# PERCEIVED LIFE QUALITY AND HEALTH-RELATED CORRELATES AMONG MEN ABOARD NAVY SHIPS



S. W. CONWAY
T. L. CONWAY

REPORT NO. 88-43



NAVAL HEALTH RESEARCH CENTER
P.O. BOX 85122
SAN DIEGO, CALIFORNIA 92138

NAVAL MEDICAL RESEARCH AND DEVELOPMENT COMMAND
BETHESDA, MARYLAND

# PERCEIVED LIFE QUALITY AND HEALTH-RELATED CORRELATES AMONG MEN ABOARD NAVY SHIPS


Susan W. Conway

Terry L. Conway

Health Psychology Department

Naval Health Research Center

P.O. Box 85122

San Diego, CA 92138-9174



Report No. 88-43 was supported in part by the Naval Military Personnel Command by Work Order No. N0002288WRWWW508 and by the Naval Medical Research and Development Command, Department of the Navy. The views presented are those of the authors and do not reflect the official policy or position of the Department of the Navy, Department of Defense, or the U.S. Government. Approved for public release, distribution unlimited.

## Summary

### Problem

The improvement of well-being among service members is a continuing concern for Navy policy makers. Recent SECNAV instructions have established large-scale health promotion programs which emphasize the enhancement of quality of life (QOL) among Navy personnel. Establishing baseline levels of life quality and periodic monitoring of well-being following implementation of these programs can help assess whether the goal of enhanced well-being among Navy personnel is being met. Additionally, it is important to examine factors related to life quality to provide information about potential ways for improving Navy members' well-being.

### Objectives

The primary objectives of this study were twofold. First, findings are presented to provide a baseline assessment of perceived QOL in a group of Navy shipboard men. As part of this objective, Navy shipboard QOL ratings were compared to those of a national sample to provide a perspective for interpreting the Navy responses. Second, various health-related factors were examined as potential correlates of life quality. This information can provide ideas about factors that might be targeted in health promotion programs to improve health and fitness as well as enhance Navy members' perceptions of well-being.

### Approach

Participants were 430 men stationed aboard nine Navy ships. The men completed self-report questionnaires assessing various lifestyle habits and attitudes toward health and fitness. Lifestyle questionnaire measures included QOL items, subjective ratings of health and fitness, perceptions of being overweight, substance consumption measures, and reports of recent experience with upper respiratory, gastrointestinal, musculoskeletal, and psychosomatic symptoms. In addition, a measure of overall fitness was computed by averaging the standardized scores on four tests of physical fitness: 1.5-mile run, sit-ups test, sit-reach test, and percent body fat.

Two types of data analyses were completed. First, means for Navy shipboard and national responses on common QOL items were compared. Second, regression analyses were used to examine the association between QOL and several health-related measures.

## Results

Navy QOL evaluations were similar to national evaluations in terms of variability and general positivity. There were significant yet small differences between the two groups in the average ratings on several items. Navy shipboard men reported being less satisfied with their wives or girl friends than the national sample and were consistently lower on items addressing satisfaction with work. Conversely, Navy men reported greater satisfaction with themselves and with their ability to adjust to changes than did the national sample.

A number of health-related variables were found to be independently associated with perceived QOL in four life domains. Work QOL was associated with higher subjective health ratings, being a smoker, and lower reporting of psychosomatic symptoms. Perceived quality of one's personal life was associated with higher subjective ratings of physical fitness, lower alcohol consumption, and lower reporting of psychosomatic symptoms. Higher subjective ratings of physical fitness, lower reporting of psychosomatic symptoms, and perceptions of not being overweight were associated with higher satisfaction with self. Satisfaction with life as a whole was related to higher subjective ratings of health, lower reporting of gastrointestinal symptoms, and perceptions of not being overweight.

## Conclusions

Results suggest that the Navy shipboard environment may enhance perceptions of oneself and one's coping abilities, yet contribute to lower satisfaction with personal life and work--possibly related to frequent separation from home and family. The consistent association of health and fitness measures with higher life quality, including satisfaction with one's Navy job, underscores the importance of the Navy's Health and Physical Readiness Program and the Chief of Naval Operations' Personal Excellence Program. To the extent that such programs improve the health and fitness of service personnel, additional benefits should be gained in terms of enhanced well-being among Navy personnel.

# Perceived Life Quality and Health-Related Correlates among Men aboard Navy Ships

Susan W. Conway and Terry L. Conway
Naval Health Research Center

## Introduction

Promoting quality of life (QOL) has become a national concern in recent years and has been the goal of many social policies and programs. It is argued that monitoring national well-being will allow better informed, more farsighted decisions by public officials (Schuessler & Fisher, 1985; Campbell, 1976). Paralleling national trends, the improvement of well-being among service members is a continuing concern for Navy policy makers as well. In fact, recent health promotion initiatives have established large-scale programs emphasizing the enhancement of life quality among Navy personnel (SECNAVINST 6100.5, 1986).

To evaluate the effectiveness of the Navy's health promotion programs in enhancing life quality, it is important to establish baseline levels of life quality among service members. Periodic monitoring of well-being following the implementation of various programs can then be done to examine whether the goal of enhanced well-being among Navy personnel is being met. Additionally, it is important to examine factors related to life quality to provide information about potential ways for improving Navy members' well-being. For example, health-related factors may be important targets for interventions to improve life quality, as previous research has found factors such as obesity, health behaviors, exercise, and physical health to be associated with well-being (Crisp & McGuinnes, 1976; Wetzler & Ursano, 1988; McCann & Holmes, 1984; Mechanic, 1980).

The assessment of life quality, however, is a challenge in its own right. Social scientists in a variety of disciplines have set about the task of developing valid and reliable methods for assessing QOL (Schuessler & Fisher, 1985). Historically, measures of life quality have been tied to economic affluence and material possessions. Due to the inadequacy of monetary or other objective measures for assessing life quality, however, the concept has taken on new measurement dimensions. Many researchers have turned their focus away from economic indicators as measures of QOL to those that are noneconomic and often subjective. The majority of subjective measures pertain to either

happiness or satisfaction, and they pertain to either a global feeling (e.g., satisfaction with life as a whole) or to a domain-specific feeling (e.g., satisfaction with one's job). In some cases, domain-specific evaluations have been combined to measure or predict global satisfaction (Andrews & Withey, 1976).

In concordance with the trend to focus on subjective QOL measures, this study used several measures of perceived life quality similar to those used by Caplan et al. (1984). Using the Caplan et al. (1984) framework, perceived life quality was measured with respect to several life domains (i.e., work, personal life, self) and to life as a whole. The health-related factors examined in this study were selected because of their general importance to Navy health promotion efforts. The primary objectives of this study were twofold. First, findings are presented to provide a baseline assessment of perceived QOL in a group of U.S. Navy men assigned to ships. As part of this objective, the Navy shipboard QOL ratings were compared to those of a national sample to provide a perspective for interpreting the Navy responses as well as to provide some indication about how other findings from this study might generalize to the civilian sector. Secondly, various health-related factors, considered important in their own right among Navy policy makers, were examined as potential correlates of life quality. This information can provide ideas about the types of factors that might be targeted in health promotion programs to improve health and fitness as well as enhance Navy members' perceptions of their own well-being.

## Method

### Subjects

Data were collected from 430 men who were participants in a larger study examining health-related lifestyle behaviors and physical fitness among male shipboard personnel (Conway & Dutton, 1985). These Navy men were stationed aboard nine San Diego-based ships, including one aircraft carrier, one cruiser, two frigates, two destroyers, and three amphibious warships. No female personnel were included in the study as only 3 of 90 San Diego-based ships had women aboard, and none of the three ships became part of this study.

The average age of the participants was 26.3 years (SD=6.4) with a range from 18-50. On the average, participants had completed 12.5 years (SD=1.5) of

education. Seventy percent of the participants were white, 8% were black, 10% were of other racial/ethnic backgrounds, and 12% did not report their ethnic background. Enlisted personnel comprised 92.5% of the sample, a slightly higher proportion than the 86.6% found in the Navy at large (Naval Military Personnel Command, 1984). The median paygrade was E-4 (petty officer, third class) and the average time in service was 6.3 years (SD=5.5).

To assess the representativeness of this group of 430 men relative to other Navy men assigned shipboard duty, demographic characteristics of the current participants were compared to those of a Navy-wide random sample of Navy personnel (Conway, Conway, & Dutton, 1988). Shipboard men in the Navy-wide random sample averaged 26.2 years of age, 12.4 years of education, and 6.7 years in the service. Their median paygrade was E-5, and 78% identified their race/ethnic background as white. Comparison of these demographic characteristics from the Navy-wide sample with those in the present study indicate that the present sample is probably representative of typical Navy personnel assigned to ships.

## Procedures

Two types of data were collected: (a) self-report questionnaire data assessing lifestyle information and attitudes related to health and well-being, and (b) results from a required physical readiness test (PRT) assessing sailors' physical fitness and body composition (OPNAVINST 6110.1B, 1982). All data were collected by Command Fitness Coordinators (CFCs) who are Navy personnel assigned by each ship to conduct the PRT. All personnel were required by Navy regulations to take the PRT unless they had a medical waiver. CFCs distributed the lifestyle questionnaires to ship personnel who were asked to complete it voluntarily and return the questionnaire to the CFC. Although the questionnaires were distributed in a haphazard rather than truly random fashion, the group who completed questionnaires appeared to be typical of other Navy men aboard ships (see description of subjects above).

## Questionnaire Measures

**Perceived quality of life.** Respondents completed 16 items that assessed satisfaction/positive affect in a variety of areas such as health, personal accomplishments, interpersonal relationships, work, and life as a whole.

Wording of these items was based on items used by Andrews and Withey (1976). Item responses were presented in a seven-point Likert format with response choices being (1) terrible (2) unhappy, (3) mostly dissatisfied, (4) mixed, (5) mostly satisfied, (6) pleased, and (7) delighted. The QOL items were analyzed individually, and, as suggested by Caplan et al. (1984), were also used to compute scale scores related to four conceptual life 'domains:' work life, personal life, self, and life as a whole. The internal consistencies (alpha) of these specific scales in the present study were .71, .85, .90, and .89, respectively. Intercorrelations among the four QOL scales are presented in Appendix A.

**Substance consumption.** A measure of weekly alcohol use was computed as the product of two responses: the average number of drinks consumed per day during the last week and the number of days on which one drank during that week. Caffeine consumption was computed as the sum of responses to questions regarding daily intake of cups or glasses of caffeinated coffee, tea, and soft drinks. Smoking status was based on an item that categorized participants as current smokers or nonsmokers. An additional quantitative measure of tobacco use among smokers was based on an item asking about average daily smoking of cigarettes, cigars, and pipefuls during the past week, and used a 10-category response scale: 0, 1-5, 6-10, 11-15, 16-20, 21-25, 26-30, 31-35, 36-40, and 41+.

**Perceived health.** A two-item scale was used to assess subjective ratings of health (alpha=.68). One of these items asked respondents to rate their current health on a 5-point scale from poor to excellent, and the other to indicate the extent to which their health had been what they wanted it to be during the last seven days. Participants also completed a checklist of common physical symptoms associated with illness or injury. Individuals indicated the extent to which they experienced each symptom during the last seven days using a 6-point Likert-type format ranging from 0 "did not experience" to 5 "experienced a great deal." Symptoms were organized into four categories: upper respiratory (i.e., cough, sore throat, flu, sinus problems, common cold symptoms; alpha=.83); gastrointestinal (i.e., stomach problems, constipation, indigestion, diarrhea, nausea/vomiting; alpha=.67); musculoskeletal (i.e., backaches, muscle aches or stiffness, muscle cramps, aching joints or bones,

muscle sprain or strain; alpha=.79); and psychosomatic (i.e., trouble concentrating, shortness of breath, pains in chest or heart, general tiredness, problems thinking clearly, tingling or numbness, weakness; alpha=.81). Scores were computed as the mean of the responses for symptoms comprising each category. Intercorrelations among the four physical symptoms categories are presented in Appendix B.

**Perceived physical fitness.** A two-item scale was used to measure subjective ratings of current physical fitness (alpha=.69). One of these items asked respondents to rate their current physical fitness on a 5-point scale from poor to excellent, and the other to indicate the extent to which their physical fitness had been what they wanted it to be during the last seven days. Considering excess weight as a factor influencing one's physical fitness, a scale based on perceptions of being overweight was also computed to assess one's propensity to weight problems. This scale was comprised of two items addressing whether one felt he was currently overweight or had ever been overweight (alpha=.48).

### Objective Physical Fitness Measure

Measures collected from the Navy's required PRT were used to compute an objective overall fitness score. The test assessed four components of physical fitness (see OPNAVINST 6110.1B or Conway & Dutton, 1985): (a) cardiorespiratory endurance, measured as the time to complete a 1.5-mile run/walk, (b) muscular endurance, measured as the number of bent-knee sit-ups completed in a 2-minute period, (c) flexibility, measured as the distance one could reach beyond the heels of the feet while sitting with legs outstretched, and (d) body composition, measured as the percentage of body weight attributable to fat, estimated from neck and abdomen circumferences (Wright, Dotson, & Davis, 1981). The overall fitness measure was computed by averaging the standardized scores on the four PRT measures. The signs of standardized values for the 1.5-mile run and the estimated percent body fat were reversed prior to computing this average score so that a higher average value indicated a higher overall fitness level.

## Results

Two types of data analyses were completed. First, to present baseline assessments of Navy shipboard QOL and to provide a perspective for

interpreting Navy QOL evaluations, descriptive statistics for the Navy and national QOL assessements were compared following the method used by Caplan et al. (1984). Second, correlational and multiple regression analyses were performed to examine the association between QOL and several measures of perceived health, physical fitness, and substance use.

## Comparison of QOL between Navy and National Groups

Mean life quality ratings for the Navy shipboard men were compared to those of national representative samples, which included adult men and women surveyed during the mid-1970s (Andrews & Withey, 1976). While the Navy and national groups differ on several demographic dimensions, comparing the two groups was still considered reasonable because demographic variables such as age, sex, and education have not been consistent correlates of perceived life quality (Wilkening & McGranahan, 1978; Davis, 1981). Table 1 shows means and standard deviations for the two groups on common items clustered according to the four conceptual life domains: personal life, work life, self, and life as a whole. (See Appendix C for shipboard means and distributions of all QOL items.) Similar to national QOL assessments (Andrews & Withey, 1976), the distributions of Navy QOL evaluations were negatively skewed (i.e., reflecting generally positive QOL evaluations) and showed considerable variation. For most items, every one of the seven response categories, ranging from 1 "terrible" to 7 "delighted", was used by participants. The average Navy QOL evaluation across the items in Table 1 was "mostly satisfied" (Mean=5.23) with a range from 4.44 ("How do you feel about your job?") to 5.66 ("How do you feel about yourself?") The average rating across these QOL items for the national sample was also "mostly satisfied" (Mean=5.47).

Table 1 also shows results of nondirectional t-tests for independent samples comparing the Navy and national groups for common QOL items. Navy shipboard men differed significantly from the national sample on the one common measure of personal life quality; Navy men reported being less satisfied with their wives and girl friends. On the three items addressing work satisfaction, Navy men were consistently less satisfied than the national sample: Navy shipboard men gave lower ratings regarding feelings about their job, their coworkers, and the actual work done on the job. Of the five common measures of satisfaction with self, two showed significant differences between the Navy and national groups with Navy QOL evaluations being higher: Navy

**Table 1**

Comparison of Navy and National Mean QOL Evaluations

| QOL Item | Navy Mean | Navy S.D. | Nat'l Mean | Nat'l S.D. | t |
|---|---|---|---|---|---|
| **Personal** | | | | | |
| How do you feel about your wife/husband (or girlfriend/boyfriend)? | 5.5 | 1.6 | 6.5 | 1.4 | 11.56* |
| **Work** | | | | | |
| How do you feel about your job? | 4.4 | 1.5 | 5.5 | 1.0 | 14.55* |
| How do you feel about the people you work with—your coworkers? | 5.0 | 1.1 | 5.6 | .9 | 11.98* |
| How do you feel about the work you do on the job—the work itself? | 5.0 | 1.3 | 5.6 | 1.1 | 8.71* |
| **Self** | | | | | |
| How do you feel about the way you handle problems that come up in your life? | 5.3 | 1.0 | 5.2 | 1.0 | 2.12 |
| How do you feel about what you are accomplishing in your life? | 5.1 | 1.2 | 5.1 | 1.1 | .48 |
| How do you feel about your own health and physical condition? | 5.2 | 1.1 | 5.3 | 1.4 | 1.05 |
| How do you feel about yourself? | 5.7 | 1.1 | 5.2 | 1.0 | 8.40* |
| How do you feel about the extent to which you can adjust to changes in your life? | 5.5 | 1.0 | 5.2 | 1.3 | 4.86* |
| **Life as a Whole** | | | | | |
| How do you feel about your life as a whole? | 5.6 | 1.2 | 5.5 | 1.2 | .85 |

* $p < .005$. This more stringent significance level was used because of the multiple comparisons being made.

shipboard men reported greater satisfaction with self and with their ability to adjust to changes than did the national sample. No reliable difference between the groups was found on the common item assessing satisfaction with life as a whole. It should be noted in general that the mean differences between the Navy and national samples' QOL ratings were quite small, with the average difference being only .4 of a point on a 7-point scale.

### Correlates of QOL in Four Domains

Pearson correlations were computed to identify variables associated with QOL in each domain. As shown in Table 2, potential correlates included perceived health, physical fitness, and substance use measures. Those variables significantly related to each QOL measure were entered into a stepwise multiple regression analysis (see Table 3).

Perceived quality of one's personal life was independently associated with higher subjective ratings of physical fitness, lower alcohol consumption, and lower reporting of psychosomatic symptoms. These three predictors accounted for 10% of the variance in satisfaction with one's personal life. Work QOL was independently associated with higher subjective health ratings, being a smoker, and lower reporting of psychosomatic symptoms. This combination of variables explained 10% of the variance in work QOL. Higher subjective ratings of physical fitness, lower reporting of psychosomatic symptoms, and perceptions of not being overweight independently predicted satisfaction with self, accounting for 37% of the variance. Satisfaction with life as a whole was independently predicted by three variables: higher subjective ratings of health, lower reporting of gastrointestinal symptoms, and perceptions of not being overweight. This combination of variables accounted for 18% of the variance found in satisfaction with life as a whole.

## Discussion

### Comparison of QOL between Navy and National Samples

QOL evaluations of Navy shipboard men were similar to national evaluations in terms of overall dispersion and general positivity. There were, however, small differences between the two groups in the average level of several specific items. The somewhat more positive self-perceptions of the Navy men in this study may be related in part to the dynamic and challenging

**Table 2**

Zero-order Correlations Among Predictors and Criterion Measures of Life Quality

| Predictors | Life Quality Domains | | | |
|---|---|---|---|---|
| | Personal | Work | Self | Life as a Whole |
| **Perceived Health** | | | | |
| Self rating of health | .24*** | .22*** | .40*** | .31*** |
| Upper respiratory symptoms | .03 | -.02 | -.07 | -.05 |
| Gastrointestinal symptoms | -.14** | -.07 | -.20*** | -.17*** |
| Musculoskeletal symptoms | .00 | -.07 | -.14** | -.09 |
| Psychosomatic symptoms | -.16*** | -.19*** | -.33*** | -.23*** |
| **Physical Fitness** | | | | |
| Self rating of physical fitness | .26*** | .18*** | .45*** | .31*** |
| Objective measure of fitness (PRT) | -.04 | .01 | .14** | .00 |
| Perceptions of being overweight | -.12** | -.12** | -.31*** | -.18*** |
| **Substance Consumption** | | | | |
| Alcohol use | -.18*** | -.06 | -.02 | -.05 |
| Caffeine use | -.06 | -.01 | -.08 | -.05 |
| Tobacco use among smokers | -.11 | -.05 | -.14* | -.15** |
| Smoking status (0=nonsmoker; 1=smoker) | .03 | .14** | -.00 | -.00 |

*p < .05
**p < .01
***p < .001

**Table 3**

Stepwise Multiple Regression Results Predicting Four QOL Measures

| Predictor | R | $R^2$ | $R^2\Delta$ | F | b | Constant |
|---|---|---|---|---|---|---|
| **Personal** | | | | | | |
| Self rating of physical fitness | .26 | .07 | .07 | 21.12*** | .36 | |
| Alcohol use | .31 | .09 | .02 | 10.25*** | -.01 | |
| Psychosomatic symptoms | .32 | .10 | .01 | 4.16* | -.20 | |
| | | | | | | 4.42 |
| **Work** | | | | | | |
| Self rating of health | .22 | .05 | .05 | 15.60*** | .23 | |
| Smoking status | .28 | .08 | .03 | 14.35*** | .37 | |
| Psychosomatic symptoms | .31 | .10 | .02 | 8.85** | -.23 | |
| | | | | | | 3.92 |
| **Self** | | | | | | |
| Self rating of physical fitness | .49 | .24 | .24 | 21.24*** | .32 | |
| Psychosomatic symptoms | .56 | .31 | .07 | 22.16*** | -.36 | |
| Perceptions of being overweight | .61 | .37 | .05 | 14.40*** | -.40 | |
| | | | | | | 4.98 |
| **Life as a Whole** | | | | | | |
| Self rating of health | .35 | .12 | .12 | 21.30*** | .37 | |
| Gastrointestinal symptoms | .39 | .15 | .03 | 7.20** | -.30 | |
| Perceptions of being overweight | .42 | .18 | .03 | 6.80** | -.31 | |
| | | | | | | 4.34 |

*p < .05
**p < .01
***p < .001

nature of the shipboard environment, for which Navy men are well trained. Furthermore, the structured environment aboard Navy ships may provide a sense of predictability and control which might enhance positive self-perceptions of one's ability to handle problems and cope with changes as they occur. The findings that shipboard life may be related to lowered satisfaction with one's work and one's interpersonal relationship with a significant other also were not surprising. Navy shipboard men are frequently away from home for extended periods which can disrupt interpersonal relationships and lower one's sense of well-being (Campbell, Converse, & Rodgers, 1976; Wilkening & McGranahan, 1978). Frequent separation from home and family may also contribute to dissatisfaction with work and is a particular concern to Navy policy makers, as family separation is one of the main reasons given by service members for leaving the Navy (CNO, Career Counseling Information, 1987). However, it should be stressed that the overall differences in QOL ratings between the Navy and national samples were quite small (a mean difference of .4 on a 7-point scale). Thus, it seems reasonable to assume that, in general, the findings presented here based on Navy personnel are probably not unique to this sample, and may indicate correlates of QOL that also exist in non-military groups.

## Correlates of QOL in Four Domains

Life quality is thought to be influenced by health-related factors (Caplan et al. 1984). Hayes and Ross (1986) found exercise and good physical health to be related to enhanced psychological well-being. Wetzler and Ursano (1988) reported strong associations between favorable health practices and psychological well-being. A few studies have reported a relationship between obesity and lower levels of psychological distress (Silverstone, 1968; Crisp & McGuinnes, 1976). In general, the results of this investigation provided further support for the hypothesis that health characteristics are related to psychological well-being. A number of perceived health, fitness, and substance consumption measures were associated with perceived QOL in these shipboard men. Consistent correlates of higher life quality were self ratings of physical fitness and health and perceptions of not being overweight. Lower reporting of psychosomatic symptoms was an independent correlate of QOL in three of four life domains.

The somewhat unexpected finding concerning work QOL and being a smoker deserves further mention. Although higher subjective well-being among light and moderate smokers has been described in an Air Force sample (Wetzler & Ursano, 1988), the finding was still somewhat surprising. Wetzler and Ursano speculated that smoking may be an important component of social interaction and status in the military. Thus, men who are more satisfied with their work and status in the military may also be more likely to be smokers. Furthermore, because participants were mostly young, the negative health effects of smoking may not yet have become evident.

The consistent association of health and fitness measures with higher life quality, including satisfaction with one's Navy job, emphasizes the importance of the Navy's Health and Physical Readiness Program and the Chief of Naval Operations' Personal Excellence Program, which includes a large-scale health promotion component. To the extent that the Navy's health promotion efforts improve the health and fitness of service personnel, additional benefits should be gained in terms of overall enhancement of perceived well-being among Navy personnel. Not only will the Navy have a healthier and fitter force, it should also have a happier and more satisfied group of people in its employ.

## References


Andrews, F.M., & Withey, S.B. (1976). Social indicators of well-being: American's perceptions of life quality. New York: Plenum Press.

Campbell, A. (1976). Subjective measures of well-being. American Psychologist, Feb., 117-124.

Campbell, A., Converse, P.E., & Rodgers, W.L. (1976). The quality of American life. New York: Russell Sage Foundation.

Caplan, R.D., Abbey, A., Abramis, D.J., Andrews, F.M., Conway, T.L., & French, J.R.P. (1984). Tranquilizer use and well-being: A longitudinal study of social and psychological effects. Ann Arbor, MI: The Institute for Social Research.

Chief of Naval Operations OPNAVINST 6110.1B, "Health and Physical Readiness Program," 19 October 1982.

Chief of Naval Operations (OP-136). (17 Nov 1987). Career Counseling Information. Washington, DC: Author.

Conway, T.L., Conway, S.W., & Dutton, L.J. (1988). Lifestyle habits among U. S. Navy personnel in 1986 (Interim Report, January 1988). San Diego, CA: Naval Health Research Center.

Conway, T.L., & Dutton, L.J. (1985). Baseline estimates of Naval physical readiness in male shipboard and shore-based personnel (Report No. 85-15). San Diego, CA: Naval Health Research Center.

Crisp, A.H., & McGuiness, B. (1976). Jolly fat: Relation between obesity and psychoneurosis in general population. British Medical Journal, 1, 7-9.

Davis, J.A. (1981). Achievement variables and class cultures: Family, schooling, job, and forty-nine dependent variables in the cumulative GSS. American Sociology Review, 47, 569-586.

Department of the Navy SECNAV INSTRUCTION 6100.5, "Health Promotion Program," 17 September 1986.

Hayes, D., & Ross, C.E. (1986). Body and mind: The effect of exercise, overweight, and physical health on psychological well-being. Journal of Health and Social Behavior, 27, 387-400.

McCann, I.L., & Holmes, D.S. (1984). The influence of aerobic exercise on depression. Journal of Personality and Social Psychology, 46, 1142-1147.

Mechanic, D. (1980). The experience and reporting of common physical complaints. Journal of Health and Social Behavior, 21, 146-155.

Naval Military Personnel Command. (31 March 1984). Navy Military Personnel Statistics: Second Quarter FY-84. (NAVPERS 15658). Washington, DC: Author.

Schuessler, K.F., & Fisher, G.A. (1985). Quality of life research and sociology. Annual Review of Sociology, 11, 129-149.

Silverstone, J.T. (1968). Psychosocial aspects of obesity. Proceedings of the Royal Society of Medicine, 61, 371.

Wetzler, H.P., & Ursano, R. J. (1988). A positive association between physical health practices and psychological well-being. Journal of Nervous and Mental Disease, 176(5), 280-283.

Wilkening, E.A., & McGranahan, D. (1978). Correlates of subjective well-being in Northern Wisconsin. Social Indicators Research, 5, 211-234.

Wright, H.W., Dotson, C.O., & Davis, P.O. (1981). A simple technique for measurement of percent body fat in man. U.S. Navy Medicine, 72, 23-27.

## Appendix A

Intercorrelations among Life Quality Measures

| | Personal | Work | Self | Life as a Whole |
|---|---|---|---|---|
| Personal | -- | | | |
| Work | .27* | -- | | |
| Self | .58* | .35* | -- | |
| Life as a Whole | .67* | .37* | .79* | -- |

*p < .001

## Appendix B

Intercorrelations among Physical Symptoms Measures

| | Upper Respiratory | Gastrointestinal | Musculoskeletal | Psychosomatic |
|---|---|---|---|---|
| Upper Respiratory | -- | | | |
| Gastrointestinal | .39* | -- | | |
| Musculoskeletal | .38* | .36* | -- | |
| Psychosomatic | .39* | .46* | .51* | -- |

*p < .001

Appendix C

Distributions and Means of Navy Responses to QOL Items

| QOL Item | Percent of Navy Men Responding | | | | | | | Mean (SD) |
|---|---|---|---|---|---|---|---|---|
| | Delighted | Pleased | Mostly Sat. | Mixed | Mostly Dissat. | Unhappy | Terrible | |
| **Personal** | | | | | | | | |
| How do you feel about your own personal life? | 15.8 | 35.1 | 25.6 | 18.4 | 2.1 | 2.6 | .5 | 5.4 (1.2) |
| How do you feel about your wife/ husband (or girlfriend/boyfriend)? | 34.9 | 27.3 | 13.0 | 14.5 | 2.6 | 3.6 | 4.1 | 5.5 (1.6) |
| How do you feel about your romantic life? | 25.8 | 24.9 | 17.6 | 13.8 | 6.1 | 6.3 | 5.2 | 5.1 (1.8) |
| **Work** | | | | | | | | |
| How do you feel about your job? | 6.1 | 20.3 | 24.3 | 27.4 | 9.9 | 6.4 | 5.4 | 4.4 (1.5) |
| How do you feel about the people you work with- your coworkers? | 5.1 | 27.5 | 38.5 | 21.2 | 5.4 | 1.4 | .9 | 5.0 (1.1) |
| How do you feel about the work you do on the job--the work itself? | 9.8 | 32.2 | 28.4 | 19.1 | 4.4 | 4.0 | 2.1 | 5.0 (1.3) |
| **Self** | | | | | | | | |
| How do you feel about the way you handle problems that come up in your life? | 9.1 | 36.2 | 37.6 | 13.3 | 2.1 | 1.2 | .5 | 5.3 (1.0) |
| How do you feel about what you are accomplishing in your life? | 11.5 | 31.1 | 28.8 | 20.6 | 3.7 | 4.0 | .2 | 5.1 (1.2) |
| How do you feel about your physical appearance the way you look to others? | 10.8 | 33.2 | 32.0 | 16.5 | 4.7 | 2.1 | .7 | 5.2 (1.2) |
| How do you feel about your own health and physical condition? | 11.2 | 31.1 | 34.9 | 16.2 | 4.9 | 1.2 | .5 | 5.2 (1.1) |
| How do you feel about yourself? | 18.6 | 47.1 | 21.9 | 8.6 | 1.9 | 1.9 | .0 | 5.7 (1.1) |
| How do you feel about the extent to which you can adjust to changes in your life? | 17.1 | 38.3 | 28.9 | 12.9 | 1.9 | .9 | .0 | 5.5 (1.0) |
| How do you feel about the kind of person you are? | 18.7 | 46.0 | 24.5 | 8.4 | 1.4 | .7 | .2 | 5.7 (1.0) |
| **Life as a Whole** | | | | | | | | |
| How do you feel about your life as a whole? | 19.0 | 41.8 | 22.1 | 13.1 | 1.6 | 1.9 | .5 | 5.6 (1.2) |
| Considering all things together, how content are you with your life as a whole? | 13.6 | 36.3 | 25.5 | 15.7 | 4.4 | 4.0 | .5 | 5.3 (1.2) |
| To what extent has your life as a whole been what you wanted it to be? | 6.8 | 29.9 | 24.8 | 21.3 | 11.7 | 4.9 | .7 | 4.8 (1.3) |

UNCLASSIFIED
SECURITY CLASSIFICATION OF THIS PAGE

# REPORT DOCUMENTATION PAGE

| | |
|---|---|
| 1a REPORT SECURITY CLASSIFICATION<br>Unclassified | 1b RESTRICTIVE MARKINGS<br>None |
| 2a SECURITY CLASSIFICATION AUTHORITY<br>N/A | 3 DISTRIBUTION/AVAILABILITY OF REPORT<br>Approved for public release; distribution unlimited |
| 2b DECLASSIFICATION/DOWNGRADING SCHEDULE<br>N/A | |
| 4 PERFORMING ORGANIZATION REPORT NUMBER(S)<br>NHRC Report No. 88-43 | 5 MONITORING ORGANIZATION REPORT NUMBER(S) |
| 6a NAME OF PERFORMING ORGANIZATION<br>Naval Health Research Center<br>6b OFFICE SYMBOL (If applicable)<br>40 | 7a NAME OF MONITORING ORGANIZATION<br>Commander, Naval Medical Command |
| 6c ADDRESS (City, State, and ZIP Code)<br>P.O. Box 85122<br>San Diego, CA 92138-9174 | 7b ADDRESS (City, State, and ZIP Code)<br>Department of the Navy<br>Washington, DC 20372 |
| 8a NAME OF FUNDING/SPONSORING ORGANIZATION Naval Medical Research & Development Command<br>8b OFFICE SYMBOL (If applicable) | 9 PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER<br>Naval Military Personnel Command Reimbursable Doc #N0002288WRWW508, Appro. 1781804 |
| 8c ADDRESS (City, State, and ZIP Code)<br>Naval Medical Command National Capital Region<br>Bethesda, MD 20814-5044 | 10 SOURCE OF FUNDING NUMBERS<br>PROGRAM ELEMENT NO: 63706N<br>PROJECT NO: M000 95<br>TASK NO: 005<br>WORK UNIT ACCESSION NO: |

11 TITLE (Include Security Classification)
(U) PERCEIVED LIFE QUALITY AND HEALTH-RELATED CORRELATES AMONG MEN ABOARD NAVY SHIPS

12 PERSONAL AUTHOR(S)
Susan W. Conway, and Terry L. Conway

| 13a TYPE OF REPORT | 13b TIME COVERED | 14 DATE OF REPORT (Year, Month, Day) | 15 PAGE COUNT |
|---|---|---|---|
| Interim | FROM _____ TO _____ | 1988, Oct, 31 | |

16 SUPPLEMENTARY NOTATION

| 17 COSATI CODES | | | 18 SUBJECT TERMS (Continue on reverse if necessary and identify by block number) |
|---|---|---|---|
| FIELD | GROUP | SUB-GROUP | Quality of Life; Physical Fitness; Navy Shipboard Men; Substance Use; Health |
| | | | |
| | | | |

19 ABSTRACT (Continue on reverse if necessary and identify by block number)

**The objectives of this study were twofold. First, findings are presented to provide a baseline assessment of perceived quality of life (QOL) in a group of Navy shipboard men. As part of this objective, Navy shipboard QOL ratings were compared to those of a national sample to provide a perspective for interpreting Navy responses. Second, health-related factors associated with perceptions of well-being were identified. Similar to national assessments, Navy QOL evaluations were generally positive with considerable variation in the evaluations. QOL evaluations of Navy shipboard men were higher than national evaluations on items addressing satisfaction with self and the ability to adjust to changes, yet slightly lower on items assessing satisfaction with work and one's personal life. There was a consistent association between better health/fitness and higher life quality, including satisfaction with one's Navy job. Consistent correlates of perceived life quality were self ratings of health and physical fitness, perceptions of not being overweight, and lower reporting of psychosomatic symptoms. Results are discussed in terms of the Navy's emphasis on health and physical readiness.**

| 20 DISTRIBUTION/AVAILABILITY OF ABSTRACT | 21 ABSTRACT SECURITY CLASSIFICATION |
|---|---|
| ☐ UNCLASSIFIED/UNLIMITED ☒ SAME AS RPT ☐ DTIC USERS | Unclassified |
| 22a NAME OF RESPONSIBLE INDIVIDUAL<br>Susan W. Conway | 22b TELEPHONE (Include Area Code)<br>(619) 553-8466<br>22c OFFICE SYMBOL<br>40 |

DD FORM 1473, 84 MAR 83 APR edition may be used until exhausted
All other editions are obsolete

SECURITY CLASSIFICATION OF THIS PAGE
UNCLASSIFIED

U.S. Government Printing Office: 1985—507-047