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**A FINAL REPORT ON AN INVESTIGATION OF DEPLOYMENT RELATED
FACTORS ON PERFORMANCE AND PSYCHOSOCIAL ADJUSTMENT**

**Robert P. Archer, Ph.D, Principal Investigator
Catherine V. Cauthorne, M.S., Research Associate
Department of Psychiatry and Behavioral Sciences
Eastern Virginia Medical School
Norfolk, Virginia**

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Executive Summary

In the fall of 1984, a two year research project was funded through the Office of Naval Research to study the effects of deployment on the functioning and adjustment of Navy personnel and their families. Surveys were collected, in pilot and main survey administrations, from approximately 4000 Navy personnel and spouses, across all type commands and selected shore-based installations.

Major findings are summarized as follows:

- 1) The deployment assessment survey instrument developed for this project functions well in terms of internal reliability and construct validity. It provides a standardized measure for assessing deployment-related attitudes and beliefs, as well as life stress levels and overall family functioning.
- 2) Individuals' coping mechanisms for dealing with deployment are grounded in overall aspects of family functioning, general coping skills in dealing with life stress, and specific beliefs and perceptions of deployment. This multi-dimensional concept is essential to those who are endeavoring to obtain a complete and accurate picture of deployment.
- 3) Sailors and their spouses interact strongly together to influence each other's attitudes and perceptions. Attempts to measure one without examining the other will lead to an incomplete data base. The intense work/family overlap predicted for military families is validated in this study.
- 4) Navy families describe themselves in significantly different ways from their civilian counterparts in terms of expression of feelings, family cohesion, coping with conflict, and establishment of order and structure in the family. Agencies dealing with these families should be sensitive to these differences, in order to maximize the delivery of services.
- 5) Based on the results of this study, a checklist of predictors for families and sailors at risk of developing problems during deployment has been generated. This checklist, located in Appendix D, is an easy-to-read, simple assessment tool that can be

used to sensitize sailors and/or spouses to factors in their lives which could disrupt coping mechanisms.

- 6) Location in the temporal deployment cycle, as well as educational level for sailors and spouses, can strongly affect perceptions and attitudes. Individuals within 90 days of leaving or returning from deployment reported higher degrees of dysfunctionality on multiple dimensions. Educational level also affected perceptions of distress and coping, with more highly educated individuals reporting less distress and enhanced coping.
- 7) The high return rate (66%) indicates the importance of deployment to sailors and families across rank, rate, and type command. The impact of deployment attitudes on retention intentions is a finding of major impact for the Naval Community.

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PURPOSE:

The purpose of this technical report is to summarize findings from a two year ONR research contract conducted between October 1, 1984 and October 1, 1986. This technical report will describe and summarize the methodology and major research findings from this investigation and their implications for understanding phenomena related to deployment procedures among Navy personnel and their spouses. A prior technical report (85-1) has been prepared to summarize findings from the pilot phase of this investigation.

OVERVIEW:

In the fall of 1984, a two year research project was funded through the Office of Naval Research to study the effects of deployment on Navy personnel and their families. In order to accomplish this task, the research team at Eastern Virginia Medical School, Department of Psychiatry, contracted to develop and administer a survey instrument to measure the emotional responses, perceptions and attitudes of Navy personnel and their spouses in response to deployment. This survey included measures of life stress history, family functioning and organization, perceptions of

job performance, and issues related to morale and intention to reenlist.

Based on the view that the work and family environments of military personnel represent significantly interactive and overlapping environments, (Glickman, 1986; Curran, 1981; Stoddard & Cabanillas, 1976), the current investigation was designed to examine the effects of deployment on both Navy personnel and their spouses. Much of the prior literature in this area had focused exclusively on the responses of only one family member, typically either the spouse or the sailor, in studies of deployment effects (Decker, 1978; Pearlman, 1970; Snyder, 1978).

Additionally, the current research viewed deployment as a form of stress which impacts both the individual and the overall family unit (Den Dulk, 1980; Nice, 1979; Rosenfeld, Rosenstein, & Raab, 1983). In responding to such stress, it was hypothesized that both individuals and families would employ general adaptational resources which would interact with individual and family attitudes and perceptions specific to deployment phenomena in the determination of deployment adaptation. For these reasons, our survey involved general measures of family functioning and life stress as well as measures which were specifically related to deployment related attitudes, perceptions and responses.

METHODOLOGY

In the creation of the deployment specific item pool for this survey, the research team conducted semi-structured interviews with 105 Navy personnel, ranging in rank from E-2 to Admiral. The content of these interviews specifically dealt with attitudes and problems related to predeployment, deployment, and post-deployment experiences from the perspectives of both individual and family functioning. Based upon the results of these interviews, combined with the reports from the published literature, the pilot survey was developed for field testing. In addition to the items specifically developed for this purpose, which were rationally or intuitively clustered into 24 scales, the research team also selected the Sarason Life Events Scale and the Moos Family Environment Scale for inclusion as general measures embedded within the research survey instrument. Based upon a comprehensive review of the literature, as well as personal communications with researchers in the stress assessment area, it was felt that the Sarason Life Events Scale represented the most productive measure of life stress events currently available (Sarason, Johnson, and Siegal, 1978). This instrument, developed through ONR funding, offered a comprehensive measure which is capable of quantifying individual variations in positive and negative responses to life events

stressors. The Life Events Scale was included in two separate parts of the survey used in the study, i.e., the section to be completed by all service personnel as well as the section to be completed by spouses of married service personnel. In addition to the Sarason measure, the Moos Family Environment Scale was selected for inclusion in this survey (Moos, Insel, & Humphrey, 1974). The Family Environment Scale is a standardized measure which was designed to assess the social climates of a large variety of family types. The ten scales within this instrument focus on the measurement and description of interpersonal relationships among family members which are emphasized within their family, and on the basic organizational structure of the family. Similar to the Sarason, the Moos Family Environment Scale is presented twice within this ONR survey, once for all service personnel and again in the subsection for spouses. In the interest of reducing the overall length and complexity of this survey, five of the ten standard scales used in the Family Environment instrument were selected for study. Specifically, these included measures of Cohesion, Organization, Expressiveness, Conflict, and Control in the family.

The research survey in this investigation, therefore, varied in length depending upon the marital status and dependent status of the respondent. In the simplest case, i.e., a single sailor without dependents, the total item pool consisted of 110 items involving deployment specific

content and the Sarason Life Events Scale. In the most complex case, i.e., a married sailor with dependents, the sailor and spouse would collectively respond to 395 items involving separate administrations of the deployment specific item pool, the Moos et al. Family Environment Scale, and the Sarason et al. Life Events Scale.

RESEARCH FINDINGS: PILOT STUDY

A detailed summary of the findings from the pilot administration of this survey are reported in Technical Report# 85-1 under contract # N00014-84-C-0666 (Archer and Cauthorne, 1985). These findings were based upon the responses of 399 sailors and 215 spouses, representing a return rate of 50% of those individuals contacted during the pilot. Based upon findings from the pilot, particularly related to internal reliability for deployment specific scales, minor revisions were made in the item pool of this survey prior to the main administration.

MAIN SURVEY ADMINISTRATION METHODOLOGY

In February of 1986, the survey was distributed throughout the type and shore commands within the Norfolk Naval Base and selected SUBLANT commands in Charleston, South Carolina and Groton, Connecticut. The type commands

had designated the following individuals as liaison personnel for purposes of this study:

Captain Daniel Branch, Operations Officer, SUBLANT
Captain Robert Deane, Force Medical Officer, AIRLANT
Lieutenant Mary Gee, Morale Officer, SURFLANT
Dr. Alice Snyder, Deputy Director, Navy Family
Services, Norfolk, Virginia.

With the exception of Lieutenant Gee, who replaced Lieutenant Commander Mary Lukaszewicz, these liaison officers were the same liaison personnel employed in the pilot phase of this investigation. These personnel were responsible for coordination of the logistic requirements necessary to accomplish the survey administration and served as central return points for completed surveys. For all type commands, the liaison officers indicated that the most effective means of survey administration would be through Naval distribution and collection of survey instruments. These Navy type command liaison officers were also responsible for the selection of "target" units for survey administration. Units were selected for participation in the study based upon a combination of criteria involving their point in the deployment cycle and availability for research procedures.

SAMPLE CHARACTERISTICS

As a result of the above procedures, research surveys were distributed beginning February 1, 1986 to 1000 Navy

personnel in Naval Airwings, 1000 personnel in the SUBLANT commands in Virginia, South Carolina and Connecticut; 1000 personnel in the SURFLANT command; and 425 personnel in the Norfolk Naval Base Shore commands. In order to protect subject confidentiality, all personnel were requested to seal completed surveys in individual manila envelopes and return them directly to their command liaison officer. All surveys were returned to the research contractor's office by March 30, 1986. Table 1 illustrates the return rates accomplished by type command and shore command status. It may be noted that a total of 2245 Navy personnel returned their surveys, as well as an additional 1155 spouses of Navy personnel. Therefore, the overall return rate for the survey among Navy personnel was 65.6%. Among Naval personnel returning the survey, 94.6% were male and 4.9% were female. In addition, 88.9% were enlisted respondents and 11.1% were officers.

As shown in Table 2, the mean age of Navy respondents to this survey was 27.5 years with a range in age from 18 to 57 years. The mean educational grade level of these Navy personnel was 12.93 years with a mean educational or grade level for spouses of 12.94 years. The mean number of prior deployments for this sample of Naval personnel was 7.31. Of the Navy personnel responding to this survey, 1165 (51.9%) were married for the first time, 203 (9.0%) were remarried, 107 (4.8%) were divorced, and 752 (33.5%) were single. Upon return of all survey data to the contract office, data were

coded and entered into the mainframe computers at Eastern Virginia Medical School and Old Dominion University for statistical analyses. The primary statistical package employed for data analysis was SPSS-X.

DATA ANALYSIS

As an initial point of data analysis, the 24 scales developed from the deployment specific item pool in this survey, as well as the 5 Moos Family Environment Scales, were examined in terms of their internal reliability coefficients using Cronbach's Alpha Coefficient Statistic. The results of these analyses appear in Table 3. In general, the results of these analyses are highly consistent with the pilot phase of this investigation. The internal reliability coefficients offer an overall evaluation of the degree to which individual items within a particular measure correlate with overall scores generated by that scale. To the degree to which measures are effective in attempting to quantify a unitary dimension of a particular construct, overall item-total reliability coefficients should be high. As shown in Table 3, the reliability coefficients for the scales specifically created for this survey were generally within acceptable ranges, with alpha coefficient values of .60 or higher for 18 of the 24 scales. The internal

reliability findings for the deployment specific subscales were generally consistent with reliability levels found for the FES scales.

FACTOR ANALYSES:

While a total of 36 scales were used in the current pilot survey instrument, there are many theoretical and conceptual reasons to assume that a relatively smaller number of underlying or basic dimensions probably accounted for the majority of variance among these scale scores. Further, the results of factor analysis of pilot data substantiated a view that three factors primarily accounted for the majority of survey scale variance. To examine this hypothesis from the data in the main survey, a series of factor analyses were performed on scale scores using varimax rotation procedures with eigenvalues of 2.0 or greater. The results of these factor analyses are presented in Tables 4, 5 and 6. Table 4 presents the results of a factor analysis for all scales employed in this survey as answered by all respondents. This factor analysis yields a 3 factor solution with the following dimensions: sailors' positive attitudes toward deployment and family (25.4% of total scale variance); spouses' negative attitudes toward deployment and family (8.5% of total scale variances); and sailors' perceptions of marital distance and family conflict (6.3% of total scale variance). Table 5 presents findings from the factor analysis of scales applicable to spouses, i.e.,

scales completed by the spouses of Naval personnel. The two factors generated from this analysis were labeled as follows: 1) spouses' negative emotional responses to deployment and concerns regarding family functioning (30.5% of total subscale variance); 2) spouses' Post-deployment emotional distress and perception of family conflict (10.1% of total subscale variance). Table 6 presents the factor analysis of scales directly applicable to sailors. The two factors generated from this analysis were labeled as follows: 1) sailor's positive views of deployment, the job and the family (32.0% of total subscale variance) and; 2) sailors' need for marital distance (11.2% of total subscale variance). In general, the results of factor analysis generated by the main survey administration tend to be similar to pilot factor analytic findings in terms of nature and number of factor components. The relative variance accounted for by factors, however, tends to be substantially less in the main body of the survey. This change in variance accounted for is likely to be a product of differing factor analytic techniques between pilot and main body analyses. In the pilot survey, factor analyses employed a PA2 factor analysis and rotation procedure which tended to maximize the amount of variance accounted in relation to the SPSS-X procedures (principal components analysis) utilized for the main survey data.

In general, the results of factor analytic analyses of survey scales support the following conclusions:

- 1) The largest portions of survey variance are accounted for by respondents' perceptions of deployment-specific and family phenomena;
- 2) Roughly 40% of spouses' survey ratings were accounted for by their emotional responses to deployment and reunion periods and perceptions of family coping and conflict.
- 3) Roughly 43% of sailors' survey responses were accounted for by their perceptions of deployment, job, marriage and family.

MULTIPLE REGRESSIONS:

A series of stepwise multiple regressions were performed to examine the ability of survey subscale scores to predict to twelve outcome indicators or criteria. The results of these multiple regressions are summarized in Tables 7 through 10. The linear multiple regression analyses standardly utilized an F to enter or remove of 1.0, and a tolerance of .1. In terms of prediction of sailors'

ratings of their overall job performance, separate multiple regressions were performed on data from single service personnel, married service personnel without children, and married personnel with children. For single personnel, the variables of individual commitment to the Navy, deployment related emotional distress, positive deployment attitudes, and sailors' reports of Life Stress Events, were regressed on to single sailors' self-reports of job performance derived from a ten item scale. The results of this multiple regression identified one significant predictor, i.e., individual commitment to the Navy scale scores, with a correlation of .89 to this outcome criterion. ($R^2 = .80$). Scores from 32 scales were employed in the regression to married personnel without children. The results of this multiple regression identified four significant predictors to overall job performance, i.e., sailors' right stuff attitudes, sailors' deployment related emotional related distress, sailors' positive deployment attitudes, and spouses' views of family organization, which collectively produced a multiple correlation value of .63 with the outcome criterion ($R^2 = .39$). 36 scales were employed in the regression to job performance ratings for married personnel with children. The results of the analyses indicated five significant predictors, including sailors' deployment related emotional distress, right stuff attitude, positive deployment attitude, individual commitment to the Navy, and spouses' ratings of family organization which collectively

resulted in a multiple R value of .58 with the outcome criterion, accounting for 34% of all variance.

In the second series of regression analyses sailors' ratings of individual commitment to the Navy were examined separately for single personnel, married personnel without children, and married personnel with children. The most important predictor of individual commitment to the Navy for single personnel was their self perceptions of job overall performance ($R^2=.80$). Among married personnel without children, the most powerful predictors of individual commitment to the Navy consisted of spouses' views of family conflict, sailors' positive deployment attitudes, sailors' views of family conflict, spouses' deployment related emotional distress, sailors' deployment related emotional distress, spouses' post-deployment emotional distress, and sailors' ratings of family control. Collectively, these predictors bore a multiple R of .73 with the outcome criterion ($R^2=.53$). The most powerful predictors of individual commitment among married personnel with children involved the following eight variables which bore a multiple R relationship with the outcome criterion of .65 ($R^2=.43$). These latter predictors were: spouses' ratings of family communication problems, sailors' positive deployment attitude, sailors' ratings of family conflict and communication problems, spouses' ratings of family coping, sailors' deployment related emotional distress, sailors' ratings of family control, sailors' ratings of job

performance, and sailors' ratings of degree of emotional expressiveness within their families.

The next series of multiple regressions attempted to predict to married sailors' ratings of their families' overall coping abilities analyzed separately for married sailors with and without children. Married sailors' (without children) ratings of family coping ability were predicted to 65% of total variance with the following factors: sailors' perception of family conflict and problems in communication, sailors' predeployment emotional distress, spouses' ratings of family coping, sailors' right stuff attitudes, sailors' deployment related emotional distress, sailors' histories of life stress events, and sailors' individual commitment to the Navy. Among married personnel with children, the following six predictors produced an R^2 value of .67 with the outcome criterion: sailors' perceptions of communication conflicts within the family, spouses' ratings of family coping ability, sailors' predeployment and deployment emotional distress, sailors' right stuff attitudes, and sailors' predeployment attitudes.

In the prediction of spouses' perceptions of family coping ability for families without dependent children, the following seven variables held a multiple correlation value of .82 with the criterion ($R^2 = .68$): Spouses' ratings of deployment emotional distress, sailors' perceptions of family coping ability, spouses' postdeployment emotional distress, spouses' ratings of right stuff attitude, spouses'

predeployment attitudes, sailors' positive deployment attitudes, and spouses' histories of life stress events. Among spouses with dependent children a series of eight predictors resulted in a predicted variance of 76% with spouses' ratings of family coping: spouses' deployment emotional distress, sailors' ratings of family coping ability, spouses' postdeployment emotional distress, spouses' ratings of family cohesiveness, spouses' right stuff attitude, sailors' rating of predeployment emotional distress, sailors' right stuff attitude, and sailors' ratings of individual commitment to the Navy.

In a separate series of multiple regression analyses, sailors' ratings of deployment related emotional distress were predicted for married sailors with and without children. For married sailors without children, roughly 58% of sailors' ratings of their degree of deployment related emotional distress was accounted for by predictors in a six step regression, with sailors' predeployment emotional distress serving as the primary contributor and accounting for approximately 41% of the total variance. Among married sailors with children, roughly 59% of sailors' ratings of deployment related emotional distress was accounted for by predictors in a 8 step multiple regression, with predeployment emotional distress again serving as a primary contributor and accounting for approximately 36% of total outcome variance. Among spouses' self reports of deployment related emotional distress in families without children,

roughly 76% of the variance was accounted for in a 9 step regression equation, in which spouses' ratings of their families' overall ability to cope accounted for 62% of the total outcome variance. Among spouses with children, a total of 78% of deployment related emotional distress ratings were accounted for by a ten step multiple regression equation in which spouses' ratings of their families' overall ability to cope accounted for 67% of the total outcome variance.

In general, it might be noted that the multiple regression results regarding sailor and spouse emotional distress during deployment periods were highly similar to findings from the pilot, particularly in relationship to spouses' self-report. Finally, a series of multiple regressions were performed to predict to both sailor and spouses' ratings of their children's ability to cope. Sailors' assessment of their children's coping abilities were predicted by a four-step equation, which accounted for 58% of total variance with the following predictor variables: sailors' ratings of overall family coping, sailors' perceptions of interpersonal distance from children, sailors' predeployment emotional distress, and sailors' needs for marital distance. Spouses' assessments of children's coping abilities accounted for 65% of total variance with three predictor variables: spouses' perceptions of interpersonal distance from children, spouses' ratings of overall family coping, and spouses'

predeployment emotional distress.

In summary, the results of multiple regressions support the following conclusions:

- 1) Overall, the regression equations indicated a interactive relationship between work and family variables as predictors of family functioning and affective responses to deployment. Work issues, such as job performance and commitment to the Navy, were strongly influenced by family variables and affective responses, while family coping levels were influenced by work-related scales. The presumed interrelationships between the work and family environments postulated by Glickman (1985) is clearly demonstrated in these results.
- 2) Spouses and sailors strongly influence each other's perceptions on family issues, such as perceptions of family coping, in addition to work issues, such as commitment to the Navy. The importance of studying both partners in the family relationship is underscored by the interrelatedness of their perceptions.
- 3) The phenomenon of deployment is enmeshed in a web of family and emotional issues, and individuals' behaviors must be viewed in the light of these factors. For example, individual commitment to the Navy was profoundly affected by family variables,

such as family conflict and control styles, and by affective responses to deployment, such as levels of emotional distress surrounding all phases of the deployment experience. Responses to deployment involve individual and family emotional responses and perceptions of both the work and family environments.

- 4) When higher levels of emotional distress surround the phases of the deployment phenomenon, they contribute to diminished perceptions of family functioning for both sailors and spouses. Families report less ability to cope in effective ways as reported levels of emotional distress increased. This is also demonstrated in the ratings of children's coping performance, which were reported as lower by both sailors and spouses when emotional distress was higher and overall family coping is seen as decreased.

MANOVA:

MANOVA analyses were performed to examine the potential effects of temporal location in the deployment cycle on respondents self-reports across subscales. Specifically, a MANOVA was performed examining the effects of sailors' location in the deployment cycle grouped into categories of: 1) on ship, not deployed; 2) scheduled for deployment within 90 days; 3) returned from deployment within 90 days or; 4)

assignment to shore duty. The results of this MANOVA analysis indicated a significant overall effect for placement in the deployment cycle across survey subscales for service personnel, $F(3,413)=1.79$ $P<.001$. These findings indicate that placement or point in the deployment cycle had significant and pervasive overall effects on sailors' responses to research survey scales. Specifically, the following scales showed univariate ANOVA effects for placement in the deployment cycle: sailors' need for marital distance, sailors' right stuff attitude, sailors' ratings of individual commitment to the Navy, sailors' and spouses' positive deployment attitudes, sailors' predeployment attitudes, sailors' and spouses' level of predeployment emotional distress, sailors' and spouses' levels of deployment related emotional distress, sailors' and spouses' perceptions of family coping, sailors' ratings of job performance, sailors' and spouses' ratings of communication problems and conflict within the family, sailors' ratings of childrens' lack of coping ability, sailors' ratings of family control style, and sailors' and spouses' ratings on the Sarason Life Stress Events Scale.

To illustrate the pattern of significance found in these analysis, the specific subscale findings are provided for illustration purposes.

In Figure 1, sailors' positive deployment attitudes and sailors' ratings of individual commitment to the Navy are profiled based upon their point in the deployment cycle

at the time they completed their survey instrument. As shown in this figure, sailors reported the highest level of individual commitment to the Navy and the most positive attitudes concerning deployment when assigned to shore duty. In general, the least positive deployment attitudes and the lowest levels of commitment to the Navy were reported for sailors within 90 days of deployments during either the pre- or postdeployment periods.

Figure 2 shows the relationship of sailors' predeployment and deployment emotional distress levels to point in the deployment cycle. As shown in this Figure, sailors reported the greatest sensitivity to emotional distress when such ratings were made in the predeployment or postdeployment intervals, particularly in the latter time period. These findings would suggest that the stress related to close proximity to deployment served to sensitize respondents to issues of emotional distress.

Figures 3 and 4 present data related to spouses' ratings of deployment emotional distress and sailors' ratings of perceptions of family coping ability, degree of family conflict and children's lack of coping as a function of location in the deployment cycle. As shown in these figures, spouses' deployment related emotional distress levels were highest when reported during the reunion period following deployment, and sailors reported the greatest degree of concern regarding family and children functioning

within 90 days of deployment, particularly during reunion periods.

Figure 5 presents both sailors' and spouses' report of Life Stress Events as a function of their deployment cycle. Results of these analysis demonstrate that both sailors and spouses report more negatively stressful events for ratings made by families immediately prior to or following deployments. Among sailors, the most stressful life histories are reported during the pre- and postdeployment intervals. Among spouses, the placement in the reunion or the postdeployment interval is significantly related to an increased report of negative Life Stress Events. Item analyses of the Sarason measure indicated that these trends are accounted for by both an increased number of stress items on Life Stress Events endorsed by spouses and sailors during the 90 day periods preceding and following deployment, as well a tendency to endorse those event as more negatively stressful.

Finally, Figure 6 presents sailors' self reports of their level of job performance as a function of their location in the deployment cycle. As shown in this figure, sailors report the highest level of self-reported job performance when on shore duty placements and reported the lowest levels of job performance during intervals immediately prior to or immediately following deployments.

Overall, the results of these figures serve to confirm that deployment is a major stressor for the majority of Navy

families and that this stress has a direct and significant impact on job performance, family functioning and perceptions of the stressfulness of other life events. Further, these findings serve to indicate that interventions designed to aid service personnel and families in effectively coping with deployment would be most likely to be effective during periods immediately prior to or immediately following actual deployments. This observation is based upon the fact that Navy families appear to be most sensitive to deployment related issues during these periods, with an increased degree of denial employed during shore duty placements. In particular, the data presented in these figures appear to indicate that the reunion period is markedly stressful and produces acute adjustment demands on families in terms of stress tolerance and adaptive coping.

FINDINGS FROM MOOS FAMILY ENVIRONMENT SCALES

The five subscales of the Moos Family Environment measure were analyzed across a number of combinations of sailors' and spouses' responses. The results of profiling for selected comparisons are presented in Figures 7 and 8. As shown in Figure 7, a general pattern emerges from the current data which indicates Navy families appear to have unique family characteristics in relation to their civilian counterparts. First, Navy families appear to place greater emphasis on the direct and open expression of feelings and

emotions as reflected on values for the Expressiveness Scale. Secondly, both sailors and spouses within the Navy community appear to place greater emphasis on family cohesiveness and value activities designed to increase the sense of family "togetherness". There is also a marked degree of de-emphasis within Navy families on the direct expression of anger and conflict, to a degree which differs significantly from the emphasis placed on this dimension among civilian families. Specifically, Navy families appear to avoid open expression of conflict areas in relation to their civilian counterparts. Finally, Navy families place substantial value and emphasis on order and organization within the family structure accompanied by explicitness and clarity in family rules and responsibilities. This emphasis on organization, however, does not appear to be related to use of authoritarian or rigid family controls. Navy families, in fact, score lower than the mean for civilian families on the control dimension as defined by the Moos measure.

Overall, in comparing sailors' and spouses' responses on the Moos Family Environment Scales, it can be noted that sailors view family functioning differently from spouses on at least two dimensions: family cohesion, $t(1054)=-2.88$, $P<.01$, and family expressiveness, $t(1054)=-4.47$, $P<.01$. As may be seen in Figure 7, spouses place substantially greater emphasis on family cohesiveness and on the open expression of feelings than do their sailor counterparts.

The right side of Figure 7 presents the Moos values for all sailors classified into the type commands of AIRPLANT, SUBLANT and SURFLANT. Figure 8 presents the Moos Family Environment Scale data for spouses and sailors by category of type command membership. Figures 9 and 10 present Moos data for spouses and sailors, collectively and separately, by officer and enlisted status. In general, results of T-tests indicated that both officer and officer spouses place greater emphasis on family cohesiveness and the avoidance of conflictual issues, and less emphasis on rigid family controls than their enlisted counterparts.

RETENTION ATTITUDES

A number of analyses were undertaken to examine the degree to which survey responses might be utilized in the prediction sailors' reenlistment intentions and attitudes. Table 11 shows the frequency distribution on the survey single item "I intend to make the Navy my career" for sailors broken into the categories of single sailors, married sailors without children, and married sailors with children. As can be seen in this table, the 5 point Likert format for frequency of responses to this item was essentially trimodal in nature. Specifically, "strongly disagree", "not sure", and "strongly agree" received the predominant number of endorsements while the categories of "disagree" and "agree" received significantly fewer endorsements. Thus, the pattern revealed in this data

suggests that service personnel across all categories of marital and dependent classification tend to hold either strong opinions or are undecided regarding the issue of reenlistment intention. There are, however, very clear and significant effects for marital and dependent status on the frequencies of these distributions. Specifically, roughly 20% of single sailors agree or strongly agree that they intend to make the Navy their career, 38% of married sailors indicate positive career intentions, and fully 60% of married sailors with dependent children intend to make the Navy their career. It should be noted, however, that these variables also are confounded by the increased age and length of prior Naval service associated with sailors in these latter categories. Further, consistent with findings from Beach, Weinstein, and Beach (1984), the current distribution of endorsement patterns would suggest that the most profitable targets for interventions efforts designed to increase rates of reenlistment and retention would focus upon the 40% of sailors in each marital and dependent category who have not strongly made up their minds regarding the reenlistment issue.

In Tables 12 through 14, discriminant analyses were employed using subscale variables to predict to intentions to reenlist classified into the three categories of low intention, unsure, and high intention to reenlist. Table 12 indicates that for single sailors a linear combination of four variables achieved an overall correct classification

rate of nearly 70% to these three outcome classes. Specifically, single sailors who reported higher levels of individual commitment to the Navy, longer periods of prior service, higher self evaluations of job performance, and more positive deployment attitudes were most likely to indicate positive intentions regarding reenlistment. Table 13 indicates that among married sailors without dependent children, a linear combination of seven variables resulted in correct classification of roughly 76% of respondents into 3 outcome classes. Specifically, married sailors without dependent children who reported higher levels of commitment to the Navy, longer periods of time in the service, higher perceptions of family cohesiveness, more positive predeployment and deployment attitudes, and whose spouses reported lower levels of overall stress and lower perceptions of family conflict, were most likely to report positive reenlistment intentions. Finally, Table 14 indicates that a linear combination of eleven variables were able to correctly classify reenlistment intentions of married sailors with children with roughly 73% accuracy into the three outcome groups. Specifically, married sailors with children who reported higher levels of commitment to the Navy, longer prior service, less emotional distance from their spouse, less predeployment and postdeployment emotional distress, higher perceptions of family emotional expressiveness, greater degrees of the right stuff attitude, and more positive deployment attitudes, and whose spouses

reported less perception of family conflict, less post-deployment emotional distress, and a greater degree of family expressiveness, reported the most positive intentions regarding reenlistment.

EDUCATIONAL BACKGROUND OF SERVICE PERSONNEL AND SPOUSES

In order to examine the potential effects of educational background on respondent's self-reports on the research survey, a series of analysis were undertaken. In all cases, educational backgrounds were grouped into one of two discrete categories, i.e., high school diploma or less and post high school education or training. Two MANOVAs were conducted to investigate the overall impact of educational background across survey scales. The results of these analyses indicated a significant educational main effect on survey scale responses for service personnel ($F = 2.69, p < .01$).

To examine the effects of sailors' educational background on individual survey scale values, a series of univariate ANOVAs were performed. As shown in Table 15, 8 out of the 18 scales showed significant main effects for educational level of service personnel on the survey responses of 1236 sailors. Specifically, the 513 sailors reporting post high school education also reported, in contrast to the 723 sailors who indicated a twelfth grade or less educational background, the following features:

- 1) Higher individual commitment to the Navy.

- 2) Higher positive deployment attitudes.
- 3) More positive predeployment attitudes.
- 4) Less deployment emotional distress.
- 5) Higher perceptions of job performance.
- 6) Better communication and less conflict in their families.
- 7) Less interpersonal distance from their children.
- 8) Greater family cohesiveness.

Significant educational effects were not found for scores related to history of life stress, family organization, or family coping levels.

As shown in Table 16, spouses' educational background showed a significant main effect on nine of the sixteen scales examined. Specifically, the 467 spouses reporting post high school education, in contrast to the 588 spouses with high school degrees or less, also reported:

- 1) Less emotional distress during the predeployment period
- 2) Less emotional distress during the deployment period.
- 3) Less emotional distress during reunion periods.
- 4) Higher levels of family coping ability.
- 5) Less interpersonal distance from their children.
- 6) Greater family cohesiveness.
- 7) Greater family emotional expressiveness.
- 8) Less family conflict.
- 9) Less rigid family control systems.

Significant educational effects were not found for spouses' ratings of history of life stress, marital distance, right stuff attitudes, predeployment or deployment attitudes, or perceptions of children's coping abilities.

Overall, these findings strongly underscore the importance of service personnels' and spouses' educational backgrounds in coping with deployment stress. This coping resource appears to exist independently of families' histories of life stress, and exerts a large impact on perceptions of deployment related phenomena as well as general family characteristics.

Summary and Conclusions

We would like to suggest the following conclusions which we feel are supported by both the pilot study data and data generated from the main survey administration of this project. Many of these points were noted in a preliminary fashion based upon pilot survey findings, and we will take this opportunity to underscore these points based upon the much larger set of data subsequently acquired. These statements or conclusions may be summarized as follows:

- 1) The deployment specific item pool and subscales created from this collection of items appear to function well in terms of both internal reliability and construct validity. The levels of internal reliability found for the majority

of these sub-scales are quite consistent with internal reliability figures for the Moos et al. scales and are substantially higher than internal reliability for such established instruments as the MMPI. Findings from both the pilot and main surveys conducted in this research, therefore, indicate that efforts were successful for creating a reliable instrument for the assessment of service personnel and spouses' responses to deployment related phenomena. Further, results of statistical analyses of our data indicate that the specifically constructed scales were of central importance in predicting to outcome criteria involving such classes of variables as job performance, indices of family functioning, and reenlistment intentions. It is strongly recommended that these deployment-specific subscales created in the current investigation be utilized in future research efforts in order to allow for the literature in this area to systematically build and expand in a coherent fashion. One of the major problems in the area of deployment research has been the lack of a standardized measure, thereby creating a situation in which different studies used different predictive and outcome measures,

making generalizations across studies extremely difficult.

- 2) Findings from both the pilot and main survey administration components of this investigation underscore the utility of attempting to understand Navy deployment phenomena based upon multi-dimensional conceptual models. Specifically, current findings suggest that the ways in which both individuals and families attempt to cope with deployment represents an interaction of their specific perceptions of deployment phenomena, their general coping ability as related to history of life stress, and the general characteristics of their family functioning. Subscales or measures of each of these broad domains consistently entered into the prediction of outcome variance across criteria.
- 3) Research findings strongly indicate that the understanding of Navy deployment responses for married personnel requires the inclusion of information derived not only from those personnel but also from their spouses. For example, spouses' perceptions of family organization and functioning served as a significant predictor of married sailors' ratings of their job performances. Stated

more simply, how married personnel viewed their ability to perform in the job situation was at least partly determined by how their spouses perceived their families' functioning. Many additional examples of this interaction between service personnel and spouses' perceptions may be taken from current findings. For example, married sailors' ratings of individual commitment to the Navy were in part determined by the spouses' perceptions of family coping ability, and sailors' ratings of individual commitment to the Navy served as a significant predictor of spouses' ratings of family coping. Overall, these consistent patterns of husband-wife overlap in the prediction to specific outcome criteria underscore the conclusion of Glickman (1985) that the work and family environments for Navy families are very overlapping and interactive in contrast to civilian populations. While much of the prior research in the area of Navy deployment has exclusively focused on responses of either sailor or spouse, future research in this area would benefit substantially from the development of research methodologies to include both components of the family units.

- 4) The overall family functioning patterns of Navy families show relatively consistent patterns of differences from those reported from civilian families by Moos and his associates (Moos, Insel, and Humphrey, 1974). Specifically, Navy families appear to place greater emphasis on the direct and open expressions of feelings and emotions (Expressiveness) in contrast to civilian families. Further, Navy families are likely to place greater emphasis on family cohesiveness than civilian families, and it appears that part of this sense of cohesiveness may be achieved at the cost of avoidance of direct expression of conflictual issues or issues which are likely to generate the open expression of hostility and anger. Finally, Navy families place substantial value and emphasis on order and organization within the family structure as accomplished through the use of explicit and clear family rules and responsibilities. This emphasis does not, however, come at the cost of utilization of authoritarian or rigid family control mechanisms. In this latter regard, Navy families score lower than the mean for civilian families on the Moos measure of authoritarian or rigid control. The differences demonstrated on the Moos Scales between Navy and civilian families have a number of implications,

particularly for agencies who work with these families. Planners who design programs and interventions to enhance family coping and functioning should be sensitive to the special characteristics exhibited by Navy families. For example, interventions designed to enhance cohesiveness and closeness in the family will probably be met with more favorable attitudes than interventions designed to uncover and elicit open expressions of conflict.

- 5) Based on the results of this study, a number of characteristics can be identified, in checklist form, that may predispose Navy families to substantial difficulty in coping with deployment. (See Appendix D). This checklist, generated from multiple regressions findings, serves as a means of identifying families which may be at higher risk of having significant problems during deployment. It must be emphasized that the characteristics on the checklist should be cross-validated by future research in order to maximize the predictability and utility of the checklist.
- Areas included in the checklist are as follows:
- a) Sailor's and/or spouses' perceptions of significant communication problems and conflict within the family.

b) A significant history of life stress events as perceived by sailors within a 12-month period prior to deployment.

c) Poor sailor morale or mission attitude during the predeployment period.

d) Substantial emotional distress during the predeployment or deployment intervals, as reported by sailors or spouses.

e) a sense of frustration and sailors' alienation from the Navy as manifested by decreased or marginal levels of commitment to the Navy.

Predeployment and postdeployment, defined as intervals of time encompassing 90 days immediately prior to or following return from deployments, appears to be of central importance in terms of intervention timing. The predeployment period appears to be particularly important in that events occurring within this window of time serve as the single best predictors of the degree of emotional distress that will be experienced during the actual deployment intervals. Specifically, the degree of predeployment emotional distress and the degree of poor predeployment attitudes which are manifested by both service personnel and their spouses are among the strongest

predictors of problems in the actual deployment interval. Further, the reunion period, or postdeployment interval, was consistently shown to be a uniquely stressful period in terms of individuals' commitment to their jobs, perceptions of life stress, and perceptions of family functioning. Intervals more distant from actual deployment experiences appear to be related to the development of denial syndromes within Navy personnel and their families, resulting in a lowered sensitivity to issues related to deployment. This lowered sensitivity may be related to less accessibility for interventions designed to assist families in coping with deployment phenomena.

- 6) The surprisingly high completion rate for the main body survey administration (i.e., roughly 66%) may warrant specific comments. In the subjective impression of the investigation team, this level of survey responsiveness may be accounted for by a combination of the relevance of this topic to the thousands of the individuals who took the time necessary to complete the lengthy survey, as well as the ability of the research team to actively involve the Navy command structure in the facilitation of the research design. Many hours of effort were placed into developing meaningful liaisons with the Navy community, and in the careful selection of liaison officers, who in turn

manifested sufficient personal support for this project to insure the high completion rate. Thus, we might conclude that the issue of deployment and its impact on Navy personnel and their families appears to be a very salient one to the Navy community in a manner that cuts across rank, command structures, and the Navy sub-communities. Further, we might recommend to future research teams in this area that substantial time and effort be placed on establishing the necessary individual levels of communication within the Navy command structure that will ultimately be rewarded with the fullest level of cooperation with research procedures. Finally, we might note that the use of a pilot survey administration greatly facilitated our ability to increase and improve our return rate during the main body of our survey. Based upon our pilot experiences, we were able to target problems in our survey administration procedure (e.g. confusing instructions) in a manner which allowed us to correct these issues before main survey administration.

In summary, it is clear that deployment is a stressful experience for sailors, both single and married, and for their families. The coping abilities of these individuals are largely determined by a complex mixture between

situational aspects, overall life stress, and the underlying foundations of family functioning. The identification and targeting of specific elements within each of these dimensions may provide a basis for a more intense and finely-tuned effort to assist those with problems to sustain themselves and grow through these stressful experiences.

References

- Archer, R. P. and Cauthorne, C. V. (1985). An investigation of the effects of deployment-related factors on performance and psychosocial adjustment. Technical Report ONR 00014-84-C-0666: Arlington, Virginia: Office of Naval Research.
- Beach, L. R., Weinstein, B. L., and Beach, B. H. (1984). Characteristics of Contributors to the Information Base for the Automated Aid for Personnel Retention. Technical Report 84-1. Seattle, Washington: Department of Psychology, University of Washington.
- Curran, D. J. (1981). Father Absence Effects on Military Children. Unpublished Masters Thesis, Naval Postgraduate School, Monterey, CA.
- Decker, K. D. (1978). Coping with sea duty: Problems encountered and resources utilized during periods of family adaptation. In E. Hunter and D. Nice (Eds.) Military Families: Adaptation to Change. New York: Praeger Publishers.
- Den Dulk, D. E. (1980). Severe job-related stress: Military and forced separations and readjustments. Paper presented at the Annual Conference on the Family, Gatlinburg Tennessee.

- Glickman, A. S. (1985). Factors leading to Army retention: Related to the job itself. In G. M. Croan, G. L. Bowen, G. Farkas, A. S. Glickman, and D. Orther (Eds.) Career decision-making and the military family. Technical Report DAAG29-81-D-0100: Alexandria VA.: Army Research Institute for the Behavioral and Social Sciences.
- Moos, R. H., Insel, P. M., and Humphrey, B. (1974). Preliminary Manual for Family Environment Scale. Palo Alto, California: Consulting Psychologist Press, Inc.
- Nice, D. S. The military family as a social support: Implications for bio-social health. Paper presented at the Joint Inter-University Seminar, Yale Symposium on Changing Military Manpower Realities. Montgomery, Alabama, June, 1979.
- Pearlman, C. A. (1970). Separation reactions of married women. American Journal of Psychiatry, 126, 70-74.
- Rosenfeld, J. M., Rosenstein, E. and Raab, M. (1973). Sailors' families: The nature and effects of one kind of father absence. Child Welfare, 52, 33-34.
- Sarason, I. G., Johnson, J. H., and Siegel, J. M. (1978). Assessing the impact of life changes: Development of the Life Experiences Survey. Journal of Consulting and Clinical Psychology, 46, 932-946.

Snyder, A. I. (1978). Sea and Shore Rotation: The family in separation. Technical Report TR 1-DTIC ADA-044-513: Springfield, Virginia: Military Family Resource Center.

Stoddard, E. R., and Cabanillas, C. E. (1976). The Army Officer's wife: Social stressors in a contemporary role. In N. Goldman and D. Segal (Eds.) The Social Psychology of Military Service. Beverly Hills, California: Sage Publications.

APPENDIX A

EASTERN VIRGINIA MEDICAL AUTHORITY

NAVY DEPLOYMENT SURVEY



**A RESEARCH PROJECT FUNDED BY THE OFFICE OF NAVAL RESEARCH AND
CONDUCTED BY THE EASTERN VIRGINIA MEDICAL AUTHORITY**

GENERAL INSTRUCTIONS

DON'T PANIC! NO one person will take more than half of this survey, and most will take less than half.

The purpose of this survey is to examine psychological and performance effects of deployments on Naval personnel and their families. Important characteristics of individuals and families at risk of developing problems will be identified, and suggestions will be made to the Department of the Navy towards reducing deployment-related stress.

Thank you for agreeing to participate in this survey. It is divided into sections, and is designed to be answered by single Naval personnel, married Naval personnel, their spouses, and Naval personnel with children. Not everyone will answer all questions, so please read all instructions carefully.

You should have been given a large manila envelope with your survey. When you have completed the survey, please put it into the envelope and seal the envelope. Since you will be returning the survey to a person in your command, this will make sure that no one in the Navy will read your answers. All information will be kept totally confidential, and all data will be reported back in group format. It will be impossible to pick out individual responses. Therefore, please answer as honestly and completely as possible.

In order to begin the survey, please follow these instructions:

1) Read the instructions for each section very carefully. Not everyone will complete each section, so read carefully to see whether you should answer the questions in that section.

2) Where it is indicated, write your answer in the space provided to the left of each question. Where there are circles to the left of the question, please darken in the appropriate circle completely.

3) Some questions give you a choice of five options. Please select the one that most closely fits your feelings or beliefs about that question. For example, look at the following:

I really enjoy watching sports events.

Your answer choices are as follows:

Strongly		Not		Strongly
Disagree	Disagree	Sure	Agree	Agree
1	2	3	4	5

If you don't really like to watch sports, you might choose answer 2, indicating that you disagree. You would find the circle under 2, as indicated, and color it in:

1	2	3	4	5
0	●	0	0	0

4) If you have any questions or comments about this survey while you are taking it, please feel free to call the Office of Naval Deployment Studies at 446-5881. Any of our staff will be happy to help you.

Please understand that all of the responses on your survey are COMPLETELY CONFIDENTIAL, and will be seen only by the research team. No one in the US Navy will see any individual responses. In addition, some of the questions contain information of a personal nature. If you prefer not to answer all or any part of this survey, you are under no obligation to do so. All identifying data will be removed from each survey, and all surveys will be destroyed when no longer required by the research team. No individual will be identified in any way when reporting survey results.

THANK YOU FOR YOUR COOPERATION!

SECTION ONE

PART I (All Naval Personnel)

Please answer the following questions by filling in the appropriate choice or correct answer in the space provided.

___1. What is your sex?

- 1) Male
- 2) Female

___2. What is your current age?

___3. What is your current paygrade?
(for example, E-4, O-1, etc.)

4. How long have you been on active duty?

_____ Years

___5. What type of naval force are you currently a part of?

- 1) Naval Air Force (ashore or afloat) (AIRLANT)
- 2) Submarine Force (SUBLANT)
- 3) Afloat Force (not including naval air personnel) (SURFLANT)
- 4) Ashore Force (not including naval air personnel)

___6. Which of the following choices best describes your current situation?

- 1) I am currently deployed and on ship.
- 2) I am currently deployed and NOT on ship.
- 3) I am currently on ship, or with a squadron but NOT deployed.
- 4) I am going to be deployed in less than 3 months.
- 5) It has been less than 3 months since returning from deployment.
- 6) I am and will continue to be on shore duty.
- 7) Other

___7. In the previous 12 months, approximately how many days were you on emergency leave?

8. What is your ethnic background and, if married, your spouse's ethnic background?

- 1) White, not of Hispanic origin.
- 2) Black, not of Hispanic origin.
- 3) Hispanic or Latin: specify type (e.g., Puerto Rican, etc.)
- 4) American Indian or Alaskan Native
- 5) Pacific Islander (e.g., Filipino)
- 6) Asian
- 7) Other

8) Husband _____ 9) Wife _____

10. Usually, how often do YOU attend church, and if married, does your spouse attend church?

- 1) Not at all
- 2) Rarely
- 3) Often, but not on a regular basis
- 4) At least once a week

10) Husband _____ 11) Wife _____

12. Write in the last year of formal education YOU have completed and, if married, the last year YOUR SPOUSE has completed?

Example: 12

Grammar School	1	2	3	4	5	6	7	8
High School	9	10	11	12				
College	13	14	15	16				
Graduate School	17+							

12) Husband _____ 13) Wife _____

___14. Who is currently the main financial provider for your family?

- 1) I am
- 2) My spouse is
- 3) My spouse and I are about equally
- 4) Other

___15. Is your family currently living on or off base?

- 1) On base
- 2) Off base
- 3) Not applicable

___16. Since beginning your Navy career, how many times have you been deployed for 30 days or more?

17. Since entering the Navy, what is the total number of years and months you have spent on deployment.

Years _____ Months _____

___18. Who do you primarily rely on when you have a major personal or family problem?

- 1) myself
- 2) my supervisor (at work)
- 3) relatives (including spouse)
- 4) other Navy families or friends
- 5) friends outside of the Navy
- 6) Navy support and service programs
- 7) civilian professional service agencies
- 8) religious institutions
- 9) other

___19. Are you currently:

- | | |
|-------------------------------|-------------------------------|
| 1) married for the first time | 4) divorced and not remarried |
| 2) remarried | 5) single, NEVER MARRIED |
| 3) widowed and not remarried | |

21. To what extent do you feel that serving in the military contributed to your divorce?
- 1) not applicable, never divorced
 - 2) not applicable, divorced before entering the service
 - 3) to a great extent
 - 4) to a small extent
 - 5) not at all

Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree
1	2	3	4	5

- 6

	Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree	
	1	2	3	4	5	
1 2 3 4 5						
0 0 0 0 0						36. My job performance is better on deployments than when I am not deployed.
0 0 0 0 0						37. I get into trouble with the Navy during periods of deployment.
0 0 0 0 0						38. My job evaluations are typically good.
0 0 0 0 0						39. My job evaluations are generally less favorable when I am on deployment.
0 0 0 0 0						40. Individuals or families who have serious problems during deployment are usually inadequate.
0 0 0 0 0						41. I rarely feel nervous and high strung when I am deployed.
0 0 0 0 0						42. During deployment, I rarely have trouble keeping my mind on what I'm doing.
0 0 0 0 0						43. During deployment, I frequently feel depressed.
0 0 0 0 0						44. I have difficulty with jealousy during my periods of deployments.
0 0 0 0 0						45. In general, my health has suffered during deployments.
0 0 0 0 0						46. Overall, I feel that I experience substantial emotional distress during periods of deployment.
0 0 0 0 0						47. Things at home are generally very different when I return from deployment.
0 0 0 0 0						48. I feel distant and uneasy upon my return from deployment.

For the following question, write the number of your response in the space to the left of the question number.

___ 49. Overall, my performance evaluations during periods of deployment have been:

- | | |
|------------------|-------------------|
| 1) excellent | 4) below average |
| 2) above average | 5) unsatisfactory |
| 3) average | |

___ 50. Have you received any formal reprimands or indications of inadequate performance during your deployments?

- 1) yes
- 2) no
- 3) not applicable--never deployed

Listed below are a number of events which sometimes bring about changes in a person's life. IF YOU HAVE EXPERIENCED ONE OF THESE EVENTS IN THE PAST TWELVE MONTHS, put a check mark in the first column for that event. Then fill in the circle to the right of the check that best indicates the impact the event had on you. A rating of -3 shows a stressful, negative impact, while a rating of +3 shows a very positive impact. A rating of 0 indicates no impact at all for an event which happened to you.

****REMEMBER. ONLY CHECK AND RATE THE EVENTS THAT HAVE ACTUALLY HAPPENED TO YOU IN THE PAST TWELVE MONTHS****

-3 = extremely negative
 -2 = moderately negative
 -1 = somewhat negative
 0 = no impact

+1 = slightly positive
 +2 = moderately positive
 +3 = extremely positive

Did it occur? If it occurred:

yes no -3 -2 -1 0 +1 +2 +3

51. Marriage			0	0	0	0	0	0	0
52. Detention in jail or comparable institution			0	0	0	0	0	0	0
53. Death of spouse			0	0	0	0	0	0	0
54. Major change in sleeping			0	0	0	0	0	0	0
55. Death of close family member:			0	0	0	0	0	0	0
56. Major change in eating habits			0	0	0	0	0	0	0
57. Foreclosure on mortgage or loan			0	0	0	0	0	0	0
58. Death of a close friend			0	0	0	0	0	0	0
59. Outstanding personal achievement			0	0	0	0	0	0	0
60. Minor law violations (traffic tickets, disturbing the peace, etc.)			0	0	0	0	0	0	0
61. <u>Male</u> : wife/girlfriend's pregnancy			0	0	0	0	0	0	0
62. <u>Female</u> : pregnancy			0	0	0	0	0	0	0
63. Changed work situation (different work responsibility, major change in working conditions, working hours, etc.)			0	0	0	0	0	0	0
64. New job			0	0	0	0	0	0	0

	Yes	No	-3	-2	-1	0	+1	+2	+3
65. Serious illness or injury of close family member			0	0	0	0	0	0	0
66. Sexual difficulties			0	0	0	0	0	0	0
67. Trouble with employer (in danger of losing job)			0	0	0	0	0	0	0
68. Trouble with in-laws			0	0	0	0	0	0	0
69. Major change in financial status (a lot better off or a lot worse off)			0	0	0	0	0	0	0
70. Major change in closeness of family members (increased or decreased closeness)			0	0	0	0	0	0	0
71. Gaining a new family member (through birth, adoption, family member moving in, etc.)			0	0	0	0	0	0	0
72. Change of residence			0	0	0	0	0	0	0
73. Marital separation from mate (due to conflict)			0	0	0	0	0	0	0
74. Major change in church activities (increased or decreased attendance)			0	0	0	0	0	0	0
75. Marital reconciliation with mate			0	0	0	0	0	0	0
76. Major change in number of arguments with spouse (a lot more or a lot less arguments)			0	0	0	0	0	0	0
77. <u>Married male</u> : change in wife's work outside the home (starting work, ceasing work, changing to a new job, etc.)			0	0	0	0	0	0	0
78. <u>Married female</u> : change in husband's work. (loss of job, beginning new job, retirement, etc.)			0	0	0	0	0	0	0
79. Major change in usual type and/or amount of recreation			0	0	0	0	0	0	0
80. Borrowing more than \$10,000 (buying home, business, etc.)			0	0	0	0	0	0	0

	Yes	No	-3	-2	-1	0	+1	+2	+3
81. Borrowing less than \$10,000 (buying car, TV, getting school loan, etc.)			0	0	0	0	0	0	0
82. Being fired from job			0	0	0	0	0	0	0
83. <u>Male</u> : Wife/girlfriend having abortion			0	0	0	0	0	0	0
84. <u>Female</u> : having abortion			0	0	0	0	0	0	0
85. Major personal illness or injury			0	0	0	0	0	0	0
86. Major change in social activities, e.g., parties, movies, visiting, (increased or decreased participation)			0	0	0	0	0	0	0
87. Divorce			0	0	0	0	0	0	0
88. Serious injury or illness of close friend			0	0	0	0	0	0	0
89. Retirement from work			0	0	0	0	0	0	0
90. Son or daughter leaving home (due to marriage, college, etc.)			0	0	0	0	0	0	0
91. Ending of formal schooling			0	0	0	0	0	0	0
92. Separation from spouse (due to work, travel, etc.)			0	0	0	0	0	0	0
93. Engagement			0	0	0	0	0	0	0
94. Breaking up with boyfriend/ girlfriend			0	0	0	0	0	0	0
95. Leaving home for the first time			0	0	0	0	0	0	0
96. Reconciliation with boyfriend girlfriend			0	0	0	0	0	0	0
97. Deployment (longer than 30 days)			0	0	0	0	0	0	0

****STOP-STOP-STOP****

You have finished the FIRST PART of the survey. READ THE FOLLOWING INSTRUCTIONS CAREFULLY!!

- 1: If you are currently married, go to the next page and continue to answer questions.**
- 2: If you are NOT CURRENTLY MARRIED, but have children living with you in your household, go to page 18 and continue to answer questions.**
- 3: If you are single, with no children, you have finished. Put your survey into the envelope provided and turn it in. Thank you for your help.**

PART II
(Married Naval Personnel)

If you are currently married, please complete the following questions. You MUST be currently married to complete this section.

98. Please indicate the total length of your current marriage.

Years _____

99. In the past year, how many months have you and your spouse been completely separated because of deployment.
_____ months

100. Did you marry your current spouse prior to your entering military service?

- 1) Yes
- 2) No

Please answer the following questions from this answer selection:
Fill in the appropriate circle to the left of the questions.

Definitely	Mostly	Neither	Mostly	Definitely
Disagree	Disagree	Agree Nor	Agree	Agree
		Disagree		
1	2	3	4	5

1 2 3 4 5

0 0 0 0 0 101. It is important to me to have an independent and selfsufficient wife.

0 0 0 0 0 102. I am generally very satisfied with my marriage.

0 0 0 0 0 103. The husband should maintain control over important family decisions, even during periods of deployment.

0 0 0 0 0 104. I handle family finances when I'm home and my spouse handles our finances when I'm deployed.

0 0 0 0 0 105. My spouse and I equally share decision-making in our family.

0 0 0 0 0 106. My family has a clear set of personal values that are important to us.

0 0 0 0 0 107. There is a conflict between my family life and my naval career.

0 0 0 0 0 108. My family is committed to my Navy career.

0 0 0 0 0 109. In many ways, it is a relief for my spouse when I deploy.

Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree
1	2	3	4	5
1 2 3 4 5				
0 0 0 0 0	110.	Planning ahead makes deployments easier for families.		
0 0 0 0 0	111.	There are really no useful ways to prepare a family for their first deployment.		
0 0 0 0 0	112.	There are too many demands and pressures placed on me by my family immediately prior to deployment.		
0 0 0 0 0	113.	I am unable to spend adequate time with my family prior to deployment.		
0 0 0 0 0	114.	My spouse and I often fight just before I deploy.		
0 0 0 0 0	115.	As deployment comes closer, the conflict between family needs and the job is very frustrating.		
0 0 0 0 0	116.	I feel distant from my family before I deploy.		
0 0 0 0 0	117.	When I'm deployed, things I would normally do around the house just don't get done.		
0 0 0 0 0	118.	Deployment is often a welcome escape from the demands of the family.		
0 0 0 0 0	119.	When I'm deployed, my family suffers.		
0 0 0 0 0	120.	Deployment is a difficult experience for my family.		
0 0 0 0 0	121.	My family often does better when I'm deployed than when I'm home.		
0 0 0 0 0	122.	I believe that deployments have caused my family to have serious problems.		
0 0 0 0 0	123.	I do my job when deployed and I expect my family to do their jobs.		
0 0 0 0 0	124.	I believe my deployments have hurt my marriage and family life.		
0 0 0 0 0	125.	I feel like my family does not adequately understand what deployment is really like.		
0 0 0 0 0	126.	My concentration on my job is decreased by family problems.		
0 0 0 0 0	127.	My job performance is not affected by concerns for my family while I'm deployed.		

Definitely Disagree					Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree				
1					2	3	4	5				
1	2	3	4	5	0	0	0	0	0	128. My spouse handles crises well while I'm gone on deployments.		
0	0	0	0	0	0	0	0	0	0	129. When things are bad at home, it seems like I get into more trouble at work.		
0	0	0	0	0	0	0	0	0	0	130. I have feelings of guilt about my family because I have to be gone so much.		
0	0	0	0	0	0	0	0	0	0	131. Deployments cause my family to have more problems.		
0	0	0	0	0	0	0	0	0	0	132. Overall, I feel that my family undergoes substantial emotional distress during my periods of deployment.		
0	0	0	0	0	0	0	0	0	0	133. It is important for me to regain my authority at home as soon as possible when I get back from deployment.		
0	0	0	0	0	0	0	0	0	0	134. My spouse and I often have fights when I first get back from deployment.		
0	0	0	0	0	0	0	0	0	0	135. It is hard to settle back into family routines when I return from deployment.		
0	0	0	0	0	0	0	0	0	0	136. My family finds it difficult to adjust to me when I return from deployment.		

Please answer this question by filling in the answer in the space provided.

____137. Overall, I believe that my family's performance during my periods of deployments could be evaluated as follows:
 1) Outstanding
 2) Above average
 3) Average
 4) Below average
 5) Very poor

Please answer each of the following either true or false as you feel it generally applies to your family. Fill in the appropriate circle to the left of the question.

T F
 0 0 138. Family members really help and support each other.
 0 0 139. Family members often keep their feelings to themselves.
 0 0 140. We fight a lot in our family.
 0 0 141. Activities in our family are pretty carefully planned.

T F

- 0 0 142. Family members are rarely ordered around.
- 0 0 143. We often seem to be killing time at home.
- 0 0 144. We say anything we want to around home.
- 0 0 145. Family members rarely become openly angry.
- 0 0 146. We are generally neat and orderly.
- 0 0 147. There are very few rules to follow in our family.
- 0 0 148. We put a lot of energy into what we do at home.
- 0 0 149. It's hard to blow off steam at home without upsetting someone.
- 0 0 150. Family members sometimes get so angry they throw things.
- 0 0 151. It's often hard to find things when you need them in our household.
- 0 0 152. There is one family member who makes most of the decisions.
- 0 0 153. There is a feeling of togetherness in our family.
- 0 0 154. We tell each other about our personal problems.
- 0 0 155. Family members rarely ever lose their tempers.
- 0 0 156. Being on time is very important in our family.
- 0 0 157. There are set ways of doing things at home.
- 0 0 158. We rarely volunteer when something has to be done at home.
- 0 0 159. If we feel like doing something on the spur of the moment, we often just pick up and go.
- 0 0 160. Family members often criticize each other.
- 0 0 161. People change their minds often in our family.
- 0 0 162. There is a strong emphasis on following rules in our family.
- 0 0 163. Family members really back each other up.
- 0 0 164. Someone usually gets upset if you complain in our family.

T F

- 0 0 165. Family members sometimes hit each other.
- 0 0 166. Family members make sure their rooms are neat.
- 0 0 167. Everyone has an equal say in family decisions.
- 0 0 168. There is very little group spirit in our family.
- 0 0 169. Money and paying bills is openly talked about in our family.
- 0 0 170. If there's a disagreement in our family, we try hard to smooth things over and keep the peace.
- 0 0 171. Each person's duties are clearly defined in our family.
- 0 0 172. We can do whatever we want to in our family.
- 0 0 173. We really get along well with each other.
- 0 0 174. We are usually careful about what we say to each other.
- 0 0 175. Family members often try to one-up or out-do each other.
- 0 0 176. Money is not handled very carefully in our family.
- 0 0 177. Rules are pretty inflexible in our household.
- 0 0 178. There is plenty of time and attention for everyone in our family.
- 0 0 179. There are a lot of spontaneous discussions in our family.
- 0 0 180. In our family, we believe you don't ever get anywhere by raising your voice.
- 0 0 181. Dishes are usually done immediately after eating.
- 0 0 182. You can't get away with much in our family.

****STOP-STOP-STOP****

Please read the following directions VERY CAREFULLY!!

- 1: If you have children living with you in your household, go to the next page and continue to answer questions.**
- 2: If you have NO children living with you, please turn to page 20. ASK YOUR SPOUSE TO COMPLETE THIS SECTION.**

PART III
(Naval Personnel with Dependent Children)

If you have dependent children living with you in your household, please answer the following questions.

___183. How many children do you have living in your household?

___184. Are any of the children in your household from previous marriages?

- 1) Yes
- 2) No

Please fill in the appropriate circle to the left of each question.

Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree
1	2	3	4	5

- | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|--|
| 0 | 0 | 0 | 0 | 0 | 185. Our child/ren find it harder to talk with me as deployment draws near. |
| 0 | 0 | 0 | 0 | 0 | 186. I have seen a change in my child/ren's behavior as I prepare for deployment. |
| 0 | 0 | 0 | 0 | 0 | 187. My child/ren get angry and upset when I have to deploy. |
| 0 | 0 | 0 | 0 | 0 | 188. My child/ren feel I neglect them just before I leave on deployment. |
| 0 | 0 | 0 | 0 | 0 | 189. My child/ren have more behavior problems when I'm deployed. |
| 0 | 0 | 0 | 0 | 0 | 190. In general, I don't think my child/ren cope well when I'm gone on deployment. |
| 0 | 0 | 0 | 0 | 0 | 191. I have had a lot of concerns regarding my child/ren as a result of deployment. |
| 0 | 0 | 0 | 0 | 0 | 192. One or more of my child/ren are currently exhibiting problems which are of serious concern to me. |
| 0 | 0 | 0 | 0 | 0 | 193. I have worried about the effects of deployment on the development of my child/ren. |
| 0 | 0 | 0 | 0 | 0 | 194. My child/ren have a tough time getting used to me when I come back from deployment. |

****STOP-STOP-STOP****

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY:

- 1. If you are currently married, go to the next section and ask YOUR SPOUSE to complete the following section.**
- 2. If you are NOT CURRENTLY married, you have finished the survey. Please put your survey into the envelope provided and return it. Thank you for your cooperation.**

SECTION TWO

THIS PART OF THE SURVEY IS TO BE COMPLETED BY SPOUSES ONLY.

SECTION II

Part I (Spouses of Naval Personnel)

This part of the survey is to be completed by spouses. Please answer the following questions by filling in the appropriate choice or information in the spaces provided.

- ___195. What is your current age?
- ___196. Are you currently employed?
 1) Yes, Fulltime (40 hrs./wk.)
 2) Yes, Part time (less than 40 hr./wk)
 3) No
- ___197. Who do you primarily rely on for help when you have a MAJOR personal or family problem?
 1) Myself
 2) my supervisor (at work)
 3) relatives (including spouse)
 4) other Navy families or friends
 5) friends outside of the Navy
 6) Navy support and service programs
 7) civilian professional service agencies
 8) religious institutions

 Please answer by filling in the appropriate circle to the left of each question.

Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree
1	2	3	4	5

- 1 2 3 4 5
 0 0 0 0 0 198. I find it very hard to talk to anyone about my family problems.
- 0 0 0 0 0 199. I am generally very satisfied with my marriage.
- 0 0 0 0 0 200. My family has a clear set of personal values that are important to us.
- 0 0 0 0 0 201. I have never seen myself as a Navy spouse, but a spouse of an individual who is in the Navy.
- 0 0 0 0 0 202. I believe that what my spouse is doing in the Navy is important.
- 0 0 0 0 0 203. My spouse's Naval career is damaging our family.
- 0 0 0 0 0 204. Deployments are the worst part of Navy life.
- 0 0 0 0 0 205. When this hitch is up, I want my spouse to get out of the Navy.

Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree	
1	2	3	4	5	
1	2	3	4	5	
0	0	0	0	0	206. Deployments have caused me to want my spouse to leave the Navy.
0	0	0	0	0	207. I feel actively involved with the Navy Community.
0	0	0	0	0	208. Overall, I am satisfied with the military as a way of life.
0	0	0	0	0	209. Predeployment briefings by the Navy are a help to families during deployment
0	0	0	0	0	210. Extensive preparation by my family prior to deployment reduces problems during the deployment.
0	0	0	0	0	211. I get very upset and tense as deployment comes closer.
0	0	0	0	0	212. Thoughts of deployment depress me.
0	0	0	0	0	213. When my spouse leaves it doesn't bother me.
0	0	0	0	0	214. I am more irritable around my spouse just before deployment.
0	0	0	0	0	215. I find myself becoming more emotionally distant with my spouse just before deployment.
0	0	0	0	0	216. I have trouble sleeping before my spouse leaves on deployment.
0	0	0	0	0	217. Money has been our major family problem during deployment.
0	0	0	0	0	218. Deployment places unfair burdens on the families of service personnel.
0	0	0	0	0	219. I expect deployments to have little impact on the overall quality of our family life.
0	0	0	0	0	220. A Navy spouse should be able to handle things competently during deployment.
0	0	0	0	0	221. Help and support from others is easily obtained during deployment.
0	0	0	0	0	222. I am relieved when my spouse is deployed.
0	0	0	0	0	223. I resent the Navy when my spouse is deployed.

Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree
1	2	3	4	5
1 2 3 4 5				
0 0 0 0 0	224.	I don't feel good about myself during periods of deployment.		
0 0 0 0 0	225.	I have experienced a sense of guilt during deployments which has bothered me.		
0 0 0 0 0	226.	I dislike having to do jobs my spouse normally does, while he/she is deployed.		
0 0 0 0 0	227.	I feel tense and nervous when my spouse is gone on deployment.		
0 0 0 0 0	228.	I generally feel too depressed to go out on social events while my spouse is deployed.		
0 0 0 0 0	229.	I have felt a need for emotional counseling during deployments.		
0 0 0 0 0	230.	I am uncomfortable attending social affairs without my spouse.		
0 0 0 0 0	231.	In general, my health has suffered during deployment.		
0 0 0 0 0	232.	I have often leaned excessively on others to keep going from day to day during deployment.		
0 0 0 0 0	233.	I lose my temper more often when my spouse is deployed.		
0 0 0 0 0	234.	I don't get along as well with other people when my spouse is deployed.		
0 0 0 0 0	235.	Overall, I function better when my spouse is deployed.		
0 0 0 0 0	236.	I write at least once a week to my spouse when he/she is deployed.		
0 0 0 0 0	237.	I believe that deployments have caused my family to have serious problems.		
0 0 0 0 0	238.	During deployment I have had serious legal or psychiatric problems which have necessitated an emergency leave for my spouse.		
0 0 0 0 0	239.	Overall, I feel that I experience substantial emotional distress during periods of deployment.		
0 0 0 0 0	240.	My spouse has usually changed a lot when he/she returns from deployment		

	Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree	
	1	2	3	4	5	
1 2 3 4 5						
0 0 0 0 0						241. My spouse and I sometimes have trouble talking about important personal things when he/she gets back from deployment.
0 0 0 0 0						242. When my spouse returns from deployment, it takes some time before we are comfortable with each other sexually.
0 0 0 0 0						243. My spouse and I tend to argue a lot when she/he gets back from deployment.
0 0 0 0 0						244. I don't like having to be accountable to my spouse for my time and activities when he/she gets back from deployment.
0 0 0 0 0						245. Family routines are disrupted when my spouse returns from deployment.
0 0 0 0 0						246. It is important that my spouse gives me some time to adjust when he/she returns from deployment.
0 0 0 0 0						247. I get angry with my spouse when he/she leaves me to go on deployment.
0 0 0 0 0						248. I find myself becoming easily frustrated during periods of deployment.
0 0 0 0 0						249. When my spouse is deployed I suffer from boredom and emptiness.
0 0 0 0 0						250. During periods of deployment I become overwhelmed when minor things go wrong.
0 0 0 0 0						251. In general, I feel like I am unable to cope with household responsibilities during deployment.

For the next three questions, please write in the number of the answer that best applies to you in the space provided.

____252. Overall, I would indicate that the following best describes our family's experience with deployments.

1. During periods of deployments we have experienced serious problems and have had difficulty coping with them.
2. During periods of deployments we have experienced serious problems, but have successfully coped with them.
3. During periods of deployments we have experienced no serious problems and we have coped very well.

1. Our family tends to do poorly during deployment.
2. Our family tends to do as well during periods of deployment as it does during periods when my spouse is home.
3. Our family tends to function better during periods of deployment when my spouse is separated from the family.

1. Outstanding
2. Above average
3. Average
4. Below average
5. Very poor

Listed below are a number of events which sometimes bring about changes in a person's life. IF YOU HAVE EXPERIENCED ONE OF THESE EVENTS IN THE PAST TWELVE MONTHS, put a check mark in the first column for that event. Then fill in the circle to the right of the check that best indicates the impact the event had on you. A rating of -3 shows a stressful, negative impact, while a rating of +3 shows a very positive impact. A rating of 0 indicates no impact at all for an event that happened to you.

-3 = extremely negative
-2 = moderately negative
-1 = somewhat negative
0 = no impact

+1 = slightly positive
+2 = moderately positive
+3 = extremely positive

yes no -3 -2 -1 0 +1 +2 +3

255. Marriage	0	0	0	0	0	0	0
256. Detention in jail or comparable institution	0	0	0	0	0	0	0
257. Death of spouse	0	0	0	0	0	0	0
258. Major change in sleeping	0	0	0	0	0	0	0
259. Death of close family member:	0	0	0	0	0	0	0
260. Major change in eating habits	0	0	0	0	0	0	0
261. Foreclosure on mortgage or loan	0	0	0	0	0	0	0

	yes	no	-3	-2	-1	0	+1	+2	+3
262. Death of a close friend			0	0	0	0	0	0	0
263. Outstanding personal achievement			0	0	0	0	0	0	0
264. Minor law violations (traffic tickets, disturbing the peace, etc.)			0	0	0	0	0	0	0
265. <u>Male</u> : wife/girlfriend's pregnancy			0	0	0	0	0	0	0
266. <u>Female</u> : pregnancy			0	0	0	0	0	0	0
267. Changed work situation (different work responsibility, major change in working conditions, working hours, etc.)			0	0	0	0	0	0	0
268. New job			0	0	0	0	0	0	0
269. Serious illness or injury of close family member			0	0	0	0	0	0	0
270. Sexual difficulties			0	0	0	0	0	0	0
271. Trouble with employer (in danger of losing job)			0	0	0	0	0	0	0
272. Trouble with in-laws			0	0	0	0	0	0	0
273. Major change in financial status (a lot better off or a lot worse off)			0	0	0	0	0	0	0
274. Major change in closeness of family members (increased or decreased closeness)			0	0	0	0	0	0	0
275. Gaining a new family member (through birth, adoption, family member moving in, etc.)			0	0	0	0	0	0	0
276. Change of residence			0	0	0	0	0	0	0
277. Marital separation from mate (due to conflict)			0	0	0	0	0	0	0
278. Major change in church activities (increased or decreased attendance)			0	0	0	0	0	0	0
279. Marital reconciliation with mate			0	0	0	0	0	0	0

	yes	no	-3	-2	-1	0	+1	+2	+3
280. Major change in number of arguments with spouse (a lot more or a lot less arguments)			0	0	0	0	0	0	0
281. <u>Married male</u> : change in wife's work outside the home (beginning work, ceasing work, changing to a new job, etc.)			0	0	0	0	0	0	0
282. <u>Married female</u> : change in husband's work. (loss of job, beginning new job, retirement, etc.)			0	0	0	0	0	0	0
283. Major change in usual type and/or amount of recreation			0	0	0	0	0	0	0
284. Borrowing more than \$10,000 (buying home, business, etc.)			0	0	0	0	0	0	0
285. Borrowing less than \$10,000 (buying car, TV, getting school loan, etc.)			0	0	0	0	0	0	0
286. Being fired from job			0	0	0	0	0	0	0
287. <u>Male</u> : Wife/girlfriend having abortion			0	0	0	0	0	0	0
288. <u>Female</u> : having abortion			0	0	0	0	0	0	0
289. Major personal illness or injury			0	0	0	0	0	0	0
290. Major change in social activities, e.g., parties, movies, visiting, (increased or decreased participation)			0	0	0	0	0	0	0
291. Divorce			0	0	0	0	0	0	0
292. Serious injury or illness of close friend			0	0	0	0	0	0	0
293. Retirement from work			0	0	0	0	0	0	0
294. Son or daughter leaving home (due to marriage, college, etc.)			0	0	0	0	0	0	0
295. Ending of formal schooling			0	0	0	0	0	0	0
296. Separation from spouse (due to work, travel, etc.)			0	0	0	0	0	0	0

	yes	no	-3	-2	-1	0	+1	+2	+3
297. Engagement			0	0	0	0	0	0	0
298. Breaking up with boyfriend/ girlfriend			0	0	0	0	0	0	0
299. Leaving home for the first time			0	0	0	0	0	0	0
300. Reconciliation with boyfriend girlfriend			0	0	0	0	0	0	0
301. Deployment (longer than 30 days)			0	0	0	0	0	0	0

Please answer each of the following either true or false as you feel it generally applies to your family. Fill in the appropriate circle to the left of the question.

T F

- 0 0 302. Family members really help and support each other.
- 0 0 303. Family members often keep their feelings to themselves.
- 0 0 304. We fight a lot in our family.
- 0 0 305. Activities in our family are pretty carefully planned.
- 0 0 306. Family members are rarely ordered around.
- 0 0 307. We often seem to be killing time at home.
- 0 0 308. We say anything we want to around home.
- 0 0 309. Family members rarely become openly angry.
- 0 0 310. We are generally neat and orderly.
- 0 0 311. There are very few rules to follow in our family.
- 0 0 312. We put a lot of energy into what we do at home.
- 0 0 313. It's hard to blow off steam at home without upsetting someone.
- 0 0 314. Family members sometimes get so angry they throw things.
- 0 0 315. It's often hard to find things when you need them in our household.
- 0 0 316. There is one family member who makes most of the decisions.
- 0 0 317. There is a feeling of togetherness in our family.

T F

- 0 0 318. We tell each other about our personal problems.
- 0 0 319. Family members rarely ever lose their tempers
- 0 0 320. Being on time is very important in our family.
- 0 0 321. There are set ways of doing things at home.
- 0 0 322. We rarely volunteer when something has to be done at home.
- 0 0 323. If we feel like doing something on the spur of the moment, we often just pick up and go.
- 0 0 324. Family members often criticize each other.
- 0 0 325. People change their minds often in our family.
- 0 0 326. There is a strong emphasis on following rules in our family.
- 0 0 327. Family members really back each other up.
- 0 0 328. Someone usually gets upset if you complain in our family.
- 0 0 329. Family members sometimes hit each other.
- 0 0 330. Family members make sure their rooms are neat.
- 0 0 331. Everyone has an equal say in family decisions.
- 0 0 332. There is very little group spirit in our family.
- 0 0 333. Money and paying bills is openly talked about in our family.
- 0 0 334. If there's a disagreement in our family, we try hard to smooth things over and keep the peace.
- 0 0 335. Each person's duties are clearly defined in our family.
- 0 0 336. We can do whatever we want to in our family.
- 0 0 337. We really get along well with each other.
- 0 0 338. We are usually careful about what we say to each other.
- 0 0 339. Family members often try to one-up or out-do each other.
- 0 0 340. Money is not handled very carefully in our family.

T F

- 0 0 341. Rules are pretty inflexible in our household.
- 0 0 342. There is plenty of time and attention for everyone in our family.
- 0 0 343. There are a lot of spontaneous discussions in our family.
- 0 0 344. In our family, we believe you don't ever get anywhere by raising your voice.
- 0 0 345. Dishes are usually done immediately after eating.
- 0 0 346. You can't get away with much in our family.

For each of the following service agencies or groups, place a check mark in the first column if you or your family HAVE UTILIZED the service. Please indicate your level of satisfaction with the service (-3 for very unsatisfactory to + 3 for very satisfactory). REMEMBER, ONLY CHECK THE SERVICES YOU HAVE USED. ONLY RATE SATISFACTION WITH SERVICES YOU HAVE USED.

-3=very unsatisfactory
-2=moderately unsatisfactory
-1=slightly unsatisfactory
0=no feelings

+1=slightly satisfactory
+2=moderately satisfactory
+3=very satisfactory

	Used?		If used:						
	yes	no	-3	-2	-1	0	+1	+2	+3
347. Family Support Centers			0	0	0	0	0	0	0
348. Individual Counseling			0	0	0	0	0	0	0
349. Marriage and Family Counseling			0	0	0	0	0	0	0
350. Chaplain Services/ Religious Services			0	0	0	0	0	0	0
351. Parent Education			0	0	0	0	0	0	0
352. Youth/Adolescent Prog.			0	0	0	0	0	0	0
353. Child Care Services			0	0	0	0	0	0	0
354. Financial Counseling			0	0	0	0	0	0	0
355. Single Parent Programs			0	0	0	0	0	0	0
356. Premarital Programs			0	0	0	0	0	0	0

	Yes	No	-3	-2	-1	0	+1	+2	+3
357. Programs for Families with Handicapped Members			0	0	0	0	0	0	0
358. Services for Families during Separation			0	0	0	0	0	0	0
359. Crisis Referral Services			0	0	0	0	0	0	0
360. Spouse Employment Services			0	0	0	0	0	0	0
361. Recreational Programs			0	0	0	0	0	0	0
362. Spouse/Child Abuse Services			0	0	0	0	0	0	0
363. Alcohol/Drug Treatment			0	0	0	0	0	0	0
364. Rape Counseling Services			0	0	0	0	0	0	0
365. Legal Assistance			0	0	0	0	0	0	0
366. Navy Wives Club			0	0	0	0	0	0	0
367. Navy Ombudsman Program			0	0	0	0	0	0	0
368. Navy Relief			0	0	0	0	0	0	0

****STOP-STOP-STOP****

Please read the following directions VERY CAREFULLY!!

- 1: If you have children living with you in your household, go to the next page and continue to answer questions.**
- 2: If you have NO children living with you, you have completed the survey. Please put this survey in the envelope provided and have your spouse return it. Thank you for your cooperation.**

SECTION II

PART II (Spouse with Dependent Children)

If you are the spouse of a navy personnel and have dependent children living with you in your household, please answer the following questions from this answer selection. Fill in the appropriate circle to the left of each question.

Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree	
1	2	3	4	5	
1 2 3 4 5					
0 0 0 0 0					369. My family has made sacrifices for my spouse's Naval career.
0 0 0 0 0					370. Our child/ren get into more trouble in school just before deployment.
0 0 0 0 0					371. Our child/ren get into more trouble at home just before deployment.
0 0 0 0 0					372. My child/ren get distant from us just before deployment.
0 0 0 0 0					373. During deployment I find it difficult to assume the total responsibility for my children's behavior.
0 0 0 0 0					374. I cope with my family's problems and needs very well while my spouse is deployed.
0 0 0 0 0					375. I can <u>not</u> adequately supervise our children during periods of deployment.
0 0 0 0 0					376. When my spouse is deployed, it tends to be harder for our child/ren.
0 0 0 0 0					377. Our child/ren have more problems when my spouse is gone on deployment.
0 0 0 0 0					378. Our family does better when my spouse is deployed than when he/she is home.
0 0 0 0 0					379. We have had a lot of concerns regarding our child/ren as a result of deployment.
0 0 0 0 0					380. Our family problems generally go away when my spouse comes home from deployment.
0 0 0 0 0					381. When my spouse returns from deployment, there is usually a period of confusion regarding responsibilities for directing the children.

Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree	
1	2	3	4	5	
1 2 3 4 5					
0 0 0 0 0	382.	It is very hard to explain to our child/ren why deployments are necessary.			
0 0 0 0 0	383.	Our child/ren's performance in school suffers when my spouse is deployed.			
0 0 0 0 0	384.	Our child/ren get upset and nervous more frequently when my spouse is gone on deployment.			
0 0 0 0 0	385.	Our child/ren complain of feeling bad more often when my spouse is gone.			
0 0 0 0 0	386.	Our child/ren seem more withdrawn and alone when my spouse is deployed.			
0 0 0 0 0	387.	Our child/ren seem more irritable and angry when my spouse is deployed.			
0 0 0 0 0	388.	Our child/ren have a lot of physical complaints during deployments.			
0 0 0 0 0	389.	Our child/ren's academic grades tend to drop when my spouse is deployed.			
0 0 0 0 0	390.	One or more of my child/ren are currently exhibiting problems which are of serious concern to me.			
0 0 0 0 0	391.	One or more of our child/ren has had legal difficulties which are of concern to us.			
0 0 0 0 0	392.	I have been very concerned about my children's behavior during deployment.			
0 0 0 0 0	393.	I have been concerned regarding my child/ren's health during deployment.			
0 0 0 0 0	394.	We have worried about the effects of deployment on the development of my child/ren.			
0 0 0 0 0	395.	My child/ren look to my spouse to set the rules in our house.			

STOP! You have finished the survey. Thank you!
Please put the survey in the envelope provided and return it to your spouse.

APPENDIX B

Tables

TABLE ONE
Return Rates for Survey by
Type Command

Command	Surveys Sent	Surveys Returned		%Returned
		Sailor	Spouse	
AIRLANT	1000	637	(302)	63.7%
SUBLANT	1000	760	(436)	76.0%
SURFLANT	1000	597	(263)	59.7%
Shore-based	425	219	(138)	51.5%
Unlabeled		32	(16)	
Total	3245	2245	(1155)	65.6%

TABLE TWO

DEMOGRAPHIC DESCRIPTION OF SAMPLE

1. Sample by Sex	Males (%total) 2124 (94.6%)	Females (%total) 112 (4.9%)	No response (%total) 9 (0.5%)			
2. Sample by Rank	Enlisted	Subjects	%	Officer	Subjects	%
	E-1	9	0.5%	0-1	26	1.2%
	E-2	46	2.1%	0-2	62	2.8%
	E-3	218	9.7%	0-3	88	3.9%
	E-4	376	16.8%	0-4	56	2.5%
	E-5	528	23.5%	0-5	16	0.7%
	E-6	486	21.7%	0-6	1	0.04%
	E-7	208	9.3%			
	E-8	71	3.2%			
	E-9	27	1.2%			
	W-2	7	0.3%			
	W-3	1	0.04%			
	W-4	4	0.2%			
	Total Enlisted	1981	88.9%	Total officer	249	11.1%
3. Sample by # of Times Deployed	Range 0-90 times	Means 7.317 times	Standard Deviation 18.297 times			
4. Sample by Age Sailors Spouses	18-57 years 17-54 years	27.542 years 28.940 years	6.493 years 6.711 years			

TABLE TWO (cont.)

5. Sample by Marital Status	Status	#Subjects	%Total
	Married (first)	1165	51.9%
	Remarried	203	9.0%
	Widowed	2	0.1%
	Divorced	107	4.8%
	Single	752	33.5%
	No answer	16	0.7%
6. Sample Educational level (years in school)	Range	Mean	Standard Deviation
	9-18 years	12.93 years	2.43 years
	9-19 years	12.94 years	3.54 years

TABLE THREE

Reliability Coefficients and
Scale Factor Loadings

Scale:	Alpha Coefficients	Factor* Loadings
Need for Marital Distance		
Sailor	.67	.61 (3)
Spouse	.60	
Attitude of "Right Stuff"		
Sailor	.36	.59 (1)
Spouse	-.06	
Individual Commitment to Navy		
Sailor	.71	.64 (1)
Positive Deployment Attitudes		
Sailor	.60	.66 (1)
Spouse	.50	-.65 (2)
Predeployment Attitudes		
Sailor	.44	.56 (1)
Spouse	.57	
Predeployment Emotional Distress		
Sailor	.87	-.67 (1)
Spouse	.73	.63 (2)
Deployment Emotional Distress		
Sailor	.79	-.77 (1)
Spouse	.90	.85 (2)
Family Coping Levels		
Sailor	.86	.69 (1)
Spouse	.86	-.82 (2)
Job Performance Perceptions		
Sailor	.54	.64 (1)

Scale:	Alpha Coefficients	Factor* Loadings
Postdeployment Emotional Distress		
Sailor	.83	-.52 (1)
Spouse	.81	.54 (2)
Family Communication/Conflict		
Sailor	.65	-.71 (1)
Spouse	.71	.58 (2)
Interpersonal Distance from Children		
Sailor	.72	-.58 (1)
Spouse	.73	.77 (2)
Children's Lack of Coping		
Sailor	.84	-.57 (1)
Spouse	.90	.76 (2)
Family Cohesion		
Sailor	.68	
Spouse	.73	
Family Expressiveness		
Sailor	.54	
Spouse	.57	
Family Conflict		
Sailor	.73	.55 (3)
Spouse	.73	
Family Organization		
Sailor	.67	
Spouse	.68	
Family Control		
Sailor	.57	
Spouse	.59	

*Denotes scales loading on the factor with a weight > 0.50.

TABLE FOUR

Varimax Rotated Factor Matrix
for All Survey Scales

Factor 1 Label: Sailor's Positive Attitudes towards
Deployment and Family

Percentage of Total Variance: 25.4%

Scales Loading >.50 or <-.50	Actual Loading Values
Sailor's "Right Stuff" Attitudes	0.591
Sailor's Individual Commitment to the Navy	0.640
Sailor's Positive Deployment Attitudes	0.663
Sailor's Predeployment Attitudes	0.559
Sailor's Predeployment Emotional Distress	-.0674
Sailor's Deployment Emotional Distress	-0.766
Sailor's Perceptions of Family Coping	0.692
Sailor's Ratings of Job Performance	0.641
Sailor's Postdeployment Emotional Distress	-0.519
Sailor's Perceptions of Family Communication and Conflict	-0.706
Sailor's Perceptions of Inter- personal Distance from Children	-0.575
Sailor's Perceptions of Children's Lack of Coping	-0.567

Factor 2 Label: Spouse's Negative Attitudes Towards
Deployment and Family

Percentage of Total Variance : 8.5%

Scales Loading $>.50$ or $<-.50$	Actual Loading Values
1	0.85
2	0.82
3	0.80
4	0.78
5	0.75
6	0.72
7	0.70
8	0.68
9	0.65
10	0.62
11	0.60
12	0.58
13	0.55
14	0.52
15	0.50
16	0.48
17	0.45
18	0.42
19	0.40
20	0.38
21	0.35
22	0.32
23	0.30
24	0.28
25	0.25
26	0.22
27	0.20
28	0.18
29	0.15
30	0.12
31	0.10
32	0.08
33	0.05
34	0.02
35	0.00
36	-0.02
37	-0.05
38	-0.08
39	-0.10
40	-0.12
41	-0.15
42	-0.18
43	-0.20
44	-0.22
45	-0.25
46	-0.28
47	-0.30
48	-0.32
49	-0.35
50	-0.38
51	-0.40
52	-0.42
53	-0.45
54	-0.48
55	-0.50
56	-0.52
57	-0.55
58	-0.58
59	-0.60
60	-0.62
61	-0.65
62	-0.68
63	-0.70
64	-0.72
65	-0.75
66	-0.78
67	-0.80
68	-0.82
69	-0.85
70	-0.88
71	-0.90
72	-0.92
73	-0.95
74	-0.98
75	-1.00

Spouse's Positive Deployment Attitude -0.658

Spouse's Predeployment Emotional Distress	0.629
--	-------

Spouse's Deployment	0.852
Emotional Distress	

Spouse's Perceptions of Family Coping -0.829

Spouse's Postdeployment Emotional Distress	0.542
---	-------

Spouse's Perceptions of Family Communication and Conflict	0.578
--	-------

Spouse's Perceptions of Inter- personal Distance from Children	0.770
---	-------

Spouse's Perceptions of Children's Lack of Coping 0.762

**Factor 3 Label: Sailor's Perceptions of Marital
Distance and Family Conflict**

Percentage of Total Variance: 6.3%

Scales Loading $>.50$ or $<-.50$	Actual Loading Values
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
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33	33
34	34
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36	36
37	37
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40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

Sailor's Need for Marital Distance 0.614

Sailor's Perceptions of Overall Family Conflict	0.545
---	-------

TABLE FIVE

Varimax Rotated Factor Matrix
for Spouse Survey Scales

Factor 1 Label: Spouse's Negative Emotional Responses
to Deployment and Concerns about Family
Coping

Percentage of total variance: 30.5%

Scales Loading $>.50$ or $<-.50$	Actual Loading Values
Spouse's Positive Deployment Attitudes	-0.768
Spouse's Predeployment Emotional Distress	0.643
Spouse's Deployment Emotional Distress	0.889
Spouse's Perceptions Of Family Coping	--0.841
Spouse's Perceptions of Family Communication and Conflict	0.721
Spouse's Perceptions of Inter- personal Distance from Children	0.762
Spouse's Perceptions of Children's Lack of Coping	0.759

Factor 2 Label: Spouse's Postdeployment Emotional Distress
and Perceptions of Overall Family Conflict

Percentage of Total Variance: 10.1%

Scales Loading $>.50$ or $<.50$	Actual Loading Values
Spouse's Postdeployment Emotional Distress	0.531
Spouse's Perception of Overall Conflict	0.533

TABLE SIX

Varimax Rotated Factor Matrix
for Sailor Survey Scales

Factor 1 Label: Sailor's Positive Views of Deployment,
the Job, and the Family

Percentage of Total Variance: 32.0%

Scales Loading $>.50$ or $<-.50$	Actual Loading Values
Sailor's "Right Stuff" Attitude	0.591
Sailor's Individual Commitment to the Navy	0.534
Sailor's Positive Deployment Attitude	0.597
Sailor's Predeployment Attitude	0.573
Sailor's Predeployment Emotional Distress	-0.733
Sailor's Deployment Emotional Distress	-0.774
Sailor's Perceptions of Family Coping	0.827
Sailor's Rating of Job Performance	0.559
Sailor's Postdeployment Emotional Distress	-0.698
Sailor's Perceptions of Family Communication and Conflict	-0.797
Sailor's Perceptions of Interpersonal Distance from Children	-0.692
Sailor's Perceptions of Children's Lack of Coping	-0.737

Factor 2 Label: Sailor's Need for Marital Distance

Percentage of Total Variance: 11.2%

Scales Loading >.50 or <.-50	Actual Loading Values
------------------------------	-----------------------

Sailor's Need for Marital Distance	0.641
------------------------------------	-------

TABLE NINE

Multiple Regression Analyses

Dependent Variable: Sailors' Deployment-related Emotional Distress

Predictor Variables:

Married Sailors

1. Sailor's Predeployment Emotional Distress
2. Job Performance Ratings
3. Sailor's Ratings of Family Coping
4. Individual Commitment to the Navy
5. Sailor's Postdeployment Emotional Distress
6. Sailor's Positive Deployment Attitude
(58% total variance)

Married Sailors with Children

1. Sailor's Predeployment Emotional Distress
2. Job Performance Ratings
3. Sailor's Ratings of Family Coping
4. Sailor's Positive Deployment Attitudes
5. Sailor's Postdeployment Emotional Distress
6. Individual Commitment to the Navy
7. Sailor's "Right Stuff" Attitude
8. Sailor's Ratings of Family Cohesion
(59% total variance)

Dependent Variable: Spouses' Deployment-related Emotional Distress

Predictor Variables:

Married Spouses

1. Spouse's Ratings of Family Coping
2. Spouse's Positive Deployment Attitudes
3. Sailor's Predeployment Emotional Distress
4. Spouse's "Right Stuff" Attitudes
5. Sailor's Ratings of Family Cohesion
6. Sailor's Ratings of Family Communication and Conflict
7. Individual Commitment to the Navy
8. Spouse's Ratings of Family Communication and Conflict
9. Spouse's Predeployment Emotional Distress
(76% total variance)

Married Spouses with Children

1. Spouse's Ratings of Family Coping
2. Spouse's Predeployment Emotional Distress
3. Spouse's Positive Deployment Attitudes
4. Spouse's Need for Marital Distance
5. Sailor's Predeployment Attitudes
6. Sailor's Need for Marital Distance
7. Spouse's Perceptions of Family Communication and Conflict
8. Sailor's Life Stress Levels
9. Individual Commitment to the Navy
(78% total variance)

TABLE SEVEN

Multiple Regression Analyses

Dependent Variable: Sailors' Ratings of Job Performance

Predictor Variables:

<u>Single Sailors</u>	<u>Married Sailors</u>	<u>Married Sailors with Children</u>
1. Individual Commitment to the Navy (80% total variance)	1. Sailor's "Right Stuff" Attitude 2. Sailor's Deployment Emotional Distress 3. Sailor's Positive Deployment Attitude 4. Spouse's Perceptions of Family Organization (39% total variance)	1. Sailor's Deployment Emotional Distress 2. Sailor's "Right Stuff" 3. Sailor's Positive Deployment Attitude 4. Individual Commitment to the Navy 5. Spouse's Perceptions of Family Organization (34% total variance)

Dependent Variable: Individual Commitment to the Navy

Predictor Variables:

<u>Single Sailors</u>	<u>Married Sailors</u>	<u>Married Sailors with Children</u>
1. Job Performance Ratings (80% total variance)	1. Spouse's Ratings of Family Communication and Conflict 2. Sailor's Positive Deployment Attitude 3. Sailor's Ratings of Family Communication and Conflict 4. Spouse's Deployment Emotional Distress 5. Sailor's Deployment Emotional Distress 6. Spouse's Postdeployment Emotional Distress 7. Sailor's Perceptions of Family Control (53% total variance)	1. Spouse's Ratings of Family Communication and Conflict 2. Sailor's Positive Deployment Attitude 3. Sailor's Ratings of Family Communication and Conflict 4. Spouse's Ratings of Family Coping 5. Sailor's Deployment Emotional Distress 6. Sailor's Perceptions of Family Control 7. Job Performance Ratings 8. Sailor's Ratings of Family Expression (43% total variance)

TABLE EIGHT

Multiple Regression Analyses

Dependent Variable: Sailors' Ratings of Family Coping

Predictor Variables:

Married Sailors

1. Sailor's Ratings of Family Communication and Conflict
2. Sailor's Predeployment Emotional Distress
3. Spouse's Ratings of Family Coping
4. Sailor's "Right Stuff" Attitude
5. Sailor's Deployment Emotional Distress
6. Sailor's Levels of Life Stress
7. Individual Commitment to the Navy
(65% total variance)

Married Sailors with Children

1. Sailor's Ratings of Family Communication and Conflict
2. Spouse's Ratings of Family Coping
3. Sailor's Deployment Emotional Distress
4. Sailor's Predeployment Emotional Distress
5. Sailor's "Right Stuff" Attitude
6. Sailor's Predeployment Attitudes
(67% total variance)

Dependent Variable: Spouse's Ratings of Family Coping

Predictor Variables:

Married Sailors

1. Spouse's Deployment Emotional Distress
2. Sailor's Ratings of Family Coping
3. Spouse's Postdeployment Emotional Distress
4. Spouse's "Right Stuff" Attitudes
5. Spouse's Predeployment Attitudes
6. Sailor's Positive Deployment Attitudes
7. Spouse's Life Stress Levels
(68% total variance)

Married Spouses with Children

1. Spouse's Deployment Emotional Distress
2. Sailor's Ratings of Family Coping
3. Spouse's Postdeployment Emotional Distress
4. Spouse's Ratings of Family Cohesion
5. Spouse's "Right Stuff" Attitudes
6. Sailor's Predeployment Emotional Distress
7. Sailor's "Right Stuff" Attitude
8. Individual Commitment to the Navy
(76% total variance)

TABLE TEN

Multiple Regression Analyses

Dependent Variable: Sailors' Ratings of Children's Lack of Coping

Predictor Variables:

Married with Children

1. Sailor's Rating of Family Coping
 2. Sailor's Rating of Interpersonal Distance from Children
 3. Sailor's Predeployment Emotional Distress
 4. Sailor's Need for Marital Distance
- (58% total variance)

Dependent Variable: Spouses' Ratings of Children's Lack of Coping

Predictor Variables:

Married with Children

1. Spouse's Ratings of Interpersonal Distance from Children
 2. Spouse's Rating of Family Coping
 3. Spouse's Predeployment Emotional Distress
- (65% total variance)

TABLE ELEVEN

Frequency Distribution

Intention To Make the Navy A Career

	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree	TOTAL
Single Sailors	363 42.4%	106 12.4%	217 25.3%	82 9.6%	89 10.4%	857
Married Sailors with No Children	143 31.0%	40 8.7%	104 22.5%	57 12.3%	118 25.5%	462
Married Sailors with Children	132 14.7%	56 6.2%	178 19.8%	129 14.3%	405 45.0%	900

TABLE TWELVE

Discriminant Function Analysis
on Retention Attitudes

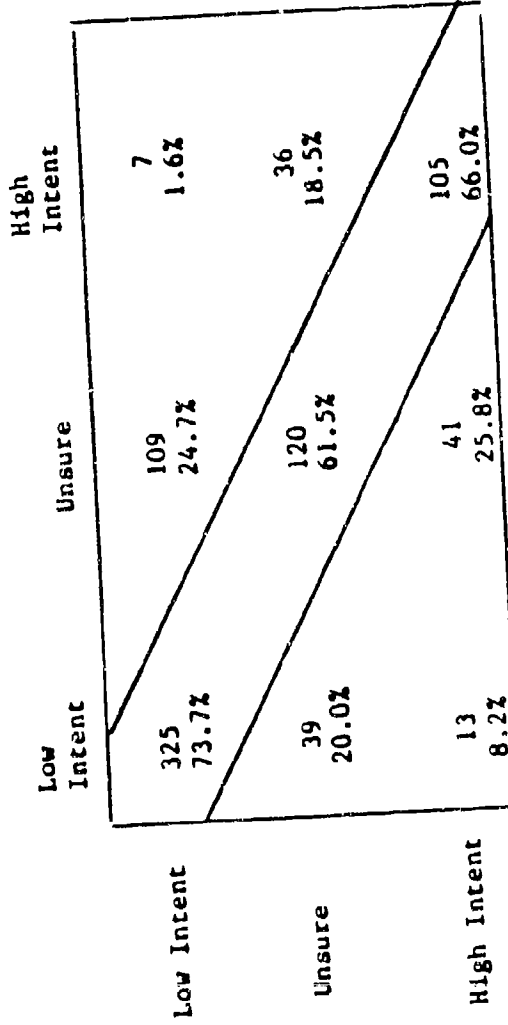
Discriminating Variables:

Individual Commitment to the Navy
Length of Time in Service
Self-Reports of Job Performance
Positive Deployment Attitudes

Dependant Variable:

Intent to Make the Navy
a Career

(Single Sailors)



Overall
Correct
Classification:
69.18%

TABLE THIRTEEN
Discriminant Function Analysis
On Retention Attitudes

Dependent Variable:	Discriminating Variables:
Intent To Make The Navy A Career	Individual Commitment To The Navy
(Married Sailors With No Children)	Length of Time in Service
	Spouse's Stress Levels
	Spouse's Perceptions of Family Conflict
	Sailor's Perceptions of Family Cohesion
	Sailor's Predeployment Attitudes
	Sailor's Positive Deployment Attitudes

	Low Intent	Unsure	High Intent
Low Intent	102 79.7%	24 18.8%	2 1.6%
Unsure	14 22.6%	45 72.6%	3 4.3%
High Intent	2 1.6%	30 24.4%	91 74.0%

Overall
Correct
Classification:
76.04%

TABLE Fourteen

Discriminant Function Analysis
On Retention Attitudes

Discriminating Variables:

Dependent Variable:

Intent to Make the Navy a Career (Married Sailors with Children)	Individual Commitment to the Navy Length of Time in Service Spouse's Perceptions of Family Conflict Sailor's Need for Marital Distance Sailor's Predeployment Emotional Distress Spouse's Postdeployment Emotional Distress Spouse's Perception of Family Expressiveness Sailor's Perception of Family Expressiveness Sailor's Positive Deployment Attitudes Spouse's "Right Stuff" Attitudes Spouse's Positive Deployment Attitudes	Low Intent Unsure High Intent	Low Intent Unsure High Intent	Unsure	High Intent

	Low Intent	Unsure	High Intent
Low Intent	84 65.1%	37 28.7%	8 6.2%
Unsure	28 21.7%	86 66.7%	15 11.6%
High Intent	17 4.5%	66 17.4%	297 78.2%
Overall Correct Classification: 73.2%			

TABLE FIFTEEN
Sailors' Attitudes, Perceptions, and Beliefs
by Education Level: Univariate ANOVAs

Scales	F Values	Significance
Individual Commitment to the Navy	16.1966	$p < .0001$
Positive Deployment Attitudes	17.3098	$p < .0001$
Predeployment Attitudes	9.6936	$p < .002$
Deployment Emotional Distress	28.5262	$p < .0001$
Ratings of Job Performance	21.7490	$p < .0001$
Interpersonal Distance from Children	4.3325	$p < .05$
Family Cohesiveness	9.5967	$p < .01$
Family Communication and Conflict	7.1033	$p < .01$

TABLE SIXTEEN

Spouses' Attitudes, Perceptions, and
Beliefs by Education Level
Univariate ANOVAs

Scales:	F Values	Significance
Predeployment Emotional Distress	8.2452	$p < .005$
Deployment Emotional Distress	12.8137	$p < .005$
Perceptions of Family Coping	7.5688	$p < .01$
Postdeployment Emotional Distress	10.3206	$p < .001$
Interpersonal Distance from Children	8.1198	$p < .005$
Family Cohesion	21.9131	$p < .001$
Family Expressiveness	10.4520	$p < .001$
Family Conflict	5.7261	$p < .05$
Family Control	19.5969	$p < .005$

TABLE SEVENTEEN

Scales:	Item Membership:
Sailor's Need for Marital Distance	102, 109, 118, 121
Spouse's Need for Marital Distance	199, 213, 222, 235, 236,
Sailor's "Right Stuff" Attitude	22, 40, 123, 126, 129,
Spouse's "Right Stuff Attitude	198, 200, 220
Sailor's Individual Commitment to the Navy	23, 25, 27
Sailor's Positive Deployment Attitude	24, 26, 28
Spouse's Positive Deployment Attitude	204, 206, 224
Sailor's Predeployment Attitude	29, 110, 111, 113
Spouse's Predeployment Attitude	209, 210
Sailor's Predeployment Emotional Distress	30, 31, 32, 33, 114, 115, 116
Spouse's Predeployment Emotional Distress	211, 214, 215, 216
Sailor's Deployment Emotional Distress	34, 35, 41, 43, 44, 45, 46
Spouse's Deployment Emotional Distress	212, 223, 224, 225, 227, 228, 232, 231, 233, 234, 239, 247, 248, 249
Sailor's Perceptions of Family Coping	117, 119, 120, 122, 124, 128, 131, 132, 137
Spouse's Perceptions of Family Coping	217, 219, 226, 230, 229, 238, 237, 250, 251, 252, 253, 254, 373, 374, 375
Sailor's Perceptions of Job Performance	36, 37, 38, 39, 42, 49, 50, 127
Sailor's Postdeployment Emotional Distress	47, 48, 133, 134, 135, 136

Scales:

Item Membership:

Spouse's Postdeployment Emotional Distress	240, 241, 242, 243, 244, 245, 246
Sailor's Perception of Communication & Conflict in Family	101, 103, 104, 105, 106, 107, 108, 125, 112, 130
Spouse's Perception of Communication & Conflict in Family	201, 202, 203, 205, 207, 208, 218, 369
Sailor's Perception of Interpersonal Distance From Children	185, 188, 194
Spouse's Perception of Interpersonal Distance from Children	372, 381, 382, 386, 395
Sailor's Perception of Children's Lack of Coping	186, 187, 189, 190, 191, 192, 193
Spouse's Perception of Children's Lack of Coping	370, 371, 376, 377, 378, 379, 380, 383, 384, 385, 387, 388, 389, 390, 391, 392, 393, 394
Sailor's Perception of Family Cohesion	138, 143, 148, 153, 158, 163, 168, 173, 178
Spouse's Perception of Family Cohesion	302, 203, 312, 317, 322, 332, 337, 342
Sailor's Perception of Family Expression	139, 144, 149, 154, 159, 164, 169, 174, 179
Spouse's Perception of Family Expression	303, 308, 313, 318, 323, 328, 333, 338, 343
Sailor's Perception of Family Conflict	140, 145, 150, 155, 160, 165, 170, 175, 180
Spouse's Perception of Family Conflict	304, 309, 314, 319, 324, 329, 334, 339, 344
Sailor's Perception of Family Organization	141, 146, 151, 156, 161, 166, 171, 176, 181
Spouse's Perception of Family Organization	305, 310, 315, 320, 325, 330, 335, 340, 345
Sailor's Perception of Family Control	142, 147, 152, 157, 162, 167, 172, 177, 182

Spouse's Perception of Family
Control

306, 311, 316, 321, 326,
331, 336, 341, 346

Sailor's Ratings of Life Stress

51, 52, 53, 54, 56, 57,
58, 59, 60, 61, 62, 63,
64, 65, 66, 67, 68, 69,
70, 71, 72, 73, 74, 75,
76, 77, 78, 79, 80, 81,
82, 83, 84, 85, 86, 87,
88, 89, 90, 91, 92, 93,
94, 95, 96, 97

Spouse's Ratings of Life Stress

255, 256, 257, 258, 259,
260, 261, 262, 263, 264,
265, 266, 267, 268, 269,
270, 271, 272, 273, 274,
275, 276, 277, 278, 279,
280, 281, 282, 283, 284,
285, 286, 287, 288, 289,
290, 291, 292, 293, 294,
295, 296, 297, 298, 299,
300, 301

APPENDIX C

Figures

FIGURE ONE

Deployment-Related Attitudes As A
Function of Location in the Deployment Cycle

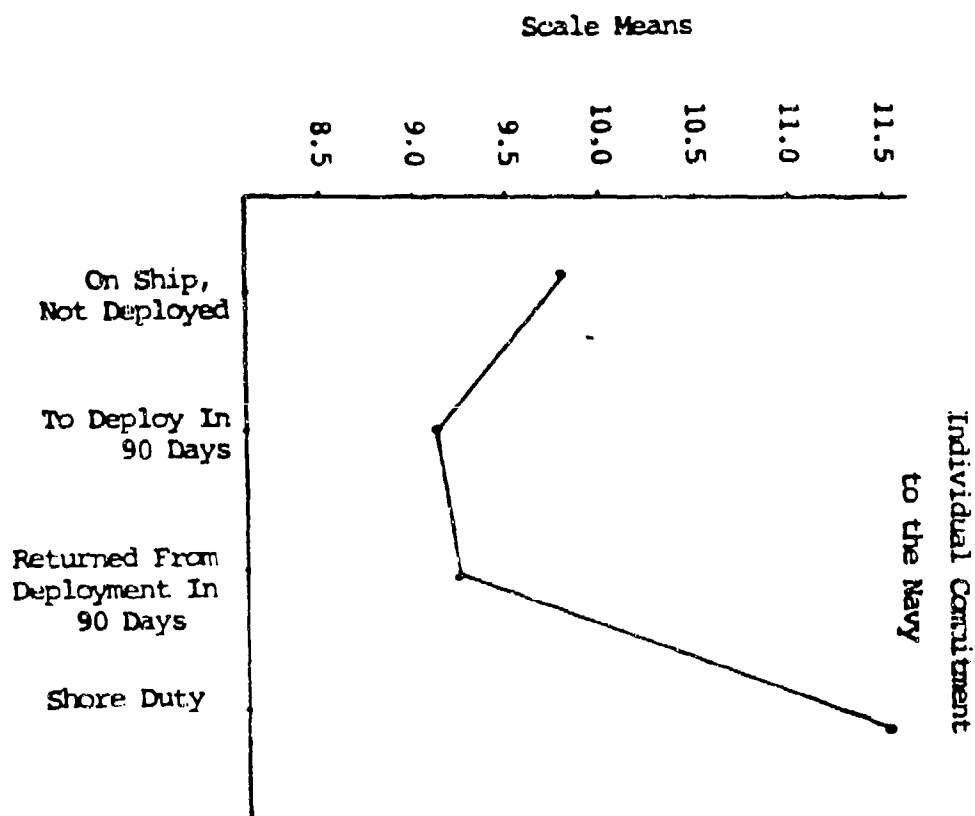
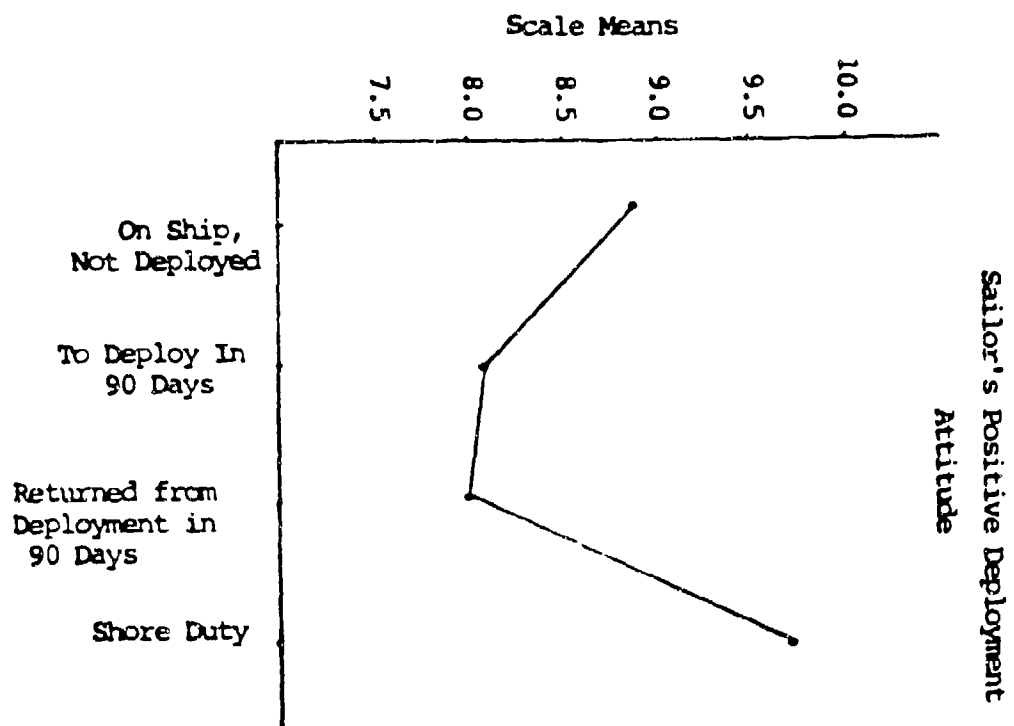


FIGURE TWO

Deployment-Related Attitudes
As A Function of Location in the Deployment
Cycle

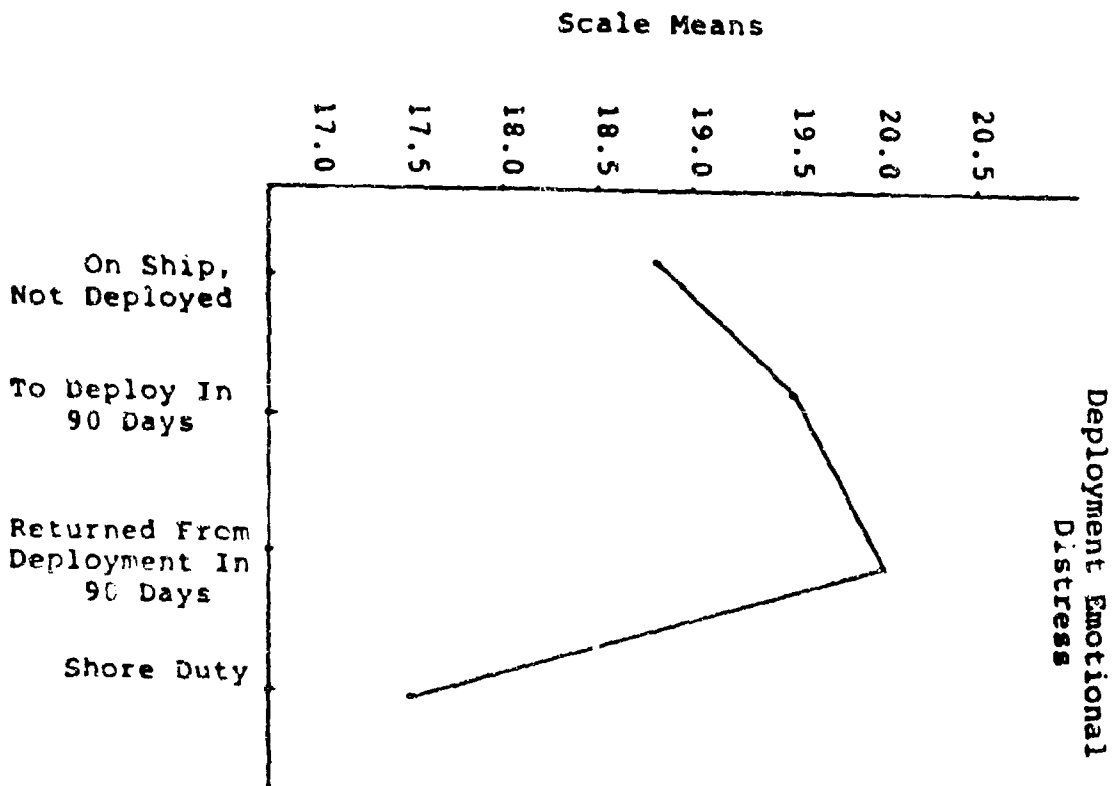
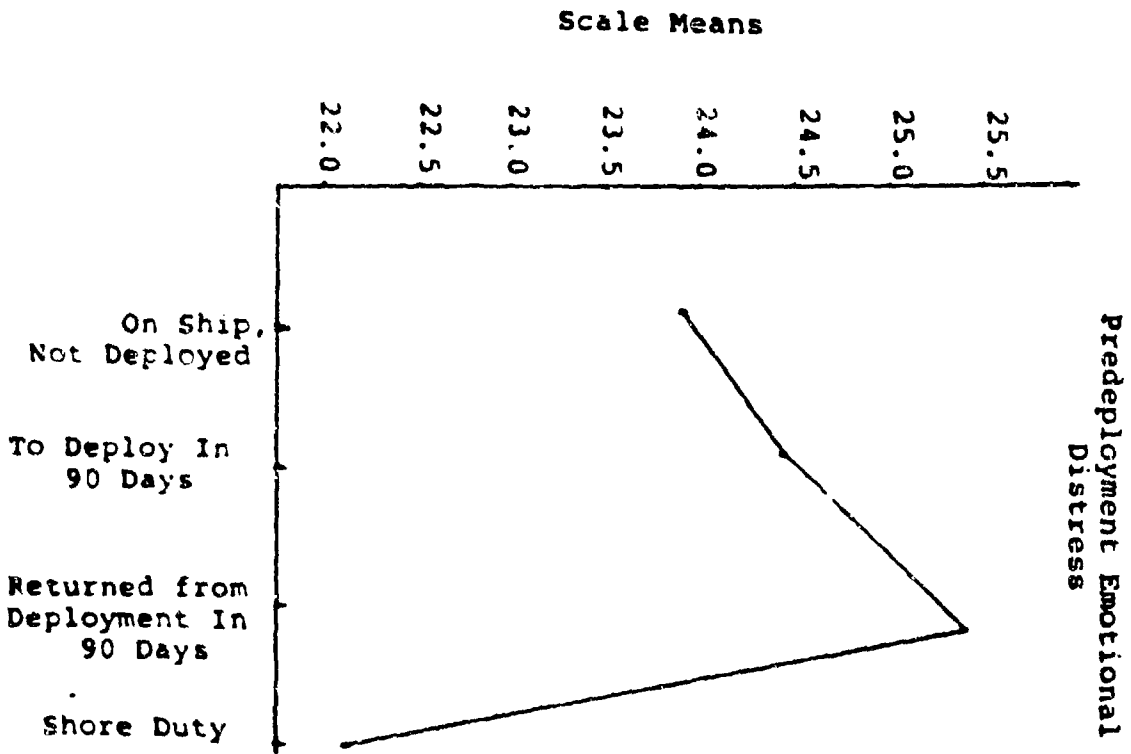


FIGURE THREE
Deployment-Related Attitudes
As A Function Of
Location in the Deployment Cycle

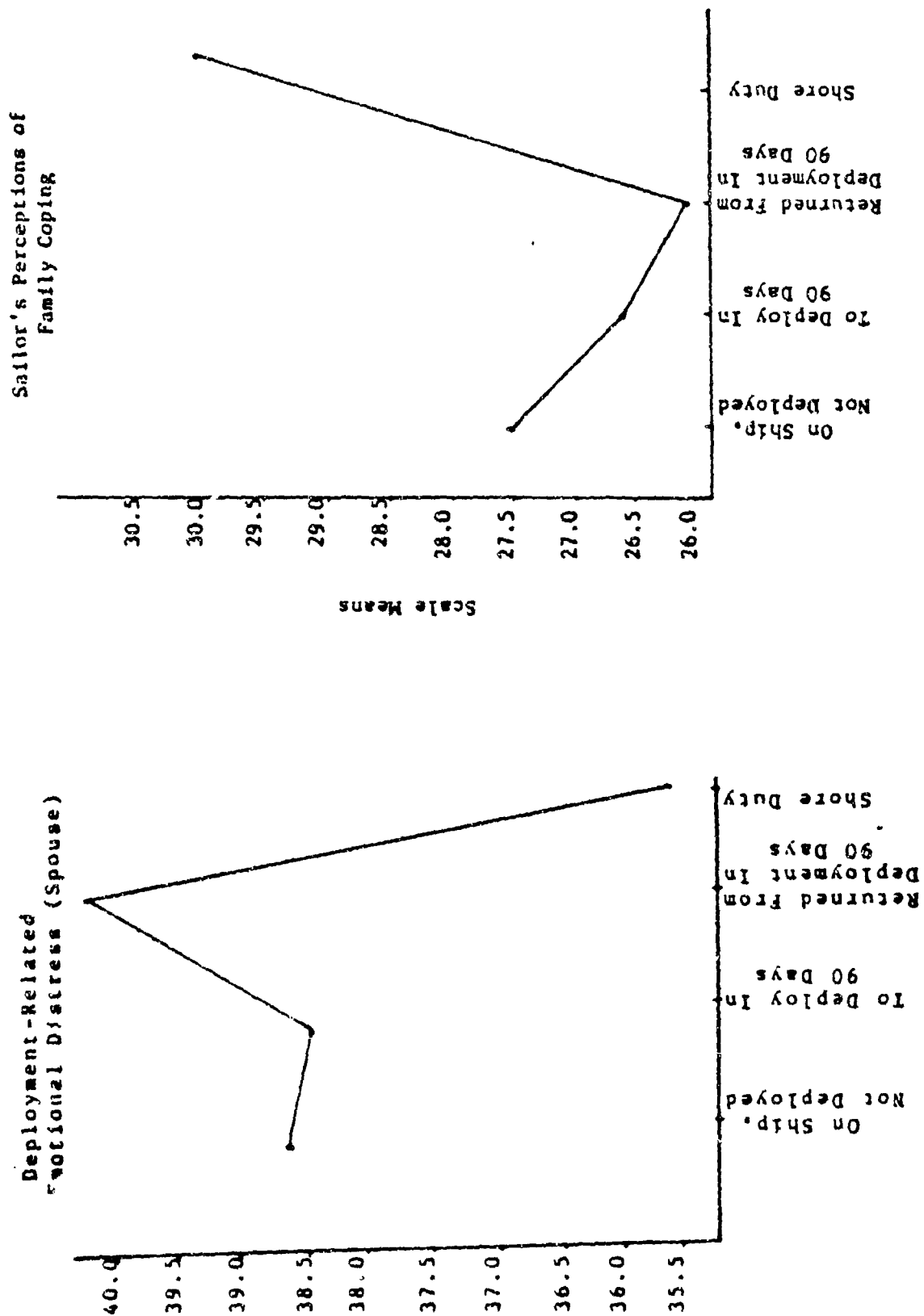


FIGURE FOUR
Deployment-Related Attitudes
As A Function Of
Location In The Deployment Cycle

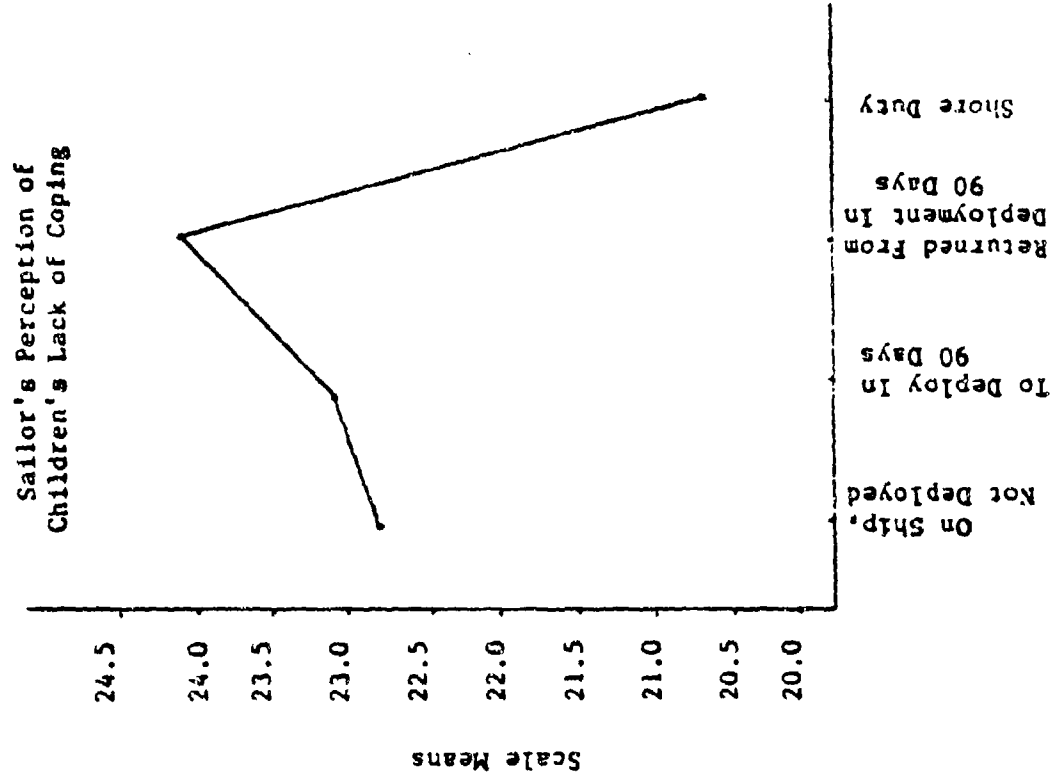
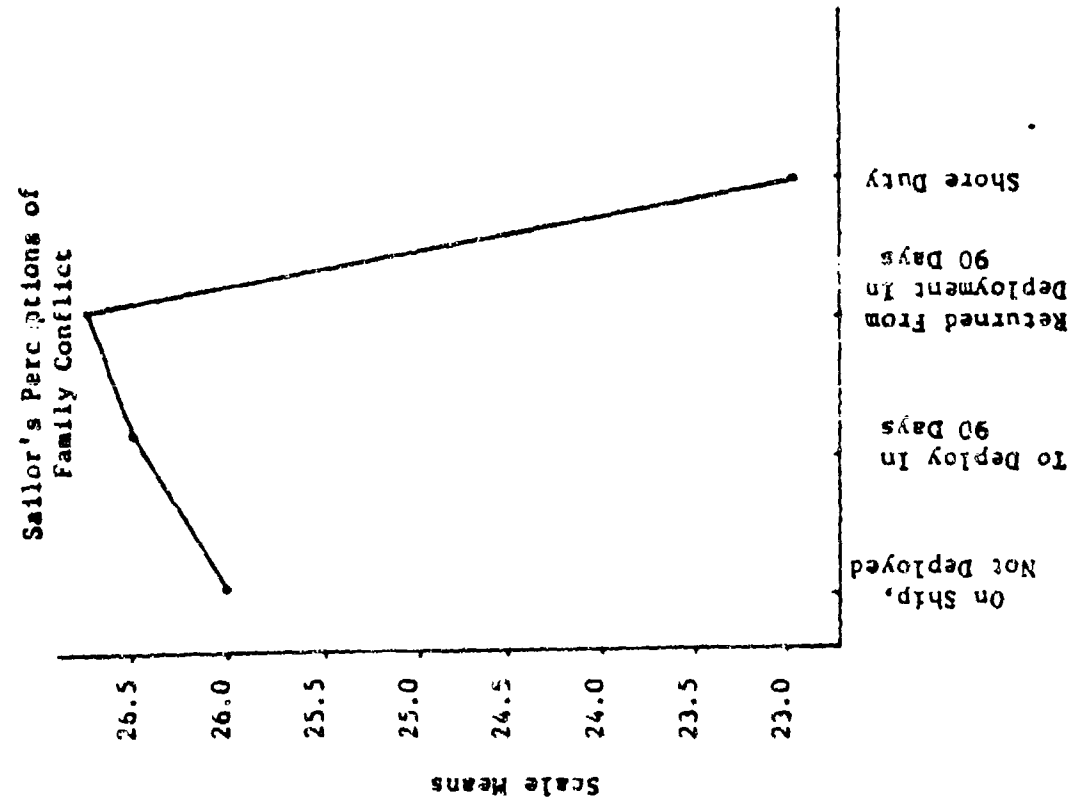
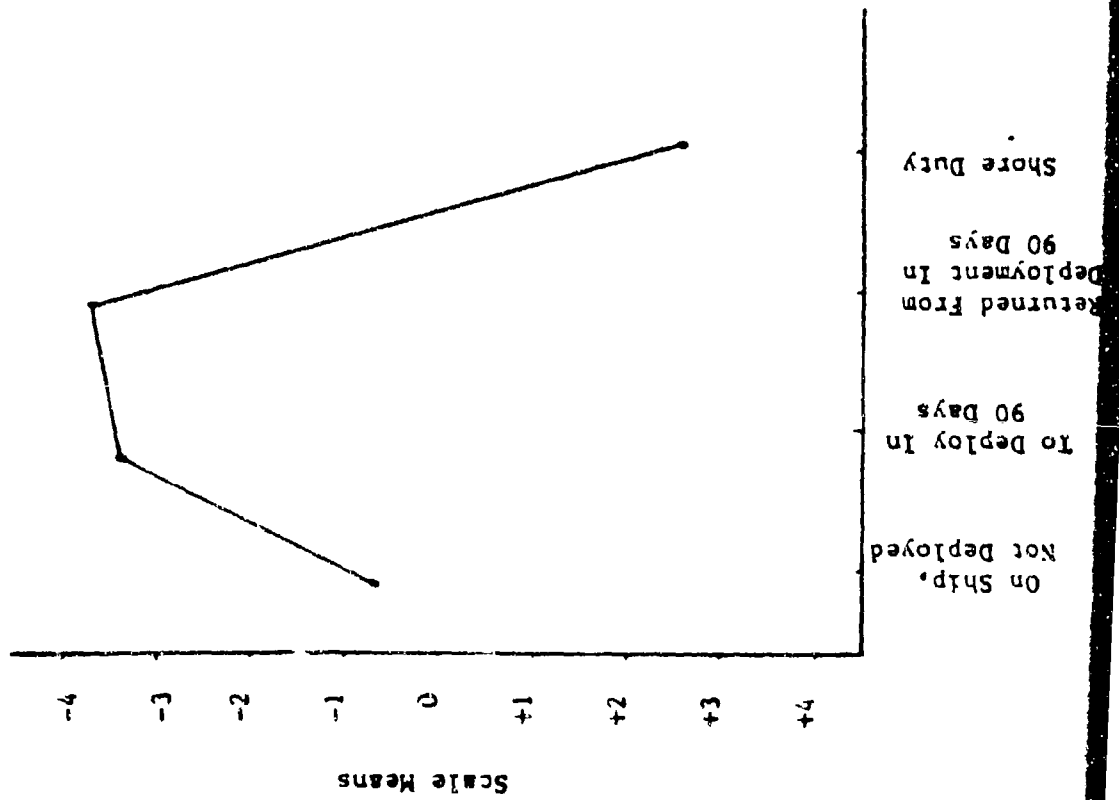


FIGURE FIVE
Deployment-Related Attitudes
As A Function Of
Location In the Deployment Cycle

Sailor's Perception of
Life Stresses



Spouse's Perception of
Life Stresses

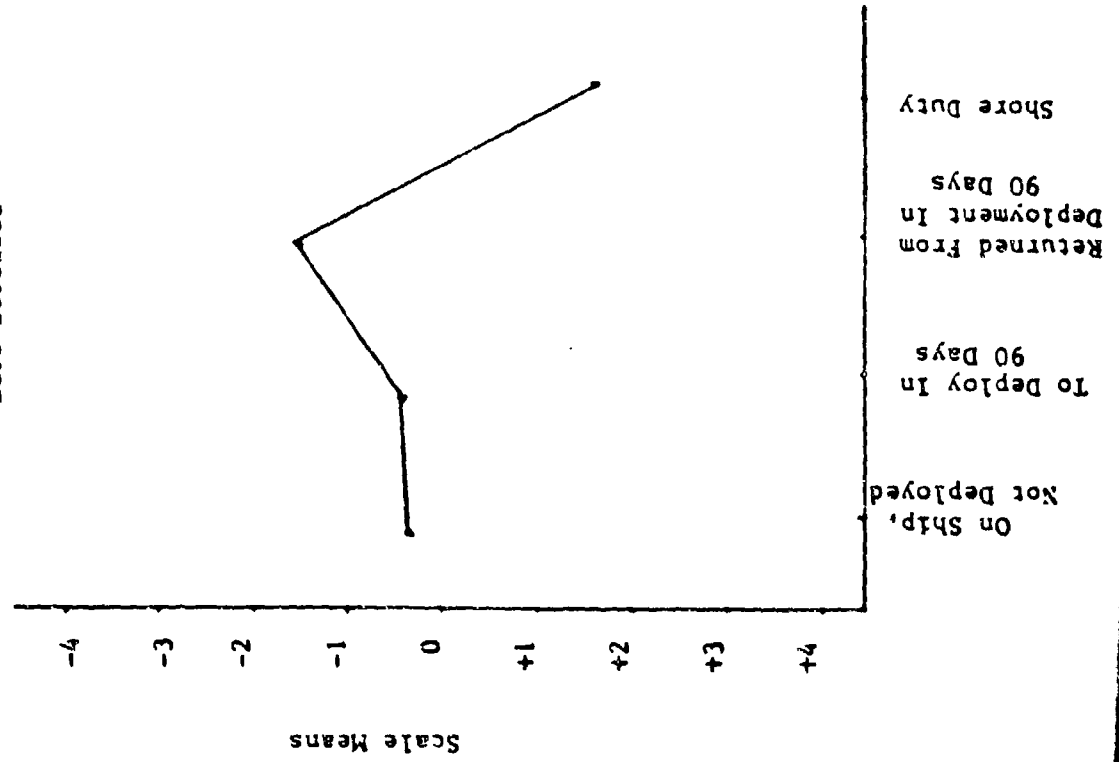


FIGURE SIX
Deployment-Related Attitudes
As A Function Of
Location in the Deployment Cycle

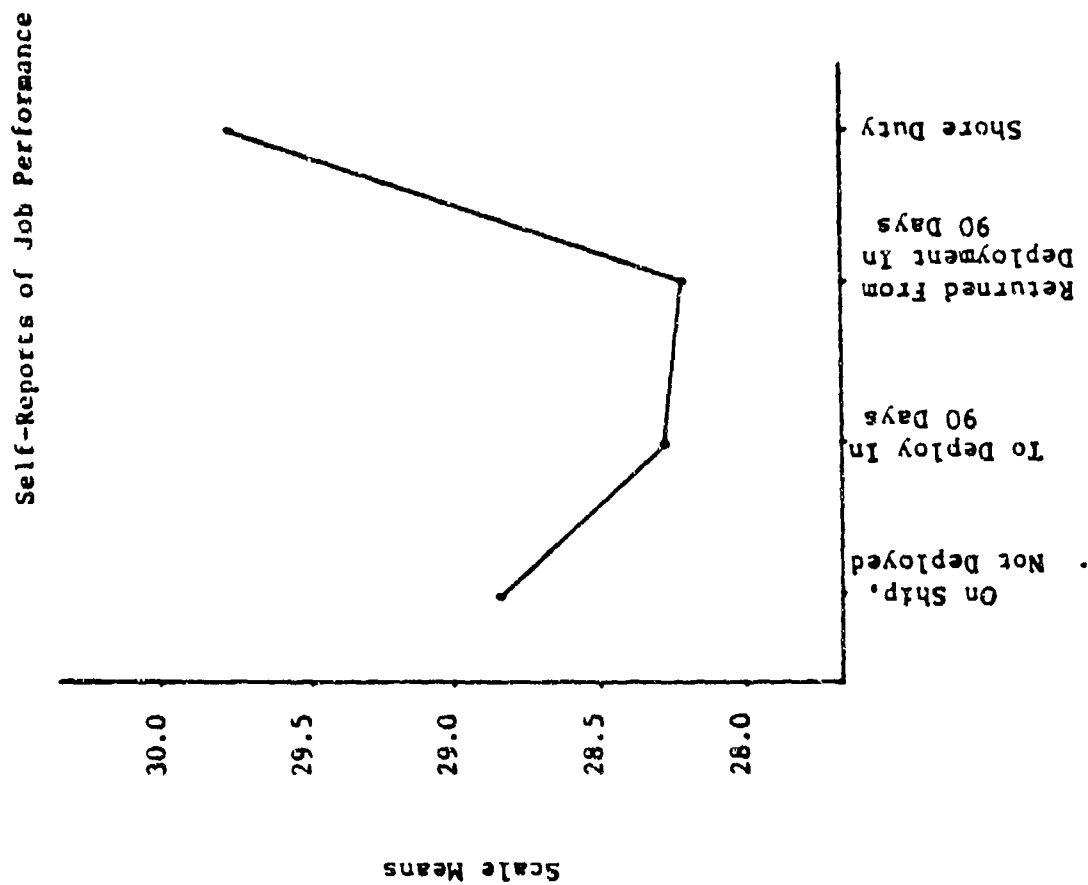


FIGURE SEVEN
Indices of Family Functioning

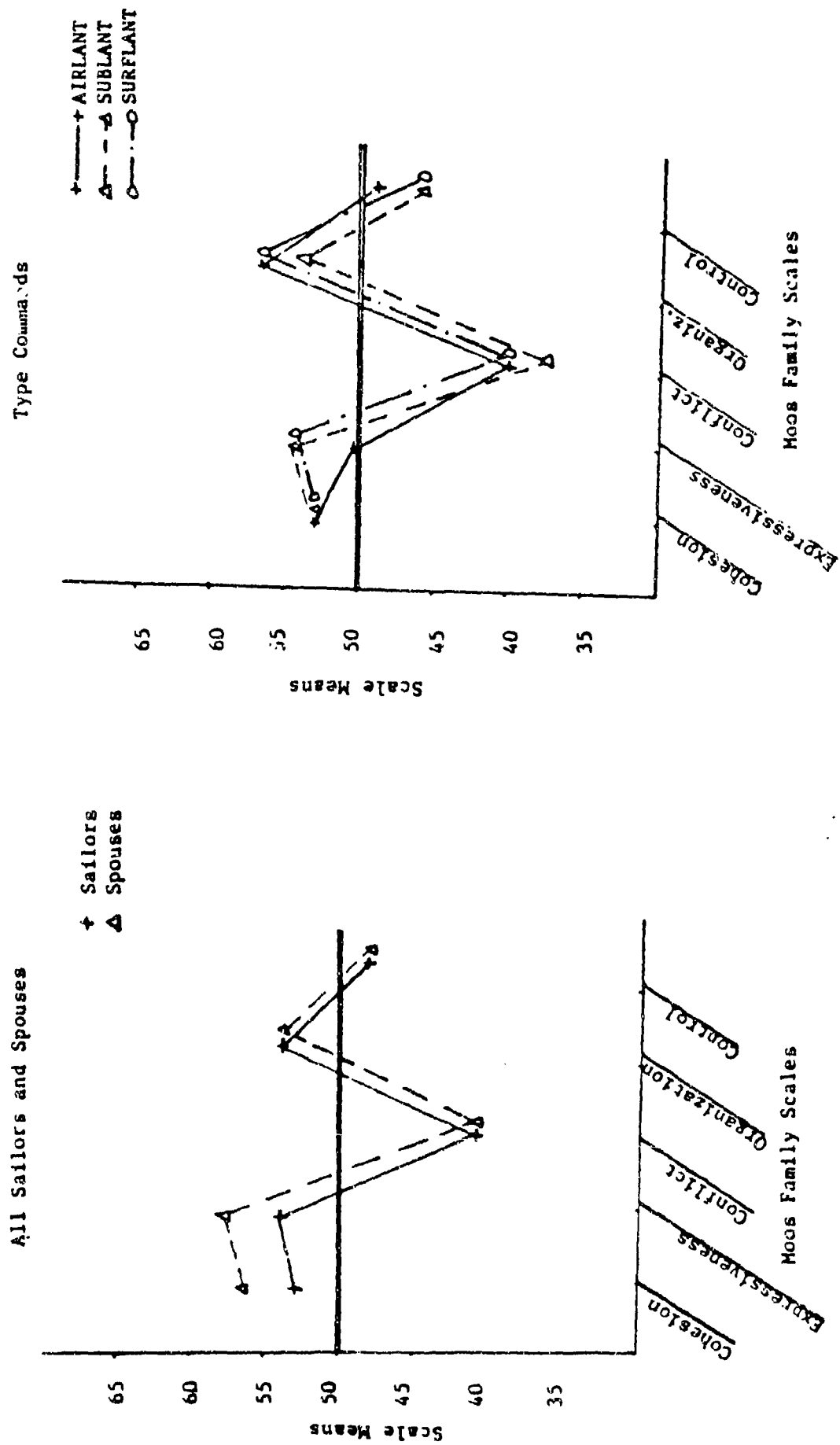


FIGURE EIGHT
Family Environment Scale Means by Type
Command Membership

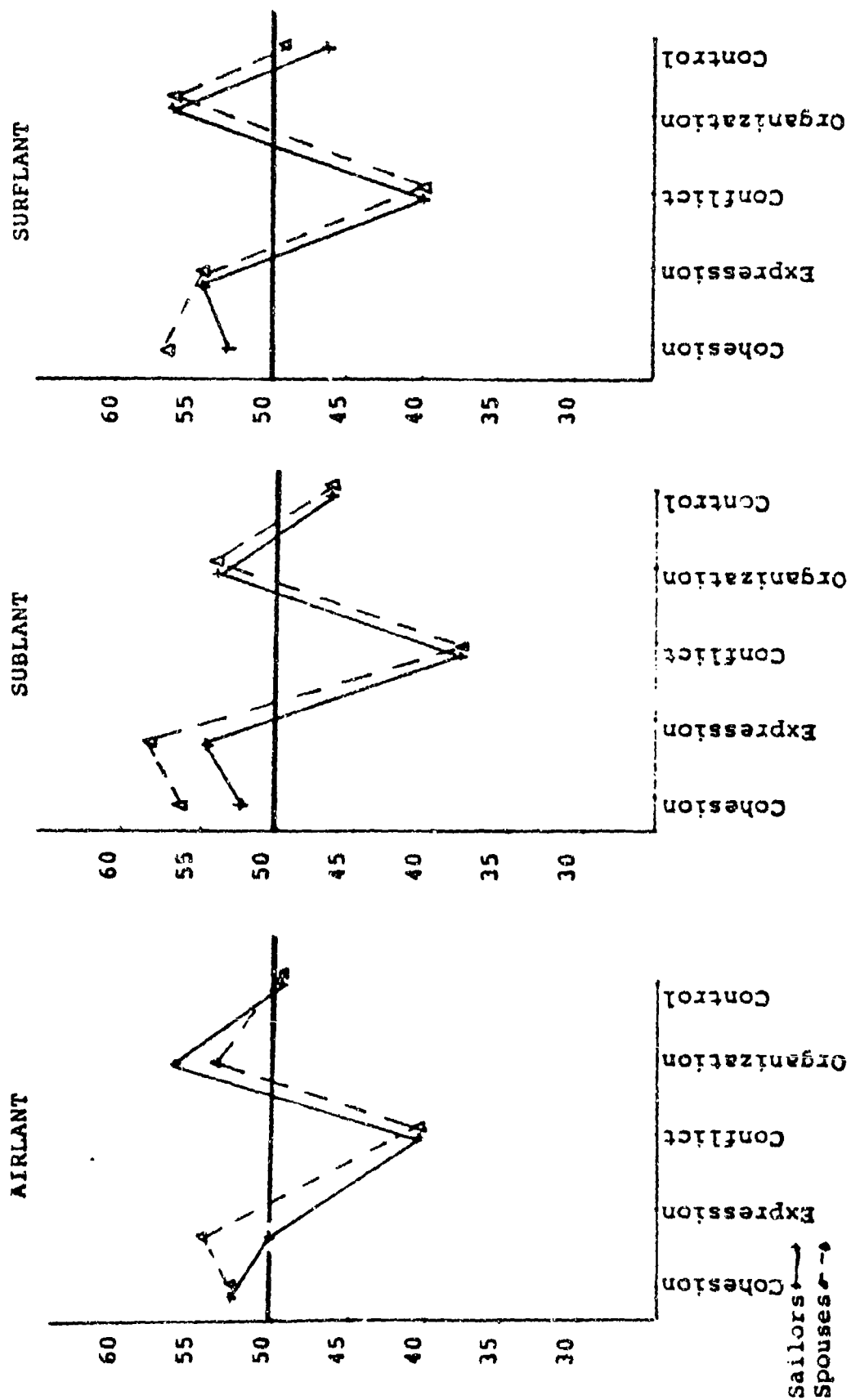


FIGURE NINE
Family Environment Scale
Scores by Personnel Rank

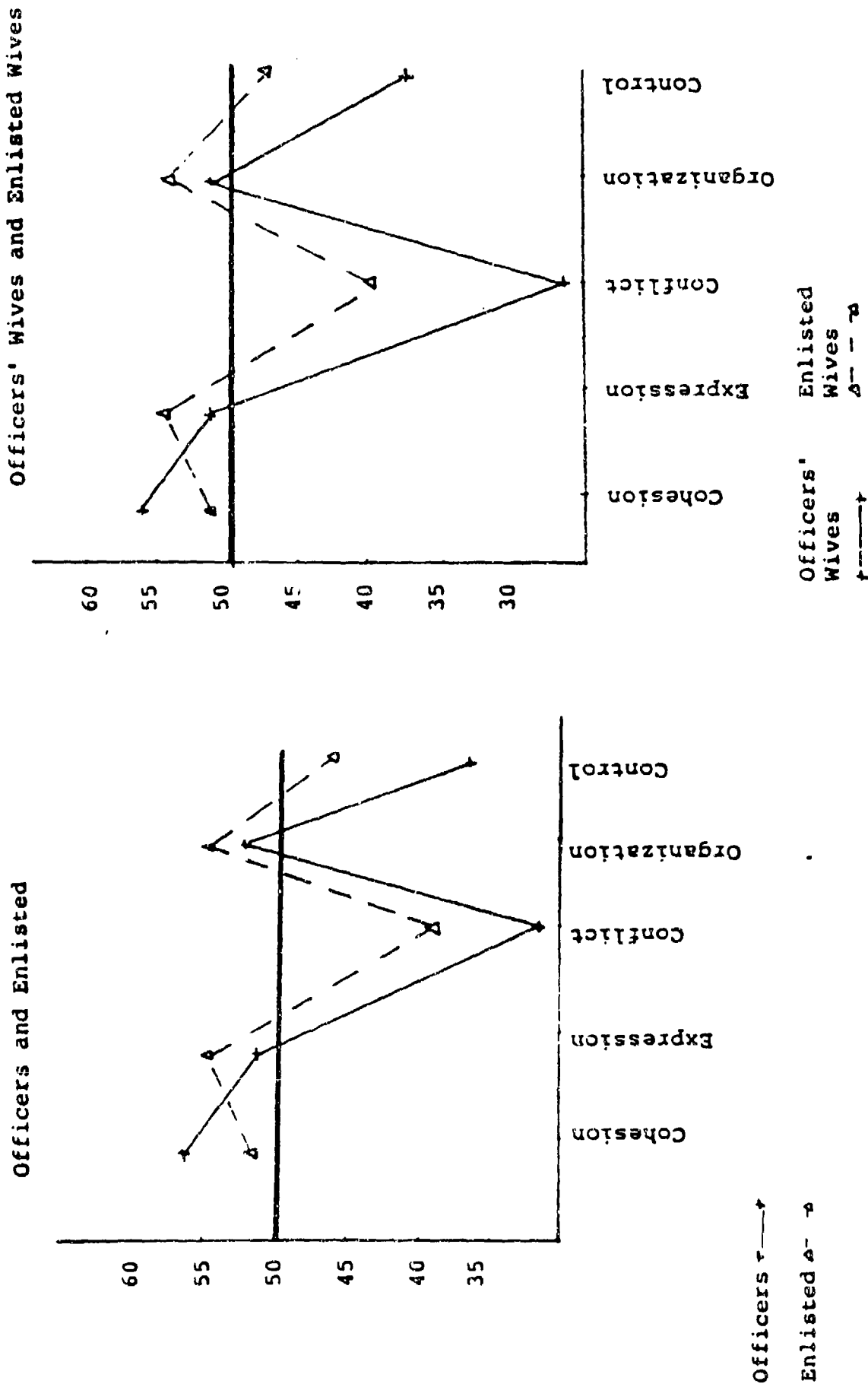
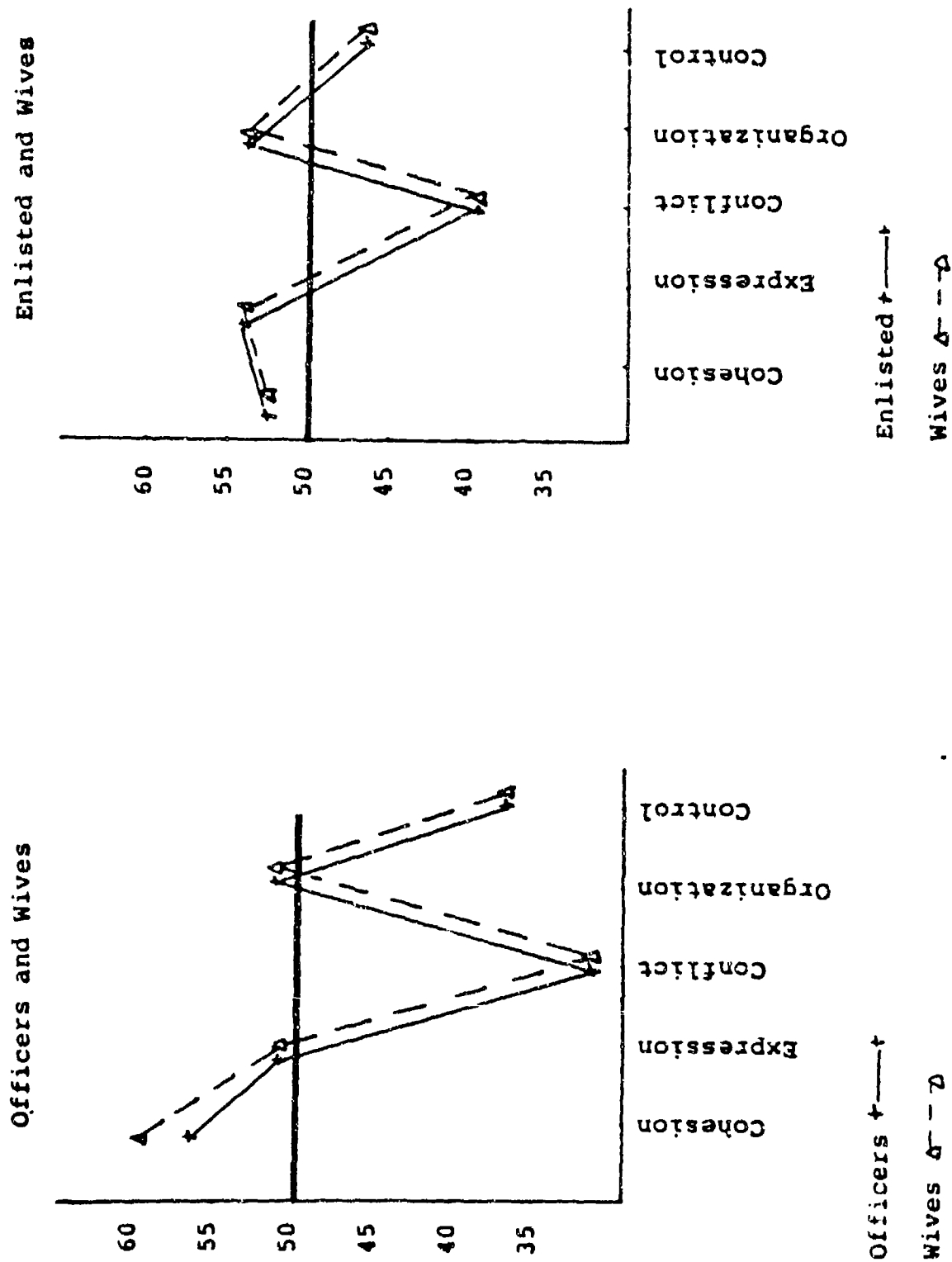


FIGURE TEN
Family Environment Scale Scores
by Rank



APPENDIX D

Checklists

The Eastern Virginia Medical School

Deployment Problems Checklist

This checklist is designed to identify the risk levels for you or your family to develop serious coping problems while you are on deployment. Check each statement as it describes your current situation.

yes no

1. Do you or your spouse often hide problems from each other?
2. Do you or your spouse often refuse to discuss "Hot" family issues with each other?
3. Do you or your spouse often feel that you cannot talk freely and honestly with each other?
4. Do you or your spouse often fight or argue a lot, and nothing seems to get settled?
5. Over the past year, have you or your spouse been exposed to a major stressful situation?
6. Do you feel that the past year has been more than usually stressful for you and/or your family?
7. In the past 90 days, have you noticed a feeling of not caring about your job very much?
8. Have you and/or your spouse felt unusually depressed or unhappy within the past 90 days?
9. Have you and/or your spouse felt unusually emotionally upset within the past 90 days?
10. Have you noticed your children to be unusually withdrawn, quiet, or distant from you within the past 90 days?
11. Have you noticed your children to be unusually aggressive or angry within the past 90 days?
12. Does the thought of going on deployment make you or your spouse unusually upset or disturbed?

--	--

13. Within the past 90 days, have you been feeling more and more like you would like to leave the Navy?

Scoring Instructions:

Count the number of items for which you checked "Yes," and read the following score results.

0-3 You and/or your family will probably do well on this deployment. While deployments are stressful by themselves, your family will probably cope well while you are gone, and will deal with small crises appropriately.

4-6 You and/or your family is at moderate risk for developing some significant coping problems during the deployment period. Planning ahead for the deployment and building a strong circle of friends and helpers to call on will help your family cope more effectively. Your command and your local Navy Family Services Center can help you.

6-8 You and/or your family are at marked risk for developing problems in coping during the deployment period. We recommend that you consider contacting your local Navy Family Services Center, your command chaplain, or your local mental health services center in order to arrange for you and your family to receive help in learning to deal with the stresses of a deployment.

More than 8: You and/or your family are at high risk for developing major problems in coping during the deployment period. It is important that you contact agencies or individuals which can help both you and your family. A helpful first step would be to talk with your command chaplain or physician about your feelings. Another approach would be to contact a local agency that specializes in helping people in your situation. A list of these agencies and their telephone numbers is attached.

Navy Family Services Center	444-NAVY
Champus Clinical Affairs Office	640-2720
Portsmouth Naval Hospital	398-5064

Deployment Problems Checklist for Single Sailors

This checklist is designed to identify your risk levels for development problems in coping while you are on deployment. Check each statement as it describes your current situation.

yes no

1. Do you often find it hard to talk about your problems with others?
2. Do you find it hard to make and keep close friends?
3. Do you fight a lot with your friends and acquaintances?
4. Over the past year, have you experienced a stressfull major life event (e.g. divorce, death of a family member, serious financial loss)?
5. Do you feel that the past year has been more than usually stressful for you?
6. In the past 90 days, have you noticed a feeling of not caring very much about your job?
7. Have you felt unusually depressed or unhappy in the past 90 days?
8. Have you felt unusually emotionally upset within the past 90 days?
9. Does the thought of going on deployment make you unusually upset or disturbed?
10. Within the past 90 days, have you been feeling more like you would like to leave the Navy?

Scoring Instructions:

Count the number of items for which you checked "yes" and read the following score results:

- 0-2 You will probably do well on this deployment. While deployments are stressful by themselves, your coping mechanisms will generally help you to deal with daily life appropriately.

3-5 You are at moderate risk for developing significant problems in coping during the deployment period. Planning ahead for the deployment and building a strong circle of friends will help you function better. Your command chaplain and your local Navy Family Services Center can help you.

6-7 You are at marked risk of developing problems during the deployment period. We strongly recommend that you contact your local Navy Family Services Center, your command chaplain, or your local mental health services center in order to get help in learning how to deal with the stresses of deployment.

More than 7 You are at high risk of developing major problems in coping during the deployment period. It is important that you contact agencies or individuals which can help you. A helpful first step would be to talk with your command chaplain or physician about your feelings. Another approach would be to contact a local agency that specializes in helping people in your situation. A list of these agencies and their telephone numbers follows:

Navy Family Services	444-NAVY
Champus Clinical Affairs Office	640-2720
Portsmouth Naval Hospital	398-5064