (48%). The other six variables accounted for the remaining 24% of the total explained variance.

### Discussion

Relocation to an overseas environment can result in numerous hardships for military families, including financial strains, geographic separation from extended family, and difficulties associated with assimilation to a new cultural setting. These hardships may pose serious challenges to the family system, resulting in a decreased level of family adaptation at the personal, family, and Army-system level. Given the link between family adaptation and military-related outcomes, such as member retention and individual and unit readiness (Bowen & Janofsky, 1988; Orthner & Pittman, 1986; Szoc, 1982) it is to the military's advantage to better understand the factors that may mediate the effects of relocation on the level of family adaptation. Such understanding will support the work of policy and program developers in designing and tailoring family-oriented programs that enhance the level of family adaptation to an overseas relocation, and thereby contribute to military preparedness.

This research sought to identify the factors that may influence the level of family adaptation to an overseas relocation. Based on the prior theoretical and empirical study in the areas of stress, coping and family adaptation, these factors were conceptualized within three broad domains: (a) family stressors, (b) adaptive resources, and (c) sense of coherence. The influence of factors within these three conceptual domains on the level of family adaptation were also examined separately for members and spouses within officer and enlisted rank groups.

In general, although the results of the investigation are not directly comparable across subgroups given the nature of the analysis, the findings clearly support the importance of the congruency of prior expectations and actual experiences concerning life in West Germany on the level of family adaptation. A Sense of Coherence measure, this factor emerge as the best predictor of family adaptation for all four subgroups: the more that the actual experiences of members and spouses in West Germany (e.g., housing, schools, medical/dental services, financial security and stability, time for family togetherness) were about the same or better than expected, the higher their reported level of family adaptation. No less than one-half and as much as 70% of the total variance explained in the level of family adaptation for each sub-group by the factors that entered the respective equations (ranging from 48% to 59%) was accounted for by this one factor. Interestingly, despite the attention that McCubbin and associates (Lavee, McCubbin, & Patterson, 1985; McCubbin & Lavee, 1986) have given to assessing the family's Sense of Coherence in their modeling and analysis efforts using this dataset, they have not included this factor as an indicator of coherence in past research. In fact, to the knowledge of this investigator, this factor has not been included as a factor at all in their empirical study of family adaptation using this dataset.

On the other hand, the results from this investigation provide additional support to the earlier findings of McCubbin and associates about the importance of community support to promoting the level of family adaptation to an overseas transition. A Family Adaptive Resource measure, this factor assessed the extent to which members and spouses felt that individuals in the community could be relied on in times of trouble, and the extent to which they perceived the community as a good place to live and raise children. The level of community support emerged as an important predictor of the level of family adaptation for all four analysis groups: enlisted members, spouses of enlisted members, officers, and the spouses of officers. For all sub-groups, the greater the community support, the higher the level of family adaptation.

Also supportive of the earlier analyses by McCubbin and associates (McCubbin & Patterson, 1983; McCubbin & Lavee, 1986) was the relative importance of family support in predicting the level of family adaptation for selective sub-groups. A Family Adaptive Resource factor which reflected the degree to which family members listen to each other, understand one another, and exchange love and affection, the level of family support emerged as a significant predictor of the level of family adaptation for enlisted members as well as the spouses of officers. In both cases, the greater the level of family support, the higher the level of family adaptation.

With the exception of officers, it is also clear from the results that the level of family adaptation to overseas relocations is hampered by the pile-up of sources of additional stressors. Specifically, stressors in the past three months was a significant predictor of family adaptation for enlisted members, stressors in the past 12 months was a significant predictor of family adaptation for spouses of enlisted members, and post-move stressors was a significant predictor of family adaptation for spouses of officers. As hypothesized, for each of three sub-groups, the higher the level of family stressors, the lower the level of family adaptation. These findings provide additional support to the earlier findings of McCubbin and associates (McCubbin & Patterson, 1983; McCubbin & Lavee, 1986; Lavee, McCubbin, & Patterson, 1985) as well as to literature on life events and illness (Dohrenwend & Dohrenwend, 1974) which point to their relationship between the pile-up of stressors and the level of family adaptation to a stressor event like relocation.

At the risk of oversimplification, the role of Sense of Coherence in predicting the level of family adaptation is particularly noteworthy within the respective sub-groups. Not only was the congruency between prior expectations and actual experiences in West Germany the best predictor of family adaptation within each sub-group analysis, but also at least one additional Sense of Coherence measure emerged as a significant predictor of variation in the dependent variable in each of the four sub-groups. For enlisted members and their spouses, the Sense of Coherence measure which involved perceptions of the predictability of Army life also emerged as a significant predictor of family adaptation. In both cases, the more that enlisted members and their spouses could predict the immediate future based on the nature of work and family schedules, the greater the level of family adaptation.

For officers and their spouses, the Sense of Coherence measure that also entered in each equation as a significant predictor of variation in the dependent variable was controllability: the perceived ability of members and their spouses to plan in advance for future military assignments and to have some say over the timing and location of these assignments. In both cases, the greater the perceived controllability, the greater the level of family adaptation.

Surprisingly, there were some factors, such as the level of pre-move stressors and the years of formal education, that did not prove to be significant predictors of the variation in the dependent variable. Of course, as reported in an earlier analysis by Lavee, McCubbin, Patterson (1985) and is reflected in examining the bivariate zero-order correlations between the predictor variables and family adaptation in Table 3, the intercorrelation among factors within conceptual domains may have resulted in selected factors not entering the equations for selected sample sub-groups. For example, Lavee, McCubbin, Patterson (1985) reported a correlation of .43 between community support and friendship support among members and spouses in the enlisted ranks.

Given the exploratory nature of this study, caution is advised in interpreting these results, especially for the officer sub-groups. Because the sample sizes for officers and spouses of officers are relatively

small, these regression coefficients may not be stable. Although it would have been preferred to conduct a two-stage analysis on different halves of each sample sub-group to examine the stability of coefficients, the size of the officer subgroups precluded this type of analysis.

With this qualification in mind, these findings have potentially important implications for military policy and program planners. First, given the importance of realistic expectations about life in West Germany to the level of family adaptation across the four sample subgroups, it is recommended that the Army re-examine current programs, such as the Army sponsorship program and procedures for reassignment processing, to ensure that families are being provided with accurate information as well as given adequate preparation for the realities of life as a Army family in West Germany. Such activities could involve transition counseling sessions, pre-relocation orientation programs, pre-move and post-move workshops, survival manuals for anticipating the challenges of an overseas location, and dissemination of accurate resource literature. For policy and program planners, the relative importance of realistic expectations to family adaptation should be encouraging. The Army not only has a number of programs directed toward this specific issue, but also the clarification of expectations provides a tangible and concrete intervention goal for evaluating the success of policy and program efforts.

Second, the relative importance of community support in explaining variation in the dependent variable for each sample subgroup in the analysis emphasizes the importance of informal community networks in facilitating the level of adaptation to an overseas relocation. However, unlike the expectations factor, this factor presents more challenges on the perspective of intervention. Past research suggests that military families, especially officer families and white families, are quite reluctant to become involved with other families in the community for purposes of support (Bowen, 1985; Bowen & Janofsky, 1988). Although this self-reliance can be viewed as a healthy response to frequent moves, the resulting personal and relational isolation can leave these families quite susceptible to the ongoing stressors of military life. It imperative that unit-level leadership as well as service providers in the local overseas military communities support family efforts to build linkages to one another, including unit-sponsored activities and mutual self help groups (e.g., family support groups).

Third, given the link between the pile-up of family stressors and family adaptation, Army leadership needs to be particularly sensitive to the negative influence that concomitant demands may have on the level of family adaptation to an overseas relocation. Ensuring that Army members have adequate time to get their personal and family affairs in order before assuming a demanding work schedule in the new location may promote a more positive adaptation by all family members, and result in a better productivity when the soldier does report for duty.

Fourth, Army leadership needs to be particularly aware of the importance of family support to the level of family adaptation among spouses of officers. For many soldiers, especially officers, an overseas assignment can be particularly demanding. Unit-level policies and practices which place undue competition between the Army and the family for the members time, energy and

commitment may be especially detrimental to the adaptation of officer spouses. It is important that unit-level leadership provide the latitude where soldiers are able to have adequate time to nurture family relationships.

Last, policy and program leaders are encouraged to evaluate the nature of these findings carefully. Although only the major findings have been highlighted, the range of findings for each sub-group should be discussed in context of current and planned Army-level initiatives in support of families. While these findings focus only on families relocating to a particular overseas environment, policy and program leaders should evaluate the potential applicability of these findings to families facing other types of relocations.

The research presented in this report needs to replicate in different types of families (e.g., servicewomen with civilian husbands, dual military couples, single parents). It also needs to be replicated for families facing different types of relocations: outside the Continental United States (OCONUS) to the Continental United States (CONUS) and within CONUS. The relative contributions of Family Stressors, Family Adaptive Resources, and Sense of Coherence need to be compared by analyzing factors within these conceptual domains in blocks through a multi-stage hierarchical regression (Pittman & Lloyd, 1988). Although exploratory, the research findings presented in this report provide important support for the importance of such research in guiding policy and program interventions for families facing specific types of military demands.

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