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MILITARY WIVES: Stress, Strain and Alcohol Use

by

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Submitted to the faculty of the Graduate School of

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of the requirements for the degree of

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1986

ABSTRACT

MILITARY WIVES: Stress, Strain and Alcohol Use

Nelson L. Henning, Ph.D.

University of Pittsburgh, 1986

This study investigated a number of important issues in the lives of women married to active duty military personnel. The study sample consisted of 119 military wives who were experiencing long term separation from their husbands. A self-administered questionnaire was used to elicit information on a wide range of life issues.

Besides gathering background and demographic data, this study collected information on the drinking behaviors and life satisfaction of the study sample. Stress theory and a theoretical stress-strain-outcome model was used to examine the effects of military related life issues on the three outcome variables of quantity and frequency of drinking, problems associated with drinking, and general life satisfaction. Coping skills and social support were considered as potential moderating variables.

Stressful life conditions were treated as the independent variable and the concept of strain was treated

as an intervening variable in a "Stress-Strain-Life Outcome" model.

Analysis of the study model suggested that stress can contribute to an understanding of life outcomes. The concept of strain appeared to be an important intervening variable. However, the data failed to suppport that the coping and social support variables acted as moderating influences.

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The accomplishment of this project would not have been realized without the contributions of several individuals. I would like to thank the Walter Reed Army Institute of Research, particularly Drs. David Marlowe and Charlene Lewis for agreeing to sponsor this study.

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My wife, Elaine L. (Jacobs) Henning has been more than a partner in life. In addition to being my chief editor/proofreader she has amazed me in juggling her time in

caring for our two small children, running a household, and yet providing a delightful distraction for me just when I needed it most. She has been the perfect mother, wife and friend to our family. Thank you Elaine!

This list of "thank yous" could go on and on but it would still be incomplete without the acknowledgement of my Heavenly Father, who has (and continues) to teach me the virtues of love, patience, persistance and His unfailing faithfulness.

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CHAPTER I.
INTRODUCTION

This study is designed to shed some light on the patterns of alcohol consumptions of wives of military men. In addition to providing descriptive information, stress theory and a theoretical stress-strain-outcome model will be used in relation to the womens' alcohol consumption, problems associated with their drinking and their general satisfaction with life.

A. THE MILITARY WIFE

The term "military wife" refers to the wife of a man in the military. The military wife is typically different from her civilian counterpart in several ways. She shares her husband's occupation while doing a delicate balancing act in maintaining her familial and personal responsibilities. With the frequent transfers and transitions, the family is the primary social unit and the wife is the focal point of the military family. She provides the continuity of the family system for the children and the husband.

It has been found that support from the family, particularly that from the wife, is one of the most important factors influencing an officer's performance on the job (Stoddard and Cavanillas, 1976) The wife plays an important role in the husband's decision to remain or leave the military. It is also true that family related problems

have a negative impact on job satisfaction (Segal, 1977; Derr, 1979).

Hunter and Nice (1978) have observed that the family mission and the military mission are inextricably intertwined. The military wife is involved with her husband's career as a matter of high priority, which transcends personal and family interest. This involvement is usually greater than that of a civilian wife.

Stoddard and Cabanillas (1976) observed that when a new officer's wife arrives at a new duty station, she is sometimes, implicitly or explicitly informed by the senior officer's wife:

1. to uphold military traditions
2. to complement her husband
3. that military considerations are held above personal considerations of interest including friends and the civilian sector
4. that it is strongly suggested that she be involved with other military wives.

While it is true only one of the spouses is employed by the military, there are responsibilities and expectations placed on the family unit. The wife is viewed as an extension of her husband and is referred to as the military person's "dependent wife".

The role of the military wife significantly impacts the military man's effectiveness to perform his job to the best of his ability. The issues which affect the military wife therefore must be recognized as important issues which relate to our nation's efforts to build and maintain a strong

defense. In accepting this view the military establishment needs to better understand and be involved in addressing the needs of the military wife.

B. RESEARCH OBJECTIVES

The first objective of this study is to obtain descriptive information regarding the life conditions, drinking patterns and frequency of problem drinking. The paucity of published research concerning the drinking practices of military wives is surprising in light of increased attention to the drinking alcohol problems, and education and prevention programs of women in the civilian population (Garret, 1973; Gomberg, 1974; Sandmaier, 1975; Bahr and Garret, 1976). These are issues which are important to researchers, policy makers and health care providers.

The second main objective is to test a model for conceptualizing the relationship between the stressful life condition associated with being a military wife and the subsequent drinking patterns/behaviors and general life satisfaction within a selected group of wives of combat soldiers.

The model this study employs is adapted from a study conducted by Martin (1983). In that study stressful life conditions were developed to reflect the actual life experiences of this specific population. For instance, the stressful life conditions reflected the frequent moves the family has to make, and the frequent separations due to military duty. Another uniqueness to this study was that the operationalization of the intervening, outcome and

moderating variables were more refined than those measures typically found in much of the previous life stress literature (Gore, 1981).

C. ISSUES CONFRONTING MILITARY WIVES

There are several issues that military wives confront. For instance, these wives frequently face relocation, brief and/or long term separation from their husband, and conflict with the role of military wife and their own vocational aspirations. This, of course, is not an exhaustive list but it does serve as an indicator of some of the difficult issues these women face.

1. Relocation

As a military wife, one is likely to relocate several times during the husband's military career. It has been observed that some military wives reported that they enjoyed their mobile lifestyle. However, they also indicated considerable dislike concerning relocating their households (Ladycom, 1977).

Geographic mobility is in itself stressful, since one must leave old friends, splinter family networks and adjust to new communities, or even strange cultures (Hunter, et. al., 1981). With supports removed the wife may "bottle-up" her feelings and attitudes. This situation may be a source of considerable stress.

In addition to this, inadequate housing may await the family at the new duty station. This situation compounds the stress felt by the dislocation. Sattin and Miller

(1971) reported that inadequate housing at the new duty station increases the family's stress level and further promotes social isolation for the military wife.

Inadequate family housing is not atypical for army families. Woelfel and Savell (1977) discussed army housing, describing problems such as the lack of on-post housing, combined with inadequate allowance for quarters. Smith (1976) observed that one of the major problems for military families is simply the frequency of moves per se, which works against the family's economic security.

Interpersonal and social problems often result for the military family. This results, in part, because the family has no lasting ties to the civilian community which in turn is due to their mobility. During the process of moving to a new location, the only meaningful relationships that the military wife has is her immediate family, and the single most intimate relationship she has is with her husband (Reinerth, 1976). It is because of her husband's career that the family moves. If marital problems surface after relocation the wife is more alone than ever and stress is increased.

The military wife and her husband may depend on one another more to compensate for the lack of other means of support (i.e., close friends, church, neighbors, or extended family members).

2. Separation

A major aspect of the military wife is a life style of departures and returns, separations and reunions. It is a fact of life for military wives that their husbands are frequently gone. As a result of going off on "temporary duty" (TDY) or going on a tour of duty which prohibits the accompanyment of his wife (usually a year in length), the wife must learn to accept and adapt to repeated separations.

These separations appear to have a stressful effect on military wives. Nice (1981) reported that wives of Navy men who were out at sea, experienced more stress related symptoms than wives of Navy men who were not at sea. Reinerth (1978) has observed that the separation is more difficult for the wife to adapt to than for her husband. MacIntosh (1968) found that a significant number of military wives who were referred to a psychiatrist had symptoms directly related to separation.

Family separation is a major issue in the adjustment of military wives. As a consequence of separation, these women often experience severe emotional and behavioral problems (Nice and Beck, 1980; Stone, 1978). These problems can be understood as negative life events which result from stress. These manifested problems include depression and anxiety, alcohol abuse, drug abuse, excessive eating, intolerance of children, sexual malajustment and extramarital affairs.

Other researchers have studied the effects of stress on military wives. In one such study Griffin (1973) suggested that the rate of divorce in the military is approximately the same as in the civilian sector, but the reasons for the divorces are different. Othner (1980) found that three out

of four military wives report that family strain is associated with their husband's TDY. Similarly, McKenzie (1981) reported that remote tours of duty and frequency of TDY's were significant factors in discriminating between married and divorced military members.

Military wives certainly are unique with respect to the nature and frequency of family separations. It is apparent that these women face ongoing stressful conditions.

3. Diminished Career Opportunities

Military wives often come into conflict with being the wife the military expects of them and supporting the role of her husband, while yet desiring to achieve her own career goals. Many military wives are employed. Approximately 52 per cent of Air Force wives work outside of the home (Air Force Conference on Families, 1980). These statistics are similar to the other services (Martin, 1983).

For military wives who need and feel it is important to seek employment or maintain a career, there are numerous constraints. These constraints can take the form of :

1. limited job opprotunities on and off the military installation
2. the frequency with which military families move
3. conflicting career goals of the husband and wife

The first constraint is that job opportunities are limited at most military installations. Also, it is common to find military installations located far from an urban center, where job opportunities are greater.

In addition, because of the frequency with which the military family moves, the wife finds it hard to gain employment. Potential employers (civilian and military) have been reluctant to hire these women. Even when these women have found suitable jobs they have been unable to develop any job seniority. As Pearson (1981) has mentioned,

> "The military wife is considered transient and temporary because of her husband's status, (thereby) finding employment difficult,....once found, she is consistently paid less than her civilian counterpart. Most often placed in clerical jobs (41.8 per cent); career development progression or advancement is a lost dream. (She is) continually starting over at entry level positions which each change of station."

Finally, on military installations wives who seek employment opportunities are forced to compete for a limited number of temporary, unskilled positions which rarely offer the opportunity for any type of career development or advancement.

While it is true that in the civilian population women still work at jobs doing equal work for unequal pay, for the military wife seeking career opportunities the inequity seems greater. This, in relation to the other issues she must deal with, makes her married life "unique."

The conflict that may exist between the pursuit of individual goals and family togetherness can serve as obstacles to the realization of both. A military career requires that it take precedence over all other family goals. When the wife of a military person has a career which she perceives of equal importance, a family crisis may occur. As a result the family members feel an additional burden they may not need to endure if the husband was not a military man.

A career woman's reluctance to follow her husband from military installation to military installation, within the United States as well as abroad, can lead to conflict in the family. Rice (1979) comments:

> "As a response to this frustration, arguments over small and seemingly unrelated events increase.....The husband may voice, for the first time, the wish for a traditional wife, one who can be happy staying at home and raising children. This, of course, runs counter to the wishes of his spouse, who is feeling self-esteem enhancement from her professional endeavors. A powerful struggle around the issue ensues and can eventually lead to divorce particulary if the couple does not seek professional help."

These demands for traditionalism run counter to trends in the civilian society over the past 20 years. Usually, in order to preserve the family unit, the military wife accepts the fact that, although her occupation is very important, she will eventually have to leave it and try to continue in another location.

Coping with these various situations mentioned in this section requires a military wife to be very flexible. The extended periods of absence by her husband, frequent moves and changes in climate, country, environment, culture and peer groups, plus the presence of her own career goals creates a situation which she must cope with or else a personal and family crisis can erupt.

CHAPTER II.
STRESS AND ALCOHOL USE

The focus of this section is to provide an understanding of how the concept of stress has been examined in the alcohol literature. A subsequent chapter regarding the theoretical framework which governs this study will discuss the stress-strain concept in detail.

A. DEFINING STRESS

A common issue which permeates stress research (especially stress and alcohol use research) is the definition and measurement of the concept of stress. The term "stress" itself has been referred to by Hodgson et al. (1979) as a "big fat word". This denotes the overuse of the term to describe a wide range of unpleasant states. For example, the literature regularly uses the concepts of stress, tension, anxiety, arousal, fear and frustration as if they were interchangable.

Gore (1981) refers to Lazarus' (1966) work regarding stress as the "cognitive threat appraisal process.... triggered by the recognition of environmental events (or conditions)." To view it more simply, the significance and the impact of one's life experiences lies in the subjective experience of each individual. It is the person's cognitive appraisal of the meaning, significance, and the potential consequences of the event or condition that leads to the degree of strain felt by each individual.

Martin's (1983) view (which is similar to Gore and Lazarus) of stress provides a more utilitarian definition of stress. He refers to the individual's subjective assessment of various life events or conditions as producing a physiological and/or psychological demand or burden. In this context the above mentioned synonyms for strain (i.e., anxiety, tension, etc.) can be adapted.

This leads us to briefly discuss the related concept of strain. In the context of the present study "strain" refers to the physiological and/or psychological reaction of the individual to the occurrence of stress. For instance, if an individual experiences considerable stress there will be an associated physiological/psychological reaction. High blood pressure, headaches, backaches, and feelings of nervousness may be a portion of the reaction labeled as "strain."

A common illustration of how stress, strain and alcohol use interrelate can be seen in the proverbial husband who has had a difficult day at work. He comes home and his wife asked him how things went a work. His reply is "terrible!" He relates to her how he had a fight with his boss (who told him that he wasn't getting a raise this year), got a traffic ticket on the way home and was bit by the neighbor's dog upon arriving home. Certainly this person has been exposed to several stressful events. He has a headache and feels upset (the reactions which are known as "strain"). So what does our friend do to reduce the strain he's experiencing? He requests his wife to get him a beer so he can relax.

What has been described here is how stress relates to strain and how strain results in tension (stress) reduction behavior (drinking alcohol).

B. TENSION REDUCTION HYPOTHESIS AND DRINKING BEHAVIOR

The association of stress and alochol use has been examined over the past four decades chiefly through the prespective of the "Tension-Reduction Hypothesis" (TRH).

The TRH espouses the basic assumption that alcohol appears to reduce anxiety in many drinkers. By extension, then alcohol is presumed to reinforce drinking behavior in those individuals who drink and report high levels of stress. Cappell and Herman (1972) have suggested that there are two fundamental propositions which are central to the TRH. They are as follows:

1. Alcohol reduces tension (stress-strain level)
2. People drink alcohol for its tension-reducing effects

Research on the TRH with both animal and human subjects has yielded equivocal and contradictory results. The reason for the supportive and contradictory results lies in two different research approaches in investigating the TRH. One method of investigation is the chemical analysis of how the human phsiology reacts to the drug alcohol. This "bio-chemical" approach has not supported the TRH. However, the second approach, which is psychological has yielded support for the TRH. Specifically, as the next section will discuss, the role of expectency plays a large part in demonstration support for the TRH. Research regarding the two assumptions of the TRH will be examined individually.

1. The Role of Stress and Alcohol Use

Some of the earlier research on the effect of alcohol on tension reduction has been interpreted as discrediting the theory that alcohol reduces stress. Many of the studies of alcoholics using an ad lib alcohol consumption paradigm and self reports of mood states as the main measure have shown that continued drinking is associated with increases in anxiety and depression (Mendelson, 1964; McNamee, et al., 1968). In another study Nathan and O'Brien (1971) compared the effects of continued alcohol consumption on four alcoholic and four matched non-alcoholic control subjects. They observed that alcoholics show increased depression, anxiety and aggressive behavior during drinking sessions.

These and some subsequent studies concerned with testing the first proposition of the TRH (alcohol reduces tension) have a number of methodological flaws. Marlatt (1985) points out many of these studies failed to control for expectency effects. For example, in a series of studies using a 2 X 2 balanced placebo design in which expectency set and drink context (alcohol versus placebo) were fully controlled in both alcoholics and social drinkers, beliefs about what they were drinking, regardless of actual drink content, were powerful determinants of behavior and affect. In this study the expectancy set referred to the subjects being told they were getting alcohol versus being told they were getting tonic water.

Another important factor in alcohol-stress research is that of the "setting" or "context" in which drinking occurs. Williams (1966) reported that subjects who are tested in convivial atmospheres are more likely to experience positive

effects of alcohol consumption when compared with more demanding or formal settings. The studies conducted by Mendelson and his colleagues (1964) were conducted primarily with alcoholics in research hospital ward, a type of setting in which alcohol consumption might be supected to result in emotionally negative reactions.

There have been several studies conducted to test the tenent that alcohol reduces tension. Research efforts have yielded mixed results. In general there are two arenas of investigationwhich test the proposition that alcohol reduces tension. The two arenas are physiological and psychological research.

The physiological literature regarding alcohol and stress has failed to support the notion that alcohol consumption reduces tension. A complete review of this body of literature will not be attempted here due to the excellent reviews already conducted by Cappell and Herman (1972) and Cappell (1974).

Generally, most of the physiological research employs varying levels of alcohol intake as the independent variable. Dependent variables such as electroencephalographic (EEG) rhythm (Inanaga, Mizaki, and Mukasa, 1983), brain catecholamine levels (Deturck and Vogel, 1983), levels of liver alcohol dehydrogenase (Mezey, 1983), or levels of urinary salsolinol and dopamine (Evans, et. al., 1984) have been used in an effort to understand the effects of alcohol and stress from a physiologic perspective.

In the realm of psychological research, on the other

hand, there is a fair amount of research supporting the idea that alcohol does reduce tension. This evidence is focused on the individual's beliefs, perceptions and attitudes concerning alcohol consumption and the expected effect of reducing tension. The next section will review studies conducted on the expectancy dimension of alcohol use.

2. Alcohol, Expectancy and Stress

The first proposition of the TRH is that alcohol reduces tension. Another way of looking and this tenent (from a psychological point of view) is "Some people believe that their ingesting of alcohol will reduce tension." This promotes the notion that "expectancy" is a factor in the alcohol-stress literature.

Wilson and Abrams (1977) conducted a study to investigate whether alcohol reduces socially induced stress in social drinkers. Their method consisted of a heterosocial interaction with high performance demand. A male subject was asked to talk to a different-sex confederate for a five minute period in order to make a favorable impression. A video camera was pointed directly at the subject and was told that his responses will be recorded for later analysis by peers. During the heterosocial interaction continuous measurements of autonomic arousal (heart rate and skin conductance) were taken. The subjects were also requred to complete the State Trait Anxiety Inventory (STAI).

In this study the subjects who believed that they had consumed alcohol showed less increase in heart rate than those who believed they had consummed tonic. There was no measurable pharmacological effect of alcohol in and of

itself. The same trend, though not statistically significant, was found on the self-report measure of anxiety (STAI). A subsequent analysis of the videotapes made of the subject's social interaction with the confederate yielded results consistent with the heart and STAI findings (Woolfolk and Abrams, 1979).

The results of this study are consistant with the TRH. It appears that learned expectations rather than the pharmacological function of the alcohol determine the effects of alcohol on behavior at low to moderate doses. It has not been validated in cases of high doses. The results suggest the effect of alcohol on tension reducing behavior is of an expectational nature rather than of a pharmacological nature.

In another study employing the same method (Abrams and Wilson, 1979) it was found that females who believed they had been drinking alcohol showed significant increases in physiological arousal and were rated by their peers as more anxious on the observational measures. This also was independent of drink content. Ratings by observers essentually confirmed the psychophysiological data. The self-report measure (STAI) failed to show any significant differences between the two sample populations. Again, it appears that expectations were the major determinant of the stress modulating response, but in the opposite direction.

In a review of these two studies, Abrams (1983) presumed that the sex difference in the modulation of social stress reactions under alcohol to be a specific effect of person variables or the interaction of the person with the setting. Abrams states:

> "We might speculate that females perceive themselves to be more vulnerable in a strange laboratory with a male confederate in an anxiety provoking situation. The belief that they have consumed alcohol may cause them feel out of control. As well these females reported a shorter history of experiences with alcohol and appeared to consume less alcohol per week than their male counterparts. Differences in social learning history with alcohol, and/or cognitive factors could account for the different results between males and females."

In analyzing these relationships perhaps this gap in knowledge will be reduced.

3. Stress Related Motivations For Drinking

The second tenent of the TRH is that people drink alcohol in an attempt to alleviate symptoms of strain. There are several survey research studies which lend support for the TRH.

In their drinking practices study Cahalan, Cisin, and Crossley (1969) investigated the habits and patterns of the American drinking public. One area of their study examined the reasons why people drink. Thier sample consisted of 1,848 respondents, of which, 909 were men and 939 were women.

The reasons the respondents gave for drinking were divided into three categories:

- Social
- Escape
- Micellaneous

In the social category reasons ranged from "to

celebrate a special occassion" to "It's the polite thing to do." The miscellaneous category reasons ranged from "I like the taste" to "It improves my appetite." Of particular interest to the present study is the "escape" reasons. This category covered the four basic reasons of:

1. It helps me to relax.
2. It helps cheer me up.
3. Helps me when I'm tense.
4. Helps me forget my worries.

These escape reasons are related to the TRH. This first escape reason, (It helps me to relax), was given by 45 per cent of the sample (50 per cent of the men and 40 per cent of the women). This suggests that a large portion of drinkers consume alcohol with the belief and expectation that alcohol promotes relaxation.

The second escape reason, (Helps cheer me up), was given by 25 per cent of the sample (30 per cent of the males and 21 per cent of the females). The negative affect has been viewed as a consequence of stress, thus seeking the reduction of negative affect can be understood in terms of attempting to combat the effects of stress.

Another 18 per cent of the sample listed the third escape reason for drinking, (Helps me when I'm tense). This 18 per cent equally represents the male and female respondents.

The last escape reason, (Helps me forget my worries), was given by 22 per cent of the sample (24 per cent of the men and 20 per cent of the women). This reason can be

viewed as the respondents' belief that alcohol provides relief (even if it is temporary) from stress.

The four escape reasons, though subtly different, have a common theme. This theme points to the belief that drinking alcohol is important to a large portion of the drinking population for the main function of escaping the tensions or stressess of every day life.

In a different, but somewhat related area of investigation, researchers have observed that problem drinkers report drinking for stress related reasons. While this area of study goes beyound the main point of the second proposition of the TRH, it is helpful in understanding another aspect of stress related drinking.

In one such study, Cutter and O'Farrell (1984) surveyed 80 normal drinkers (28 were women) in a effort to investigate the relationship between the reasons for drinking and their drinking behavior. They found that drinking to relieve stress (e.g., drinking to forget problems and dissappointments in life) were associated with deviant drinking practices. Solitary drinking and morning drinking were examples of deviant drinking. These two drinking patterns have also been associated with problematic drinking.

McCarty, Morrision and Mills (1983) conducted survey research concerning the relationship between attitudes and beliefs and how they were related to actual drinking behavior. Their sample consisted of 658 college students (56 per cent were women).

One finding of particular interest to the present study

is that heavy drinkers believed that a good reason for drinking is to forget their worries. Moderated drinkers scored next highest on this belief variable followed by light drinkers and abstainers, respectively.

These and other studies (Jung, 1977; Dishlacoff, 1976) suggest that for those individuals who belived that drinking relieves tension/stress tend to drink more alcohol than those who do not hold to the tension reduction beliefs.

The stress related motives for drinking have been referred to as "personal effects" (Mulford and Miller, 1959; 1960). Mulford and Miller delineate two other broad categories which describe the main reasons for alcohol consumption. These other two reasons have been labeled "social-convival" and "social-facilitating."

The category of social-convivial drinking means drinking for the pleasure of the social interaction. Usually, large quantities of alcohol consumption are not associeated with this motivation (social-convivial). In fact, this context of drinking is characterized by moderate use of alcohol. There appears to be little association with the TRH and this motive for drinking.

The next major category of drinking motives is that of social-facilitation. The essence of this reason is that alcohol is consumed for the purpose of overcoming social inadequacies, such as uneasiness or apprehension. This reason usually occurs where trust and cohesion have not been established. Social-facilitating drinking, unlike social-convivial drinking, involves alcohol as a necessary aspect of successful role performance in certain social situations.

This motive for drinking is closely identified with the TRH. With this type of drinking, the individual depends upon the chemical of alcohol as a means of coping with socially induced stress. The consumption of large quantities of alcohol is common among those who drink for this reason.

The last motive is that of personal effects. This motive for drinking is typified by using alcohol as an escape from problems and pressures associated with every day life. The person drinks to enable him to transcend the problems he faces. In short, the person drinks in an attempt to escape or solve the problems he faces. The individual drinks because he expects alcohol to reduce his stress/strain level.

Jessor, et al. (1968) used this concept of personal-effects motive for drinking in studying the quantity and frequency of alcohol use. They found an association between those who drink for stress related reasons (person-effects) and the increased quantity and frequency of drinking alcohol. Also, a relationship was found between this reason for drinking and the number of times intoxicated within the past year. The results indicate support for the second premise of the TRH.

In a more recent study, Garrett et al. (1980) observed a group of military wives who were living in Europe. The purpose of the study was to investigate the drinking practices of these women. The sample consisted of 248 military wives. Each respondent completed a quantity-frequency scale and was interviewed in an effort to understand their motivations for drinking. The wives were asked to respond to a list of nine reasons for their alcohol consumption. These reasons were:

1. to relax
2. to be sociable
3. for the taste
4. to forget troubles
5. to be cheered up
6. need alcohol for nerves
7. the polite thing to do
8. celebrate special occassions
9. improve appetite

Reason numbers 1,4,5, and 6 are stress related. Those who were heavy drinkers reported more stress related reasons than those who were not heavy drinkers.

In addition to the provided reasons the researchers asked the respondents to provide "other" reasons why they drank alcohol. Women who were "heavy drinkers" gave stress associated reasons for drinking more often than those who were not in the "heavy drinking" category. Those who were classified as "heavy drinkers" (11 per cent of the sample) indicated their reasons for drinking as follows:

1. culture shock
2. frequent absence of husband
3. loneliness
4. stress associated with living on a military installation

Again, this indicates there is an association between the motives for drinking (i.e., stress related) and the quantity and frequency with which these women drink.

While not everyone drinks for the same reason, there seem to be a significant number of individuals who do drink for stress reducing motives. There also seems to be a tendency for those who drink for stress reducing reasons to drink more than those who do not drink for stress reducing reasons.

These two studies of non-clinical samples mentioned point out that some people report that they drink primarily to escape life's stresses, and that they tend to drink greater quantities of alcohol when they drink. While this proposition may not be applicable to the universal population of alcohol drinkers, it still seems to be a valid tenent for a substantial number of alcohol consumers.

CHAPTER III.
THEORETICAL MODEL

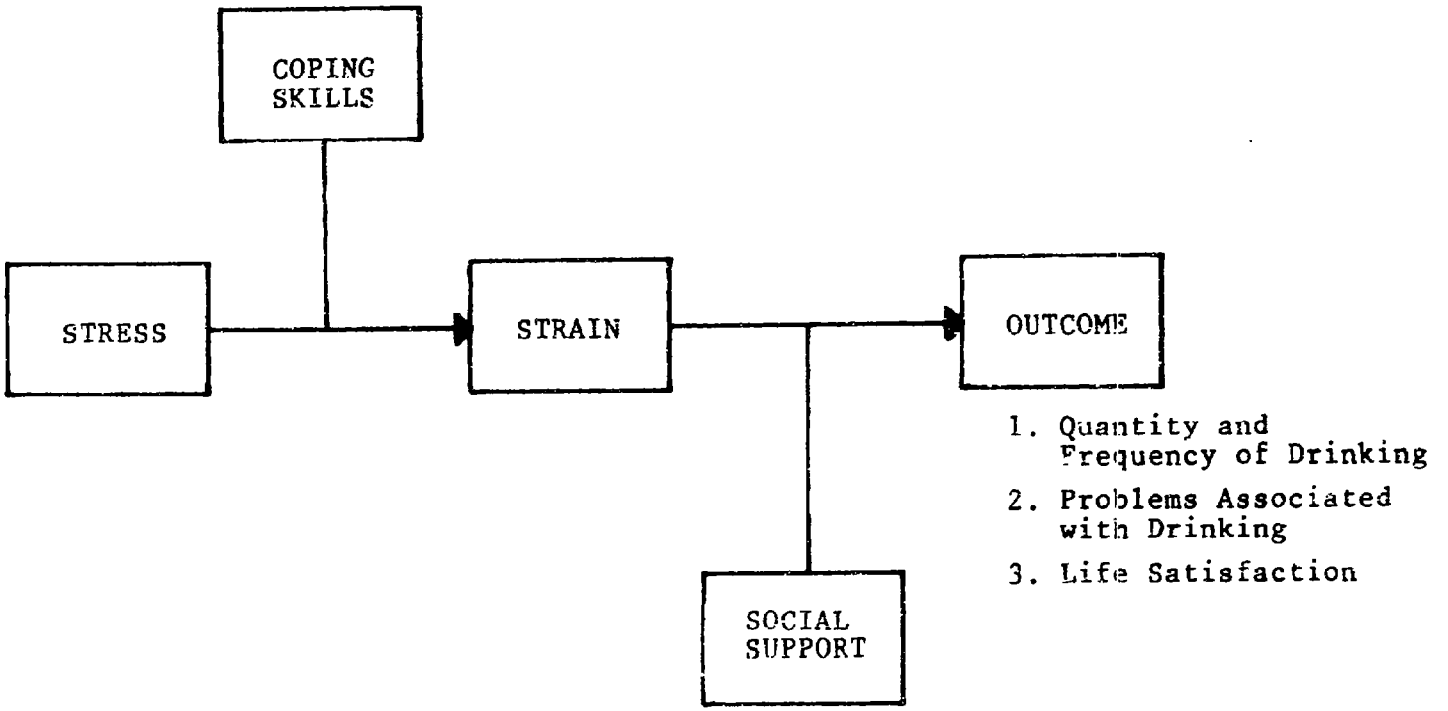
This study proposes to examine the stresses encountered by military wives and the subsequent consequences of these experiences. The proposed model (Figure 1) is referred to as the "stress-strain-life outcome process."

The arrows from the stress block to the strain block and from the strain block to the outcome block suggests that stress is related to the alcohol related outcomes only through its effect on the intervening variable strain. Stress is expected to lead to an increase in the amount of strain which in turn leads to increases in the extent of alcohol life outcomes.

The line from the coping skills block to the stress-strain arrow suggests that coping skills qualifies the stress-strain relationship. When coping skills are relatively high the stress-strain relationship will be greatly diminished or non-existant.

The line from the social support block to the arrow between the strain and outcome blocks suggests that social support moderates the strain-outcome relationships. When social supports are relatively high the strain-outcome relationships will be diminished or non-existant. In essence, the strain-outcome relationships are conditioned by the presence or absence of the social support variable. In

Figure 1: STRESS-STRAIN and ALCOHOL MODEL



this section the elements of the proposed model will be discussed and defined.

Since no two people ever react in completely the same way it is impossible to classify every life event or condition as stressful or not stressful. The extent of anyone's ability to deal with stress is a product of that person's total life experience and the coping behavior he or she has created over the years. Therefore, stress must be discussed in terms of "subjective stress." This term, subjective stress, then refers to the individual's assessment of life events and conditions as eliciting a physiological and/or psychological demand. In short, it is the assessment of the impact of life events and conditions by the individual. As Martin (1983) states:

> It is the individual's cognitive appraisal of the meaning, significance, and the potential consequences of the event or condition that leads to the degree of strain felt by the individual.

If subjective stress refers to the cognitive appraisal of the events and conditions an individual experiences in her life then "strain" can be understood in terms of a reaction to those events or conditions. For the purpose of this study the term "strain" means the physiological and/or psychological reaction of the individual to the occurence of subjective stress. The cognitive appraisal of a condition or event is a mental process, whereas, strain refers to the manifestation of a physiological or psychological condition (e.g., headaches, insomnia, etc.). This study will use a limited focus to the psychological aspects of strain as manifested by the individual's reported negative affect, psychophysiological symptoms, and interference in mental processing.

The third component of the model is referred to as "negative life outcomes." This term definitionally refers to the by-product of the stress-strain process. In the present study these outcomes are represented as:

1. the quantity and frequency of alcohol use
2. the presence of alcohol abuse
3. the individual's general life satisfaction

In the next section the components of this model will be discussed in further detail.

A. THE CONCEPT OF STRESS

Hans Selye has been credited with the popularization of the stress concept. Selye (1956) defined stress as "the rate of wear and tear in the body." He conceived of stress as a phenomenon measurable both by changes in the chemical structure of the body and morbidity change. This definition restricts our ability to identify a person experiencing a stress condition or event since such identifications would have to be supported by relevant measures of chemical or physiological changes in the body. While this definition of stress appears best suited to the field of medicine, it does not fit the needs of social researchers, whose prime motives are to examine overt behavior from environmental cues (as in the case of stressful conditions). However, Selye's work has resulted in the modifying and adapting of his basic theory to include not only possible intervening processes but also to explore possible moderating factors.

Although Selye's writing dominated the stress literature throughout the 1950's and most of the 1960's, there were other less noted contributors to the study of stress.

For instance, Freud and Burlingham (1943) and Waller (1944) investigated relevant stress factors which are associated with the effects of war on family life. Also, Lazarus (1952) examined the effects of psychological factors on human work performance. Wolf (1954) was studying the relation between life stress and bodily disease. These and other contributions have served to expand the interest concerning the concept of stress.

In stress literature there have been a number of themes that have surfaced over the years. However, there are a few which currently are seen in the literature. One, for instance, is Lazarus (1966, 1974, 1981). His theory is focused on the concept of objective versus subjective stress. This concept also illustrates the role of cognitive awareness and coping processes in understanding and refining the stress concept.

Also, there is the "Person-Environment Fit Model" (PEF). This is based on Levin's conception of motivational processes (Harrison, 1978). The Person-Environment Fit concept is most closely identified in current job stress literature. This approach has been adapted by several researchers in the area of environmental stress and mental health issues (Caplan, 1979; Campbell, 1981; and House, 1981).

Although these seemingly different concepts and theories are unique "slants" on the understanding of the stress process, they are intricately intertwined. The foundations of these theories are rooted in similar concepts and perceptions. The remainder of this review of the literature will be focused on the variables specifically relevant to the proposed study model.

B. THE CONCEPT OF STRAIN

Langner and Michael (1963) are two of the earlier contributors who use the term "strain" as a pathological outcome. The studies of these two researchers have attempted to identify stress with an individual's perceptions of different life events and strain with emotional and affective problems. Using this model, different health studies have portrayed strain as a negative outcome (Friedman and Rosenman, 1974). The same is true of the work stress literature beginning with Kahn (1964) who treated feelings of tension, anxiety, and specific responses indicating feelings of job dissatisfaction as the pathological outcome of stressful employment. These same ideas can still be seen in more current literature (Stagner, 1981; Love and Beehr, 1981; La Rocco, 1980).

Mc Pherson's (1974) definition of strain is "an organism's normal response to noxious stimuli (including the idea that absence of necessary positive stimuli, as with boredom can have the same effect)." This concept has been expanded on by Pilowsky (1974). He reported that three strain domains can be identified. These domains are:

1. The individual experiences intense, sometimes uncontrolable negative affect (i.e., fear, anxiety, anger, helplessness, mental exhaustion, etc.)

2. There are a number of psychophysiological responses (i.e., sleep disturbances, lack of appetite, muscle tension, gastrointestinal distress, menstrual cycle disturbance, excessive drinking behavior, etc.)

3. The individual experiences an interference in mental processing (i.e., difficulty in concentrating, memory loss, confusion, etc.)

The first dimension of strain is that of negative affect. As used here, negative affects refer to the external manifestation of inner feelings either conscious or unconscious (Freedmen, Kaplan, Sadock, 1973). Negative affects (as well as the other components of psychological strain) can be seen as analogous to barometer readings. Over the course of time the barometer reading will stay within a certain range. At the same time it is expected that periodic fluctuations will occur in the barometer readings especially at times of passing storm systems. Similarly, one expects an individual's psychological state to remain within a reasonable consistant range with certain highs and lows (positive and negative affect) coming and going in response to "life's changing weather systems."

The experience of negative affects, like falling barometric pressure, should be viewed as a warning. It is an indication to individuals that something is occurring in their interaction with the environment, which warrants attention.

The next domain of strain is the psychophysiological response of the organism to noxious stimuli. There has been a long and elaborate history of stress related physiological studies that have resulted from fields of research such as combat medicine (Bourne, 1969), work place health (Pinneaur, 1980) and outerspace programs (Trumbull, 1975). It is not the purpose of this study to address these and other related physiological arenas of inquiry. Rather, the focus of this review is on what is described as psychologically based physical stress complaints, such as non-illness, non-disease physical responses often termed "psychophysiological" (e.g., insomnia, headaches, etc.) (Johnson & Meile, 1981). In

general, these are physical complaints of general aches and pains, stomach problems, muscle tension, sleep disturbance, and other types of physical discomfort.

Stress and strain can produce disruptions in the area of thought processes and the ability to concentrate. This is the third domain of strain as highlighted earlier. Some stress may produce an increase in one's level of concentration. One may have heard someone stating "I work better under pressure." However, under increased stress interference in mental processing may occur. Disordered thinking and/or repression of recall can be viewed as one of the ways people respond to danger, threat or even challenge.

It is not normal for individuals to spend most or all of their time worrying about present or future events. This only distracts from meaningful daily activities, and even thinking irrationally about the difficulties they face, thus denying them the opportunity of doing something contructive about their life situation (Parrino, 1979). When such responses become intense or prolonged, they may lead to serious, negative outcomes. Interference in mental processing, like other strain indicators, can reach a point at which the individual begins to develop what can be termed pathological outcomes such as increased alcohol consumption and related alcohol problems which harm the individual's well being.

C. OUTCOME MEASURES

This study has suggested that life situations as perceived by the individual as challenging, threatening and/or dangerous, can lead to a reaction response labeled "strain." If this strain becomes extreme or persistant (beyond the limits of the individual's tolerance) certain pathological outcomes are likely to result. The stress literature indicates that stress has a negative effect on many areas of one's life. It has been reported that stress negatively effects one's satisfaction with life (Kasl, 1978), the prevalance of ulcers (Mason, 1975), occurrence of depression (Eaton, 1978), and the manifestation of problem drinking (Cutter, et. al., 1984), just to name a few. For the purpose of this study these outcomes will be conceptualized as increase drinking behavior, as well as, the presence of related drinking problems and diminished life satisfaction.

In the present study, the alcohol outcome measures (Short Michigan Alcoholism Screening Test and Quantity-Frequency of Alcohol Consumption) are used as a continuous measures and are not used as originally designed (detecting alcoholism or problem drinkers). It is not the purpose of this study to detect and/or discuss the prevalence of alcoholism in the selected sample of military wives.

The previous chapter regarding stress as it relates to alcohol consumption provides some insight on the stress-alcohol consumption relationship. This section of the study is not designed to replicate information already discussed but rather, serves to reinforce the notion that for some people alcohol consumption is increased when stress and strain is increased.

Many of the stress-alcohol studies have been conducted on clinical populations. Several researchers have found that reasons given by these populations for their drinking related problems were stress related (Wells-Parker, Miles and Spencer, 1983; Neff and Husaini, 1982; Bell, Keely and Buhl, 1977). This line of research suggests a relationship exists between stress-strain levels and problem drinking.

It has been documented that problems associated with alcohol consumption are closely related to the amount of alcohol consumed (Polich and Orvis, 1979; Cahalan and Room, 1974; Sobell et at., 1982).

These and other studies suggest that the individuals who consume alcohol for stress reduction effects drink for the wrong reasons (escape from stress and strain) and drink larger quantities and have a greater number of alcohol related problems. It would logically follow then, that when a stressed person drinks to escape the stress situation his/her drinking frequency and/or quantity increases and with the increased drinking behavior is at risk in manifesting drinking related problems.

One might ask "What is a problem drinker?" or "What constitutes problem drinking?" Knupfer (1967) has a broad definition of what is a drinking problem. He states:

> "A problem--any problem--connected fairly closely with drinking constitutes a drinking problem."

Cahalan and Room (1972) have defined problem drinking as having problems or potential problems which are associated with drinking in at least one of eleven specified areas. These problem areas are:

- Frequent Intoxication. This is manifested by drinking a minimum of five or more drinks at least

once a week, or, eight or more drinks on one of the most recent two drinking occasions and twice in the last two months; or 12 or more drinks on one of the last two occasions and twice in the last year; or currently getting high or tight at least once a week.

- Binge Drinking. This problem consists of being intoxicated for at least several days at a time or for two days on more than one occasion in the past year.

- Symptomatic Drinking. This refers to signs of physical dependence and loss of control (e.g. drinking to get rid of a hangover, having difficulty in stopping drinking, blackouts, sneaking drinks or skipping meals while drinking).

- Problems with Spouse or Relatives. This category includes the spouse's leaving or threatening to leave or the spouse or relatives asking the drinker to cut down on his consumption, or the drinker judging his drinking as having a harmful effect on his home life.

- Psychological Dependence. Drinking to alleviate depression or nervousness or to escape from problems of everyday living constitutes psychological dependence.

- Problems with Friends or Neighbors. This includes the drinker's friends or neighbors suggesting to him that he cut down or that he himself felt his drinking had been harmful to these relationships.

- Job Problems. The area of job problems includes having lost or nearly lost a job because of drinking, having co-workers suggest that he should cut down on drinking, or rating himself as having harmed his work opportunities through drinking.

- Problems with Legal Authorities. This includes having accidents while drinking, being cited for drunk driving, etc.

- Health Problems. This category deals with health

problems by the individual acknowledging that drinking had been harmful to his health and that a physician had advised him to cut down on his drinking.

- Financial Problems. This refers to whether drinking has a harmful effect on his finances during the past three years.

- Belligerence Associated with Drinking. This relates to feeling aggressive or cross or getting into fights or heated discussions after drinking.

A positive response to any of the above mentioned was accepted as identifying the respondent as having a problem with drinking alcohol. Heavy drinking has been associated with an affirmative response to any of these problem areas (Cahalan and Room, 1974).

There are many environmental and personality variables found to be related to drinking behavior. Plant (1967) summarized the role of such variables as follows:

> A tentative model may be developed for understanding the causes of problem drinking, even though the precise roles of the various factors have not yet been determined. An individual who (1) responds to beverage alcohol in a certain way, perhaps physiologically determined, by experiencing intense relief and relaxation, and who (2) has certain personality characteristics, such as difficulty in dealing with and overcoming depression, frustration, and anxiety, and who (3) is a member of a culture in which there is both pressure to drink and culturally induced guilt and confusion regarding what kinds of drinking behavior are appropriate, is more likely to develop trouble than will most other persons. An intermingling of certain factors may be necessary for the development of problem drinking, and the relative importance of the differential causal factors no doubt varies from one individual to another.

The essence of the above quotation refers to stress as

resulting from (1) tension relief, (2) escape from anxiety (strain), or (3) relief from socially induced pressure (stress).

There have been different means of identifying problem drinkers through the use of outcome measures. A review of some of the more accepted measures will be accomplished in the following section.

1. Alcohol Indices

There have been several measures to identify problem drinkers, (that is those who have problems attributed to their drinking behavior) and normal drinkers (individuals whose drinking behavior is not attributed to any life problems). Most of these instruments are designed to detect individuals who are problem drinkers or alcoholics. Usually these measures include indicators of loss of control over drinking such as frequent intoxication, binge drinking, symptomatic drinking and psychological dependence, as well as various kinds of problems due to drinking such as those with spouse or relatives, friends, supervisor or colleagues at work, the law or with health or money. These problem areas are those recently delineated above. Such tests can be quite efficient even if they have a relatively small number of questions.

One such inventory, which is one of the earliest to be developed contained 17 questions (Guze, et al., 1962). The questions covered the problem areas previously mentioned. This instrument was able to correctly identify 38 of 39 independently diagnosed alcoholics in a group of 90 felons and was later validated in a follow-up study (Guze and Goodwin, 1972)

Another popular scale was developed by Mac Andrew (1965). The "Mac Andrew Scale" is composed of 49 items and was originally intended to detect psychiatric patients with alcohol related problems. Its detection accuracy was 81 per cent. However, others have found the Mac Andrew Scale less effective than originally published (Uecker, 1970;Whisler and Cantor, 1966).

Perhaps the most widely known and accepted measure of problem drinking is that of the Michigan Alcoholism Screening Test (MAST). The MAST was developed by Selzer (1971) and is a 25 item questionnaire for assessing alcohol dependence. The items on the MAST relate to the frequency, pattern and consequences of drinking behavior. The test is designed to be administered in either oral or written form. It is scored by summing the credits from 24 differentially weighted items (one item is non credited). A diagnosis of alcoholism is suspected when the total score exceeds a criterion of four points.

The MAST was validated by comparing records of the subjects' problems due to alcohol obtained from hospitals, social service and law enforcement agencies. The results indicated that the MAST was more cost-effective than a large-scale search of records in diagnostic screening for alcoholism. Subsequent reports (Moore, 1972; Pokornny, et al., 1972; Selzer, et al., 1975) suggest that whether given in its original form (oral administration) or as a self administered test the MAST discriminates satisfactorily between alcoholics and nonalcoholics. Others (Yoder and Moore, 1973; Bernhardt, et al., 1984) have found the MAST to be effective in identifying alcohol problems among hospitalized and non-hospitalized persons.

In a slightly different vein of thought there have been a number of quantity-frequency (Q-F) measures of drinking behavior. The intent of this type of instrument is to measure the amount of alcohol people consume. The most widely used of the quantity-frequency measures was initially developed by Straus and Bacon (1953) in their study of drinking practices among college students and later adapted by others (Miller, 1963; Cahalan, et al., 1969; Harris, 1975; Armor, Polich and Stambul, 1978).

Quantity-frequency instruments usually classify a person's drinking behavior first by type of drink consumed (beer, wine, or hard liquor), then by amount of each type of beverage consumed within the past 30 days, and finally the person is asked about the quantity he has drunk on a typical drinking day. The main utility of the Q-F measurement is in its value in calculating an index of alcohol consumption across all beverages.

These self-report measures have been shown to be reasonably accurate. For instance, Polich and Orvis (1979) compared self-report of alcohol consumption with record of actual beverage sales on a military base. They found that the survey self-reports were closely related to the sales records.

The Q-F instrument has been helpful in predicting problem drinking (Lelbach, 1974; Brun, et al., 1975; Schmidt, 1976). In other words, people who drink a great deal of alcohol are at greater risks of manifesting drinking related problems. Also, Schmidt and de Lint (1970) have suggested that about five ounces of alcohol consumed per day is a dangerous level regarding physical damage. These

researchers have characterized this amount of consumption as being present in most members of a clinical alcoholic population.

2. Life Satisfaction as an Outcome Measure

While it has been traditional for stress research to almost exclusively use physical and mental health measures as outcome indicators, work stress literature has broadened the notion of negative outcomes by including job performance as indicators as outcome measures. Depending upon one's theoretical orientation (social work, psychology, sociology, etc.) certain behaviors and attitudes can be viewed as separate outcome dimensions distinct from physical or mental health issues. Such an approach is consistant with a sociological or social work theoretical model of life adaptation.

In this context one can examine the satisfaction of one's life. It has been noted in a previous chapter that the military wife has great demands placed on her by the military environment (Hunter and Pope, 1981). She is expected to be able to adapt to various life conditions including assuming the management of her home and family when her husband's job causes his absence. Failure to fulfill her role may result in chaos in the family and disruption at work (assuming she is employed).

For the purpose of this study an attitudinal indicator of how satisfied the military wife is with her life will be used as suggestive of a maladaptive life outcome. Cassel (1974) has suggested that the reason investigators have often overlooked the fact that a wide variety of pathological outcomes seem associated with similar life

circumstances is that many researchers have focused their attention on only one clinical activity (i.e., problem drinking, mental disorders such as depression, or ulcers). Conventional wisdom suggests that the stress and strain may be related to many different maladaptive outcomes. This study suggests that stress and strain influence the outcome measures of the amount of alcohol consumed, the problems associated with alcohol consumption, and the perception of one's life satisfaction.

D. MODERATING FACTORS

This study has discussed the meaning and interrelationship of stress, strain and negative outcomes. As suggested by Lazarus (1981), as well as the contributions of Harrison (1979), and Kasl (1979), moderating factors may play a significant role in understanding the effects of stress on people. The moderating factors with which this study is concerned are two dimensions of coping. These dimensions, according to Lazuras (1968) are (1) coping process and (2) coping resources. Each of these concepts will be discussed in this section.

1. Coping Process

It is important to understand the differences between coping process and coping resources. Lazarus used the term coping process to describe:

> efforts, both action-oriented and intrapsychic, to manage i.e. master, tolerate, reduce, and minimize environmental and interpersonal demands and conflicts among them which tax or exceed a person's resources (Folkman, Schaefer, and Lazarus, 1979).

This method of coping refers to both a cognitive attempt to

manage appraisal of the stressful situation and action oriented behavior to do something about reducing the stress threat.

To illustrate the cognitive element, a person may draw on past experiences in an attempt to appraise the degree of threat he faces. For instance, a woman expecting her second child may not perceive the pregnancy experience as stressful as compared to the first pregnancy. Assuming the first pregnancy was not medically complicated, the reason for a lower preception of stress may be that she drew on her past experience (memories of the first pregnancy) and felt more confident about the second pregnancy experience. This past experience has added to her ability to cope. On the other hand if the first pregnancy was medically complicated the expectant woman may perceive the second pregnancy to be equal to or more stressful than the first. In this situation the woman's coping capacity may be diminished. The difference again is the assessment of threat which is in past dependent upon past experiences (the cognitive element of coping).

Another dimension of the cognitive coping element is that of repression and/or avoidance. Some individuals deal with a stressful situation by denying the presence of stress, while others avoid doing something constructive to resolve the stressful situation as in rationalizing and procrastinating. This also is a cognitive process. The person who makes excuses (rationalizes) why he can't or shouldn't go to the dentist for his annual examination may perceive a visit to the dentist's office as stressful. The fashion in which he copes with this stressful situation is to deny his need for regular check-ups or to rationalize why he "can't" go when it is time for his annual check-up.

The other dimension of the coping process is action oriented. Billings and Moos (1981) refers to this as "active-behavioral" coping. This term refers to overt attempts to deal directly with the problem and its effects. As in the case of cognitive coping, active-behavioral coping has two broad areas.

The first area is direct action taken by the individual to resolve the stressful situation. An example of this can be seen in the hypothetical case of a woman discovering a lump on her breast. Knowing that one of the signs of breast cancer is a lump on the breast, the woman perceives this situation as a stressful situation (cognitive aspect of coping). She can take direct action after she's determined the threat by immediately calling for an appointment with her physician or cope with this stressful situation by keeping herself sedated by taking tranquilizers or drinking alcohol or doing both. Both are methods of coping with the stress but clearly one is more productive than the other.

The second action oriented method of coping with stress is more focused on regulating one's emotional state. Where the first element in active-behavioral coping addresses taking action to change self or the problem, the second element involves behaviors aimed at regulating the emotional states elicited by the problem situation. This last coping response is also an avoidance style of coping similar to the avoidance/denial style in the cognitive coping method previously discussed.

These different coping behaviors were studied by Burke and Weir (1979) to learn if there was a difference in coping behaviors between husbands and wives. The respondents in

this study were 85 married husband-wife pairs. The husbands were senior administrators in different correctional institutions in Canada. The husbands completed a lengthy questionnaire related to occupational demands, individual well-being and satisfaction with their work and nonwork lives. They also were asked to take an abbreviated questionnaire home for their wives to complete and mail back to the researchers. One section of the questionnaires given to both husband and wife examined the individual's typical coping behaviors under stress.

The results indicated that the husbands and wives did not employ the same coping responses in dealing with stress. The exception was that, when one of the partners was likely to take a problem solving direct action approach to handling the stressful situation, the other partner was less likely to use this strategy.

On the basis of these findings one could conclude that husbands and wives do not use the same strategies in coping with stressful situations. It seems that rather than a sex related pattern, the patterns are more complementary in the active/passive styles of coping. Subsequent research has supported the idea that style of coping is not sex related (Litman and Stapleton, (1984). However these researchers observed that women felt seeking social support was an important coping strategy. Related to the coping process is the concept of using coping resources.

2. Social Support

In keeping with what has become a major facet of current stress research, this portion of the study will focus on social support. There are different types of "coping resources" of which social support is one. Other examples of coping resources include one's educational/vocational training, availability of information, intelligence, and general life experience. As mentioned, this section of the study will discuss the coping resource of social support. For an elementary definition of social support, one only needs to understand the two words "social" and "support." First of all "social" refers to living in companionship with other people as compared to living in isolation. The word "support" means to sustain or withstand pressure or strain (The Random House College Dictionary, 1982). Therefore, social support can be simply defined as using those individuals in our life (social environment) to provide sustenance in an effort to combat stress (support).

The term social support (within the context of one's social network) is used here as an example of coping resources available to assist in dealing with the stress process (Folkman et. al., 1979).

Mitchell and Trickett (1980) have provided a thorough review of the literature on social networks and their role as mediators of social support. The term social support (as used in the context of social network) is used as an example of coping resources available to the individual to assist in dealing with stress and strain. This is an example of what Lazarus (1965) called a "coping resource." This is not to

be confused with the previously mentioned concept of coping as a process (cognitive aspect of coping).

Social support has been hypothesized to play many varied roles in the relationship between stress and subsequent life adjustment variables including having a direct negative relationship with:

1. objective stress events and conditions
2. intervening variables such as strain
3. criterion variables such as physical and mental health (House, 1981).

Social support has also been hypothesized to play a buffering role. Cobb (1976) suggests that social support facilitates coping with a crisis and adaptation to change. In reference to the relationship social support has in the stress-strain model Cobb states:

> One should not expect dramatic main effects from social support. There are of course some main effects simply because life is full of changes and crises. The (stress buffering) theory says that it is in moderating the effects of the major transitions in life and of the unexpected crises that the effects should be found.

Interest in social support and its potential relationship to various stress related variables has been the focus of many social researchers (Nuckolls, Cassel, and Kaplan, 1972; La Rocco, et.al., 1980; Gore, 1981; Cohen, 1984). All of these studies have suggested that social support has a direct negative relationship with both predictor and criterion variables.

There have been other studies which suggest social support also has a moderating relationship, including Cobb

and Kasl (1977), Gore (1978), House and Wells (1978), and Cohen and McKay, (1984). Many of these studies have been criticized because of various methodolgical weaknesses (Gore, 1981). Among other issues, they have tended to use definitions and measures of social support that are at best questionable. In a review of studies concerning the possible moderating effects of social support, Lin, Simeone, and Kuo (1979) found that several studies failed to find support for social support's stress buffering role.

An understanding of how outcomes are affected by stress and support is complicated by the use of stress measures that confound stress and social support. Gore (1981) noted that the way stress is often operationalized using life events scales, which indicate many life events, focus on loss of or a disruption in a social relationship such as the death of a spouse, divorce, or moving.

A more accurate assessment of social support is critical to understanding its relationship in stress research. According to Cohen and Willis (1984) there are almost as many measures of social support as there are studies. They suggest that it is difficult to compare studies and to determine why support operates as a stress buffer in some cases and not in others. In the social support literature, social support measures are used without regard to their psychometric properties or their appropriateness for the question of study. For instance, studies using measures assessing the <u>structure</u> of social networks (e.g., how many friends do you have?) are seldom distinguished from those addressing the <u>functions</u> that networks might serve (e.g., do you have someone you can talk to about personal problems?). In many cases, structure and

function items are thrown into single support indices resulting in scores that have little conceptual meaning.

Cohen, et.al., (1984) developed a social support instrument which attempts to ameliorate this problem. They distinguish between psychological and nonpsychological forms of social support. The main distinction between psychological and nonpsychological support is that psychological support refers to providing information to the person whereas nonpsychological (or tangible) support refers to providing material aid (such as lending money). Pinneau (1975) suggests that psychological supports can be further divided into "appraisal" support (this contributes to one's knowledge base) and "emotional" support (meeting one's social-emotional needs). The instrument is composed of four functional components. They are:

1. Tangible (nonpsychological support)
2. Appraisal (cognitive psychological support)
3. Self Esteem (emotional, psychological support)
4. Belonging (emotional, psychological support)

Each of these components or mechanisms have been hypothesized to have a stress buffering effect (Caplan, 1979; Cobb, 1976; Pinneau, 1975). The importance of each one of these mechanisms will be discussed for the purpose of clarifying their respective roles.

Tangible Support.

The effectiveness of tangible support is generally considered less interesting to social scientist than support effects that are presumably psychologically mediated. It seems obvious that loss of income for someone with a wealthy

family who will support them is less likely to be less stressful than for those without this type of support. Most studies do not separate tangible supports from psychological ones. Studies which do use tangible support are usually focused on populations of sick or elderly respondents (Cobb, 1976).

The effectiveness of tangible support to buffer the effects of stress seems to depend on the recipient's perception that such support is useful and appropriate. Social support is a moderator (buffer), even though a stressor (or possible stressor) is present, strain may not result, providing that social support is present. Cohen and McKay (1984) state:

> Although virtually anyone with the required resources could provide someone in need with money, care, or other forms of assistance, tangible support probably most effective when the provision of aid is viewed by the recipient as appropriate. It is likely that aid from another is perceived as inappropriate when the recipient feels threatened with a loss of freedom, interprets receiving help as a sign of inadequacy, or feels uncomfortably indebted. Inappropriate aid could presumably result in an accentuation rather than moderation of stress effects.

One of the complicating issues with tangible supports is that it has psychological implication. The provision of material support may be interpeted by the receiver as evidence for the love and/or esteem of the provider. Tangible support suggests information about one's relationship with a support network in addition to the giving of material aid. In essence, it may not be the provision of material aid as much as the perception that of belonging or being loved (Heller, 1979).

Appraisal Supports.

Threat appraisal is considered a key component in stress research. Lazarus (1966) suggests the importance of both the assessment of a potential threat and the adequacy of one's ability to cope with the threat as determinants of whether stress is experienced. Social support can enter into analysis by altering one's assessment of threat or one's assessment of his ability to handle the threat.

An example of one altering his assessment of a potential threat can be seen in the already mentioned young military wife who is about to move to a different country because of her husband's military duties. She may be fearful of leaving friends and relatives. This also may be the first time she has moved since her marriage, which would add to her fears of moving. By being fearful she has already began the threat appraisal process. This fear or threat may be reduced when talking to other military wives who in turn encourage her by sharing their own positive moving experiences. In using the social support of other military wives the young wife may modify her initial threat analysis resulting in the lowering of her threat assessment. This support operates by getting the wife to focus on the positive elements of an international move. This refocusing of attention can distract the wife's attention from the stressor.

The assessment of one's ability to handle a threatening situation can be seen in the same example of the young military wife. She may receive this type of social support from friends and relatives who encourage her by focusing in on the wife's inner strengths. Members in her social

network may point out that they have observed admirable strengths in her character that has convinced them that she will, and can, handle the relocation exceedingly well. This type of social support may convince the young wife that she really does possess the ability to "weather" the move quite nicely.

Within this type of psychological framework, it is possible to think social support networks that convince the person that her present coping abilities are adequate to respond to the relocation situation, or induce the perception that if a critical need should arise, others at the new duty station can be available to lend a helping hand. In both of these instances no new coping strategies are provided but the woman's perceptions of her duties are enhanced.

The next two functions or mechanisms of social support ("self esteem" and "belonging") are emotional types of psychological support. Each mechanism will be briefly discussed.

Self-esteem.

Not every one who is faced with stressful situation responds with a sense of devalued self-worth. However, there are those that do exactly that. It is important then to know under what conditions people who are faced with stressful situation make this type of negative self-worth assessment.

Abramson, et.al., (1978) have suggested that people who believe their inability to control important outcomes is due to their own incompetence (personal helplessness) will have

low levels of self-esteem while those who believe their inability to control a stressful event is due to something that no one is able to control will not show diminished self-esteem.

The example of the young military wife can be used once more to illustrate this point. If the wife interprets the relocation as resulting from her inability to be a "good military wife" she will have a low value of her self-worth. However, if she recognizes that moving is a normal part of her husband's profession then she probably will not perceive herself at fault, thus not resulting in a low value of her self-worth. If the wife has a social support group and uses it, then these interpersonal relationships can be used to bolster her self-esteem. Cobb (1976) has also argued that esteem support might encourage a person to cope. In this case, esteem is viewed as either increasing one's feelings of self-efficacy or increasing the importance of attempting to protect one's self. This type of social support (esteem enhancing) could elevate one's value of himself by either praise of relevant others or through positive social comparison with similar others (Cohen and McKay, 1984).

Belonging.

The concept of feelings of belonging or feelings of solidarity is thought to elevate one's mood. Since negative moods are often associated with depression, this mechanism may be particularly relevant in protecting one from stress-induced psychological disorders (Seigman, 1975). Also, it could be argued that belonging itself meets psychological needs such as nurturance and need affiliation. This is in keeping with the stress-buffering hypothesis, assuming of

course that a particular stressor deprives someone of his sense of solidarity and belonging and that the support system replaces it.

Again, in the example of the young military wife, if she views the move as a stressor but has an understanding that she is not leaving her peer group (other military wives) but rather moving to meet new members of that peer group, then her feelings of belonging are fostered. This sense of belonging (which can be facilitated by her network of military wives) can continue, thus having the potential of providing a buffering effect from the stressful situation (relocation).

These four mechanisms of social support (tangible, appraisal, self-esteem, and belonging) have been used in a measurement of social support (Cohen and McKay, 1984). The scale is called the "Interpersonal Support Evaluation List (ISEL). It consists of four subscales (tangible, appraisal, self-esteem, and belonging) which have 10 items each. In total the ISEL has 40 items.

Recently there have been studies conducted using the ISEL as a measurement of overall functional support. Each study tested the buffering hypothesis. The buffering hypothesis requires a statistical interaction between social support and stress.

In one such study Cohen and Hoberman (1983) found a buffering interaction between life events and the total ISEL in the prediction of depressive symptomatology in a sample of college students. This study supports the previous findings of Sandler (1982) in which he reported life events

X ISEL buffering interaction for depressive symptomatology in a sample of college students.

Cohen, et. al., (1985) studied a population of 92 college students (47 males and 45 females) using the ISEL. The findings yielded similar results as reported in the two previously cited studies.

These four mechanisms of social support are used by Cohen and McKay (1984) in an effort to gain a better assessment of social support and how it works. Their instrument provides a means to test and understand the stress-buffering hypothesis. As far as assessment techniques are concerned, multidimensional measures of one's functional support resources are needed to replace the unidimensional and structural (measuring the existance of social relationships) measures used in previous research studies. By using a multidimensional measure of social support future research efforts, such as this one, can capture a better approximation of the complex issue of social support.

CHAPTER IV.
HYPOTHESES

This study intends to develop an array of descriptive information about the life experiences and drinking practices of a selected group of military wives. In addition, the following "Stress-Alcohol" hypotheses will be tested.

1. Hypothesis Statements

H_1: The stress will be directly and positively related to strain.

It is the individual's appraisal of the meaning, significance, and the potential consequences of stress that leads to the degree of strain felt by the individual (Martin, 1983). It has also been observed that the strain concept is positiviely associalted with stress (Campbell, 1981).

H_2: Reported strain is directly and positively related to the negative alcohol outcomes. When strain increases the quantity-frequency of alcohol use will increase. This is also predicted for the measured drinking problems. In addition, the life satisfaction will decrease as strain increases. Thus, a direct negative relationship is predicted between the strain and life satisfaction variables.

Monat and Lazarus (1985) suggest that increased drinking behavior and problems related to drinking are associated with increased stress. Although Monat and Lazarus did not specifically refer to strain, it (strain) is expected to be associated as hypothesized in this study. Also, Campbell (1981) has suggested that strain is inversely associated with ones sense of well being.

H_3: Stress, is not expected to be directly related to negative alcohol outcomes independent of reported strain.

In practical terms an increase in stress is expected to lead to an increase in the amount of strain which in turn leads to increases in the extent of negative outcomes. As hypothesized in this model stress is not expected to affect the outcome measures independently of it's relationship to strain. Thus, stress should not have a direct effect on negative outcomes. This is similar to Martin's (1983) model which supported this hypothesis.

H_4: Coping skills reduce the relationship between the stress variable and the strain variable.

In regards to hypothesis five Martin (1983) reported that increased coping skills reduced the stress-strain association. This same observation is expected in this study.

H_5: Social support reduces the relationship between reported strain and each of the three alcohol outcomes.

Martin (1983) has reported that social support reduces the extent of negative outcomes that are normally associated by various levels of strain. In statistical terms, coping

skills and social support are moderating variables that condition the relationships between stress and strain and between strain and negative outcomes respectively. These effects are often referred to as interaction effects.

The rationale for the moderating variable of coping is that if one has effective coping skills then when a stress situation or condition is experienced then the individual will be likely to adapt without manifesting strain. In the case of social support as a moderating variable, it is believed to be a buffer between the strain and outcome variables. As operationalized in this study social support does not act as preventing strain, as in the case of coping skills, rather it serves to enable the individual to withstand the strain. However, this does not mean coping skills and social support only in the described capacity, but their primary roles will be as described here.

CHAPTER V.
METHOD

A. SAMPLE DESCRIPTION

The respondents were married to active duty servicemen who were assigned to a large military installation in a rural part of the southeastern United States. The sample of women (and their families) were living on a military installation.

The military installation has a large number of combat trained soldiers assigned to it. The sample was experiencing separation from their husbands, who were assigned away from the installation.

B. SELECTION METHOD

Based on time and monetary constraints a decision was made to try to obtain a sample of at least 100 respondents. It was assumed the sample would be representative of the population of army wives.

A list was obtained from a "Waiting Wives" roster which was maintained by the installation's housing office. The purpose of the "Waiting Wives" program is to keep a current list of military wives living on the installation. All of the women falling into the category of "Waiting Wives" would be separated from their husbands for an extended amount of

time (six months or longer). The commander of the installation (and his representatives) use this list in an effort to provide logistical and recreational support for the wives while their husbands are away.

C. SAMPLING PROCEDURE

The list of names provided the starting point of data collection. The cover letter (found in the appendix section) guaranteed the volunteers anonymity and explained who was sponsoring the study. The data collection was originally scheduled to take place in three phases. First, each wife was to be contacted by letter and requested to participate in the study. If she for any reason desired not to participate she would be dropped from the list of potential respondents. All of the 154 potential respondents, which composed the "Waiting Wives" list, were asked to participate in the study. Once cooperation was solicited, the second phase of data collection should have begun. This consisted of mailing out a questionnaire to each volunteer. The questionnaires contained a self-addressed, stamped envelope and instructions to return the questionnaire by mail. After seven to ten days follow-up letters were to be sent out as reminders to complete the questionnaire. During this third phase of data collection, follow-up would have consisted of personally contacting the respondents at their homes. Due to an administrative error the introduction letters, cover letters with questionnaire and follow-up letters never left the post office at the data collection site. Upon arrival this oversight was discovered. To conserve time a decision was made to send out only the cover letter and questionnaire (Appendix A and

B). Three days after this was accomplished house to house follow-up began. After two weeks of personal follow-up data collection was completed. The number of valid questionnaires collected was 119 for a response rate of 77%.

D. DATA PREPARATION

The questionnaires were coded by enlisted specialists at the Walter Reed Army Institute of Research. The coded questionnaires were then keypunched by a private contract agency. Once the data was returned by the private contract agency it was reviewed by this reseacher for accuracy.

E. DESIGN

The study had a correlational hypothesis testing design with a single data collection. A self-administered questionnaire was used to collect data focused on the variables of stress, strain, alcohol consumption, problems associated with alcohol consumption, life satisfaction, coping skills, and social support. The data were collected (using these variables) to test a "Stress-Strain-Alcohol Use" model. Five specific hypotheses were proposed and tested.

F. INSTRUMENTATION

The items, measures, and scales for this study were adopted from a current Department of the Army longitudinal study and studies reported in the recent social psychological literature. Additionally, some of the scales have been developed solely for the purposes of this study.

ndividual scales and measures and their order of appearance are provided in the Appendix section.

In the majority of the cases, reliability of the scales used has been established. In a few of the cases measures of reliability have not been established. This study used Cronbach's Coefficient Alpha formula to estimate internal consistency reliability.

This section contains the procedures used for compiling the scale scores of the scales used in this study. For descriptive purposes individual scale items (means, frequencies, etc.) will be reported in the "Results" chapter of the study. Also, all scales used in this study were pretested for the purpose of enhancing respondent clarity and interitem correlation.

INDEPENDENT VARIABLE

1. Stress Scale

A 16 item scale has been adopted from an ongoing longitudinal research project being conducted by Walter Reed Army Institute of Research, Washington, D.C. Detailed methodological information on this scale was not available from Walter Reed at the time of this study. However this scale was adapted from Martin's (1983) stress study. Martin's scale consisted of 12 items and reported a reliability of .80. The orignal 12 item measure was reported as having dimensionality. The dimensions reported by Martin were:

- Making and keeping friends
- Husband's safety

- Housing issues
- Employment issues
- Mobile lifestyle issues

Respondents were asked to indicate the degree to which they were currently experiencing problems associated with the listed life experience areas. Their responses were scored on a five-point scale, which was anchored at the extremes of "not a problem" (0) to "very severe problem" (4). Two sample items are as follows:

1. Thoughts of having to move again....
2. Trying to keep my marriage going...

A mean scale score was created by adding the individual responses and dividing by the number of applicable events. A theoretical range of scale scores is 0 to 64. At least 12 of the 16 items must be answered for a scale score to be compiled for a respondent.

INTERVENING VARIABLE

2. Measurement of Strain

A 17 item scale developed by Martin (1983) has been adapted for the purpose of measuring strain. Four items were added to make the scale a 21 item index of strain. This scale assessed the severity of strain experienced during the past few months. The restriction of responses to this period of time was intended to create a time dimension for this variable that would coincide with the initiation of the previously discussed stress scale. For example the stress scale instruction frames the time "since you have become a military wife." The assumption is that the wives

have been married more than a few months. This is a fairly safe assumption in that the husbands are career military (this is one of the requirements before the wives can stay on post while their husbands are away). It should be understood this effort to impose a time dimension on this data has severe limitations and cannot be equated to the time dimension in a longitudinal study.

The frequency for each strain scale item ranged from a score of (0) "never" to a score of (4) "very often." The theoretical score range for the total scale was 0 to 84. Items in this scale represented negative affect (e.g., feeling unhappy, helpless, etc.), general aches and pains (e.g., stomach pains, muscle tension, etc.), cognitive difficulties (e.g., forgetful, mind wanders, etc.), and physical disturbances (e.g., rapid weight gain/loss, menstrual problems, etc.). These items of the four different subtypes were mixed in the 21 item scale to reduce the likelihood of response sets.

An overall scale score was established by summing the numerical responses and dividing by total items answered, with at least 18 of the 21 responses required for a scale score. On the original 17 item scale Martin (1983) reported a reliability of .94.

Using the procedure of factor analysis Martin found evidence of three dimensions in the strain scale. The factor consisted of all of the hypothesized affect items as well as two psychosomatic and two cognitive items. The remaining two factors appeared to be non-complex representations of the psychosomatic and cognitive domains. The three components accounted for 61 per cent of the scale

variance. The factor correlations were all in excess of .80. These correlations support the assumption that these strain domains are highly related to one another.

OUTCOME VARIABLES

3. Alcohol Quantity-Frequency Index

The method of measuring the average daily intake of alcohol was measured in this study by asking nine questions regarding the respondents' drinking practices. This method has been used by several researchers (Straus and Bacon, 1953; Mulford and Miller, 1960; Cahalan, Cisin and Crosssley, 1969). The respondents were asked questions regarding their consumption of beer, wine, and/or hard liquor over the past 30 days. Each respondent reported the frequency with which she had drunk a particular beverage over the past 30 days, then the quantity she had drunk on a typical drinking day. The amounts of beer, wine, and hard liquor were summed and divided by 30 (days) which yielded a continuous measurement of daily "average" alcohol intake.

An illustration will show the mechanics of deriving the quantity-frequency (Q-F) score. Suppose a typical wife drinks beer once or twice a week for a 30 day period and consumes three beers each day that she drinks. Also, suppose she drinks no wine but drinks hard liquor two days in the period, consuming two drinks each drinking day. Her overall ethanol consumption per day would be calculated as follows:

Beer:(1.5 drinking days/week) X (3 drinks per day) X
(.48 ounces of ethanol per drink) / (7 days/week)=
.309 ounces of ethanol per day.

Liquor:(2 drinking days/month) X (2 drinks/day) X (.43 ounces per drink) / (30 days)= .057 ounces of ethanol per day

Total volume: .309 + .057= .366 ounces of ethanol per day.

According to Cahalan, et. al., (1969) this index yields a close approximation of the respondents drinking practices. Garrett and Bahr (1974) compared self-rating and quantity-frequency measures of drinking and found that the Q-F index of drinking was highly correlated with self rating in an interview setting. They found a high consistency between the two methods of measurement. The coefficients (.82 and .89) on two separate nonclinical samples reflect a high degree of association between the two methods of measurements.

Polich and Orvis (1979) used the Q-F self-report measure of alcohol consumption and compared it to actual alcohol sales records. They found a correlation of .83 between the two methods of measurement. This suggests the the Q-F measurement is a creditable method of estimating alcohol consumption. For the purpose of this study the Q-F index served as a continous measurement of the respondents' ethanol intake.

4. Problem Drinking Scale

The "Problem Drinking Scale" used in this study was a 13 item ("yes"/"no" response format) shortened version of the Michigan Alcoholism Screening Test (MAST). The MAST was originallly developed by Selzer, Vinokur and Rooijen (1975). It is intended to detect alcoholism. Skinner and Sheu (1982) found that their estimates of internal-consistency

reliability (Coefficient Alpha) for this scale from their initial assessment (.85) and retest (.88) are quite similar to the values obtained by Zung (1979) with problem drinkers (.88 and .83, respectively). The test-retest correlation of .84 from the Skinner and Sheu study is in line with these internal-consistency estimates.

Polorny, Miller and Kaplan (1972) compared this shortened version of the MAST to the original MAST. The instruments were adminstered to 60 patients being treated for alcoholism and to 62 randomly selected patients with mixed psychiatric diagnoses but not known to have drinking problems. All the patients were male and were similar in age and ethnic composition.

For the group of 60 alcoholics the correlation coefficient between the tow scales was .95; for the 62 non-alcoholics it was .96. The highly correlated scores suggest that the two scales discriminated equally well between alcoholics and non-alcoholic psychiatric patients.

In the present study, the scale was called the Problem Drinking Scale and was intended to be used as a continous measurement of problems associated with drinking. It was not the purpose of this study to detect and discuss the prevalence of alcoholism in the selected sample of military wives.

A sample of the items which made up the PDS is:

- Do you feel you are a normal drinker?
- Do you ever feel guilty about your drinking?
- Are you able to stop drinking when you want to?

A scale score was obtained by summing the responses ("yes equals one, "no" equals zero) and dividing by the number of items answered. A total of 10 out of the 13 items had to be answered in order for the scale to be valid. Selzer, et. al. (1975) reported an internal validity of .87.

5. Life Satisfaction Scale

A 28 item scale has been adopted from an ongoing longitudinal research project being conducted by Walter Reed Army Institute of Research, Washington, D.C. Detailed methodological information on this scale was not available from Walter Reed at the time of this study.

This scale is designed to assess the wife's satisfaction with her life. The items in this scale covered such areas as satifaction with her marriage, military pay, housing, medical care, etc.

The respondent was asked to indicate her satisfaction with each life item. The response categories were arranged in a six-point Likert format, and were anchored in the extremes of (1) "completely satisfied" to (6) "completely dissatisfied." Refer to Appendix B for full scale sample.

Overall, scale scores were derived by summing each numerical response and dividing by the number of item answered. The theoretical scale score range was 28 to 168. For a scale to be considered valid 22 of the the 28 items had to be answered.

MODERATING VARIABLES

6. Coping Skills Scale

The Coping Skills Scale (CSS) was adopted from Billings and Moos' (1981) Coping Response scale. This 20 item scale is designed to measure the respondent's coping capability.

The directions asked the respondents to indicate how often they used a particular method to help themselves deal with problems they face. Examples of the items included:

- Tried to see the positive side.
- Excercised more.
- Kept my feelings to myself.

The responses to each item were in a five-point Likert format. The response categories were anchored in the extremes of (1) "never" (meaning the respondent never used this method) to (5) "always" (meaning the respondent always used this method).

The responses were "counter-balanced" (meaning the items were not all stated in one direction). An answer of "always" sometimes meant a reflection of positive coping skills and sometimes it reflected negative coping skills. This was done to decrease the probability of establishing a biased response pattern.

This summative scale was created by adding the numerical responses and dividing by the number of items answered. A total of 16 of the 20 items must be answered to have a usable score on this scale. The theoretical response range is 20 to 100.

The items in this measure were grouped into three methods of coping according to cluster analysis, the ratings

of several judges, and previous research (Billings and Moos, 1981). These categories of coping are referred to by Billings and Moos as cognitive, behavioral and avoidance. These methods are listed respective to the three examples of scale items previously mentioned. The items were selected from a previous inventory (Sidle, et. al., 1969) and a review of the literature on coping responses in a variety of situations (Moos, 1976, 1977).

Their attempt to minimize item redundance within each coping category resulted in clusters of relatively independent coping strategies. Also, an upper limit may be placed on internal consistency coefficients by the fact that the use of one coping response may be sufficient to reduce stress and thus lessen the need to use other responses from either the same or other categories of coping. With these considerations in mind the alpha for each method of coping was .72 for cognitive coping, .80 for behavioral coping, and .44 for avoidance coping. These coeficients indicate that the sub-categories of coping responses, as well as the entire set of items (alpha= .62), exhibit moderate to weak internal homogeneity. Adequate internal consistency and independence have been demonstrated previously (Folkman and Lazarus, 1980).

7. Social Support Scale

A 40 item Interpersonal Support Evaluation List (ISEL) was adopted from the work of Cohen and Mc Kay (1984). Their scale attempts to measure four dimensions of social support. These dimensions, which were previously disscussed, are tangible support, support for self-esteem, sense of belonging, and appraisal support. For examples of scale

items refer to the preceding chapter under the heading of "social support."

The 40 item scale was designed with a "true" or "false" response format. A scale score was obtained by summing the numerical response (a "true response equals 1 and a "false" response equals 0) and dividing by the number of answered items. For the score to be considered valid the respondent must answer 32 of the 40 items. The items are "counter-balanced" in a effort to avoid a biased response pattern. The theoretical score range was from 0 to 1. Internal reliability of the total scale has been reported as low as .77 (Mermelstein, Cohen and Lichtenstein, 1983) and as high as .86 (Cohen, et. al., 1985). Ranges for the four subscales are .77 to .92 for appraisal, .60-.68 for self-esteem, .75-.78 for belonging, and .71-.74 for tangible support (Mermelstein, Cohen and Lichtenstein, 1983; Cohen et. al., 1985).

Cohen and Hoberman (1983) found the ISEL correlated .30 with the total score of the Moos Family Environment Scale (FES; Moos and Moos, 1981). Correlations with subscales of the FES with the ISEL were .21 with expressiveness, .46 with cohesiveness, and .19 w th conflict. In the same study the ISEL also correlated .46 with number of close friends, and .42 with number of close relatives. The ISEL also correlated .31 with the Partner Adjustment Scale (PAS; Mermelstein, Lichtenstein and McIntyre, 1983). The PAS is a measurement of the quality of marital or living partner relationships. These findings indicate that the ISEL is an appropriate measure of support.

DESCRIPTIVE MEASURES OF ALCOHOL USE

8. Drinking Context Scale

It has been mentioned that one of the goals of this study was to obtain descriptive data concerning this study's sample. One area of concern in this study was learning the social context in which the wives drink. The 12 item "Drinking Context Scale" (DCS) was developed for this specific purpose. It coverd social context areas such as with whom the wife drinks, where she drinks, and when she drinks.

The response categories were formatted into a four-point Likert scale. The responses ranged from (1) "never" to (4) "most of the time". This scale was not designed to be a summative scale but rather was developed to yield descriptive data. On each item the respondent was asked to indicate whether she drank alcoholic beverages within the past 30 days. Examples of items include:

- When I eat meals...
- Alone at home...
- When my husband is gone...

9. Reasons for Drinking Scale

The "Reasons for Drinking Scale" (RFDS) was developed for the purpose of gathering descriptive data. The 15 item scale as used in this study attempted to measure the importance the wife gives to her motives for drinking. Examples of items in this scale included:

- I drink to be sociable.

- I drink to relax.

- I drink because alcohol is cheap on post.

The response categories were in a four-point Likert format. The response categories ranged from (1) "not at all important", (2) "Slightly Important", (3) "Somewhat Important", and (4) "very important" for their indicated reasons for drinking. As with the DCS, this scale was not designed to be a summative scale or to yield a single scale score.

The instrument used in this study contains 17 demographic variables. These variables include information about the subject's age, race, marital situation, etc. The 17 demographic variables are presented in the appendix section of the study.

CHAPTER VI.
DATA ANALYSIS

A. DESCRIPTIVE ANALYSIS

One of the objectives of this study was to gather descriptive information concerning the characteristics of military wives. The sample of this study has provided considerable information on a relatively small (N=119) but important subset of military wives.

1. SAMPLE CHARACTERISTICS

Table 1 provides a summary of a number of personal background characteristics of this sample.
The largest ethnic group represented in this study is white (58.8%) followed by blacks (28.6%). The remaining ethnic groups (Asian, Hispanics, and "other") about equally represent the remaining 12.6% of the sample.

Slightly more than 87% of the study respondents reported that English was their native language. This percentage is higher than what Martin (1983) reported (77%) in his study of army wives.

Regarding religious preference, over half of the study (55.5%) indicated they were protestant. This percentage is a bit misleading because several respondents reported religious preferences in the "other" category (17.6%) which could be considered as protestant (i.e., Baptist,

Table 1

General Background Characteristics in Percentages

Characteristics (n=119)	Percent	Number of Respondents
Ethnic Background		
White	58.8	70
Asian	4.2	5
Black	28.6	34
Hispanic	4.2	5
Other	4.2	5
Native Language		
English	87.4	104
Spanish	4.2	5
Korean	1.7	2
Vietnamese	1.7	2
Thai	.8	1
Japanese	0.0	0
German	2.5	3
Other	1.7	2
Religious Preference		
Catholic	15.1	18
Jewish	0.0	0
Moslem	0.0	0
Protestant	55.5	66
Other	17.6	21
No Preference	11.8	14
Importance of Religion		
Strongly Disagree	1.7	2
Disagree	16.8	20
Agree	50.4	60
Strongly Agree	31.1	37
Pregnant		
Yes	.8	1
No	99.2	118

Pentecostal, and Seventh Day Adventists). The only other religious preference was Catholic, which constituted 15.1% of the study. The remaining 1[illegible].8% of the sample indicated that they had no religious preference.

Concerning a related religious characteristic, 81.5% of the sample agreed that their religion was an important aspect of their daily life. The remainder of the sample (18.5%) believed that religion was not an important part of their life. These data suggest that the sample, in general, hold religion as an important element of their lives.

One of the items in the demographic section of the questionnaire asked if the respondent was pregnant. The data revealed that only one of the respondents was pregnant at the time the data were collected.

Table 2 contains information regarding other personal characteristics which are expressed in mean scores with standard deviations. The mean age of the wives in this study is slightly over 32 years. This, not surprisingly, reflects a relatively young group of wives. These women have been married to their military husbands for about 10 years and have between 2 and 3 children living in their homes. As a group the husbands of these women have been in the military for nearly 14 years and have been away from home about 6 months.

Table 3 represents selected demographic data which is best expressed in percentages. About one in three of the wives has been previously married and nearly three-fourths of these women have some college education or have a college degree. This reflects a well educated group of wives.

Table 2

Mean Scores on Selected Background Characteristics

Characteristics (n=119)	Mean	S.D.
Age	32.4	5.29
Years being a military wife	10.09	5.31
Children at home	2.48	1.23
Years husband has been in the military	13.68	7.66
Husband's absence in weeks	24.51	19.27

Table 3

Selected Demographic Data in Percentages

Characteristics[a] (n=119)	Percentage	Actual Number
Previously Married	31.1	37
	68.9	82
Educational Level		
Less than High School Diploma	1.7	2
High School Diploma	14.3	17
Some College	43.7	52
College Degree	30.3	36
Advanced College Degree	7.6	9
Husband's Rank		
E1-E4	8.4	10
E5-E6	53.8	64
E7-E9	28.6	34
W1-W2	4.2	5
W3-W4	2.5	3
O1-O3	0.0	0
O4-O6	2.5	3
Husband's Unit		
Combat Arms	20.2	24
Medical Battalion	.8	1
Aviation Battalion	16.8	20
Engineer Battalion	12.6	15
Other	37.8	45
Don't know	10.9	13
Wife Currently Employed		
No	67.2	80
Part-time	12.6	15
Full-time	20.2	24

[a]Totals less than 100% reflect missing data.

The socioeconomic status of these wives is best represented by their husbands' pay grade. To better understand the military pay grades the following explanation is offered. An "E1" represents the lowest pay grade for enlisted personnel and "E9" represents the highest pay grade for enlisted personnel. The "W1" pay grade reflects the lowest pay for "warrent officers" and "W4" reflects the greatest pay grade for warrent officers. The "O1" pay grade is the beginning pay grade for "officers" and the "O6" pay grade reflects a greater amount of rank and pay for officers. Generally speaking, officers are paid more than warrent officers and warrent officers are paid more than enlisted personnel.

The largest pay grade group is represented by the "E5-E6" enlisted pay grades (53.8%) followed by the "E7-E9" senior enlisted grades (28.6%), which if followed by the "E1-E4" junior enlisted grades (8.4%) and next is the "W1-W2" warrent officers pay grades (4.2%) and last the "W3-W4" and "O4-O6" pay grades which each reflect 2.5% of the sample of wives' husbands.

The units in which the husbands work generally reflect the type of work the husbands perform. For instance, the "combat arms" unit is primarily made up of combat ready soldiers such as infantry soldiers or soldiers in the armor units, whereas those in the "medical battalion" work at different jobs in the hospitals or clinics.

Over a third of the wives listed the "other" category in describing their husbands' unit. This category includes office workers, mechanics, transportation workers, etc. Only a little over 10% could not recall their husband's unit.

The last of the background data reflects the wives' occupational situation. Over two-thirds of the sample were not working outside of the home, whereas, approximately one out of five worked full-time. The remaining portion of wives (12.6%) worked part-time.

2. Context and Reason For Drinking Instruments

One of the goals of this study is to describe the context of and the reasons given for the respondent's drinking behavior. Learning this information may provide a better understanding of the relationships found in this study.

The instrument used to measure the context in which these women drink consisted of 12 items (see Appendix B). The women responded to questions about when and where they drink and indicated whether they "never, rarely, sometimes," or "most of the time" drink under this circumstance.

Table 4 lists the context of their drinking in mean scores with standard deviations and is ranked in descending order of the mean scores. The response categories were in Likert format and anchored in the extremes of "never" (1) to "most of the time" (4). The mean scores were calculated only on the respondents who indicated they had drank alcohol during the past 30 days (n=56).

The largest mean score (2.87) indicates that drinking most often occurs in someone's home when meeting with friends. The drinking done by these respondents is done in a social setting. This is also true with the third largest mean score (2.39), which is drinking with friends at a club setting on post.

Table 4

Ranked Social Context of Drinking By Mean Scores

Rank	Social Context (n=56)	Mean	S.D.
1	With friends at my home or theirs	2.87	1.02
2	When husband is away	2.41	.99
3	At a club on post with friends	2.39	1.20
4	Alone at home	2.27	1.10
5	At a bar off post with friends	2.13	1.27
5	At night after the evening meal	2.13	1.01
6	With my family	1.95	1.00
7	At a restaurant	1.83	.96
8	At a club on post by myself	1.67	1.01
9	During the day before the evening meal	1.46	.71
10.	At a bar off post by myself	1.45	.95
11.	With a meal at home	1.41	.73

However, the social context of drinking when their husbands are away and drinking alone at home (ranking second and fourth respectively) may be interpreted as a reaction to loneliness.

The two contexts of "at a bar off post with friends" and "at night after the evening meal" tied for the fifth ranking. The first of these two indicates that it is not uncommon for these drinkers to go off post with friends to drink. It does seem that most of the drinking is on post. This seems to be true because the first and third ranked contexts are on post settings. This is not too surprising due to the fact that most of the wives live on post.

The context of "at night after the evening meal" may have been ranked higher except for the fact that most of these women have children living at home and probably do not have time to set down after the evening meal and have a drink. They may be quite busy doing the dishes and getting their children ready for bed, especially since their mates are not in the home.

The husbands being absent may also explain why the context of "drinking with family" is ranked relatively low. If the husbands had been at home this context may have also ranked higher.

It appears that the drinking "at a restaurant" context is not a popular situation. Having personally visited this military post on several occasions it is this researcher's opinion that the large majority of restaurants in the vicinity were either of the quick food, self-service or short-order variety. To go to a restaurant where cocktails

were served one would have to drive several miles to an adjoining community.

The greatest solitary drinking was done at home (this ranked fourth). However, the next ranked context of solitary drinking was done on post at one of the clubs. This context ranked eighth. The next ranked solitary context was that of drinking at a bar off post. Drinking during meals and during the day seems to be infrequent occurances judging from their relatively low rankings.

Generally speaking, it seems that most of the drinking is done during social gatherings even though one of three solitary contexts did rank fourth. One disturbing fact revealed by the data is the frequency in which this sample drinks alone at home. This is distrubing because solitary drinking has been associated with problem drinking (Glynn, et. al., 1983; Hobfoll and Segal, 1983). Nineteen per cent of the drinking sample stated that this type of solitary drinking was done "most of the time."

Table 5 represents the ranked mean scores with the standard deviations of 15 possible reasons for drinking behavior. As with the data in Table 4 the mean scores were calculated on those who had drank in the past 30 days (n=56).

Eight out of the top 10 ranked reasons are what Cahalan, et. al., (1969) has been referred to as "personal effects" reasons . As noted in an earlier chapter these personal effects reasons have been associated with deviant drinking. It seems that the wives in this study consume alcohol with the belief that alcohol provides relief from

Table 5

Reasons For Drinking Ranked By Mean Scores

Rank	Reason (n=56)	Mean	S.D.
1	I like the taste	2.78	1.02
2	I drink to relax	2.40	1.03
3	Helps me to go to sleep	1.75	.97
4	A drink cheers me up	1.63	.86
5	A drink helps me forget my worries	1.61	.98
6	I drink to be sociable	1.59	.71
7	I drink because my husband is gone a lot	1.50	.89
8	I drink to forget everything	1.47	.91
9	A drink increases my self confidence	1.37	.75
10	I drink when I'm bored	1.33	.66
11	I drink when I'm thirsty	1.26	.64
12	I drink because it is socially expected in a military community	1.16	.46
13	I drink because alcohol is cheap on post	1.05	.23
13	I drink because it is readily available on post	1.05	.30
14	A drink makes me feel more feminine	1.04	.19

the stress and strain they experience. This idea is reinforced because the second largest mean score is associated with the reason "I drink to relax" (mean=2.40; SD=1.03).

The reason of "I like the taste" ranked first (mean=2.78; SD=1.03). It is also apparent that many of these drinkers use alcohol as a sleeping aid judging from it's third highest mean score. This is closely followed by the reason "a drink cheers me up." It seems several of the drinking wives use alcohol as a mood elevator. This may also be true of the next reason of "a drink helps me forget my worries."

It seems the military environment is not perceived by the respondents as being important in regards to why they drink. There were three reasons which specifically referred to the military environment and they were among the lowest mean scores reported. Again, it appears that the military environment is not an important reason for the drinking behavior of these respondents.

Later in this chapter correlational analysis will be accomplished relating to the reasons for drinking items and the drinking problems index (MAST).

3. Drinking History Data

One section of the questionnaire asked a series of seven questions regarding drinking in the respondent's family. The data gathered relating to this area of life is represented in Table 6 and is reported in percentages.

The first question asked whether the respondent's

father has or has had a drinking problem. To this question two-thirds (66.4%) of the women indicated that their fathers had no history of drinking problems, while the remaining one-third (33.6%) indicated that their fathers do have a history of drinking problems. It appears that many of these women did have a father who abused alcohol. This seems alarmingly high in light of statistics reported by Schomp (1977), which suggests that 10% of drinking men have a drinking problem.

The second question asked if the respondent's mother had a drinking problem. The number of individuals responding in the affirmative was comparatively low (n=11; 9.2%).

The age in which the women began drinking on a regular basis was the next area of inquiry. The age for beginning drinkers ranged from 12 to 40 years of age (mean=20.43; S.D.=4.54). Table 6 shows the ages represented by age groups. The first group (17 years and younger) accounts for 24.4% of the 76 drinking wives who responded to this item. The next age group (18 and 19 year olds) represents another 23.7% of the drinking wives. The third grouping (20-22 year olds) represents 28.9% of the wives. The last age group (23-40 year olds) constitutes the remaining 25% of the drinking wives sample. Over 52% of the wives began drinking between the ages of 18 and 22. As mentioned earlier 76 wives responded to this item by indicating an age, the remainder of the sample (43 respondents) indicated that this item did not apply to them. The 43 wives seem to be representing lifetime abstainers.

The fourth item on the drinking history inventory asked

Table 6

Drinking History Items By Per Centages

Drinking History Item[a]	PerCent	N
1. A Father with a drinking problem		
No	66.4	79
Yes	33.6	40
2. A mother with a drinking problem		
No	90.8	108
Yes	9.2	11
3. Age began drinking[b]		
17 or under	22.4	17
18-19	23.7	18
20-22	28.9	22
23-40	25.0	19
4. Would volunteer self for treatment		
No	7.6	9
Yes	91.6	109
5. Ever quit drinking		
No	74.8	89
Yes	18.5	22
6. Husband has drinking problem		
No	84.9	101
Yes	14.3	17
7. Would ask husband to volunteer for treatment		
No	10.9	13
Yes	88.2	105

[a]Totals less than 100% or Ns less than 119 reflect missing data.

[b]Per centages are based on a drinking sample of 76.

the question "If you knew you had an alcohol problem would you volunteer for treatment offered by the Army?" To this question 91.6% answered "yes." Only one respondent failed to answer this item.

The next item asked "Have you ever quit drinking because you felt that alcohol was hurting you or your family relationships?" Approximately 75% of the women answered "no" whereas about 19% indicated that they had quit drinking for the stated reason. A total of eight wives failed to respond to this item.

The sixth item asked if the respondent felt her husband has a drinking problem. To this approximately 85% indicated that they did not believe their husbands had a drinking problem. Fourteen per cent did believe their husbands had a drinking problem. Polich and Orvis (1979) found that 13.9% of their sample of Air Force personnel had a drinking problem. The Polich and Orvis sample was considerably larger (n=3,148) yet the perception of the wives in the present study are nearly the same.

The last item asked "If you knew your husband had an alcohol problem would you ask him to volunteer for treatment offered by the Army?" The majority of these wives answered "yes" (88%) whereas only eleven per cent stated they would not ask their husband to volunteer for treatment.

B. PSYCHOMETRIC ANALYSIS

In this section of the study each scale used will be discussed in terms of psychometric properties. Highlights of the application of the various scales to the study respondents are located in Table 7. The contents of this table includes obtained alphas (where alpha is applicable), means and standard deviations of each scale used. The scores for all scales (except the QF scale) were obtained by summing each item score, then subtracting the number of missing items and then dividing by the number of scale items. The "Method" chapter provides detailed instructions regarding scale composition.

1. Stress Scale

The 16 item stress scale was adapted from Martin's (1983) measure of stress conditions. Martin's original scale contained 12 items. The reliability for the 12 item scale was .80. In the current study an alpha of .84 was obtained for the 16 item scale.

The items were a list of stressful conditions and the response dimension was a five point Likert format with the extremes anchored from zero ("not a problem") to four ("very severe problem").

A factor analysis was accomplished in the present study on the 16 items. The first three factors explained 50% of the total scale variance. The other two factors (there were five in all) having eigenvalues of at least one accounted for a very small percentage of scale variance. Therefore a solution using three factors appeared to best represent the data. The varimax rotated factor matrix rotated three

Table 7

Scale Characteristics

Scale	Mean	S.D.	Alpha
Stress	1.39	.73	.81
Strain	1.60	.82	.93
Quantity-Frequency[a]	.64	.79	--[b]
MAST	1.28	1.64	.70
LSAT	3.28	.73	.91
Social Support	.76	.21	.80
Coping	3.67	.54	.75

[a]The mean score represents average ounces of daily alcohol intake.

[b]An alpha is not appropriate for this index of alcohol consumption.

factors which were somewhat ambiguous. For factor loading a criterion of .35 or greater was established.

The principal factor in the three factor solution accounted for 71.8% of the common factor variance. The second and third factors accounted for 15.1 and 13.2% of the common factor variance, respectively.

Based on the item loadings in the varimax rotated factor matrix, a clearly defined multi-dimensionality was not observed. Nine of the 16 items loaded on the first factor. Three of these items were complex with one on the second factor and two loading on the third factor. One of the 16 items failed to load on any of the three factors. Four items loaded on the second factor and were not complex, while only two items independently loaded on the third factor.

A strained attempt at interpreting the factors suggested the first factor relates to generalized interpersonal security issues. The second factor was characterized by issues involving moving while the third factor addressed the issue of employment.

Although there is some semblence of dimensionality a decision was made to treat this scale as being essentially unidimensional. There were several mitigating factors which were considered before this decision was made. These mitigation factors were:

1. Thirteen of the 16 items loaded on the first factor in the pre-rotated matrix.

2. The internal reliability of the scale was relatively high (.84).

3. Only a few of the items clearly loaded on the second and third factors (4 items for the second factor and 2 for the third).

4. The first factor accounted for 71.8% of the common factor variance in the three factor solution.

It appears that meaningful dimensionality is not attainable. Because of the complexity of meaningful dimensionality as well as the moderate interpretability of the analysis this measurement of stress is treated as a generalized measure of stress.

All 16 items were retained in the final construction of the stress variable even though one item failed to load on either of the three factors. However this item was acceptable in the item total correlation column of the reliability analysis.

The theoretical scale range is zero to four with a middle value of 2.0. The observed range of the stress scale is .063 to 3.250 with a mean of 1.39.

2. Strain Scale

The 21 item strain scale was adapted from Martin's (1983) measure of reported strain. Martin's original scale contained 18 items. A reliability for the original scale was reported as being .94. This is compared to an alpha of .91 using the 21 item scale.

The items were a list of psychological/physiological complaints. The respondents were asked to indicate how often they experienced any of the listed problems. The response set was placed in a five point Likert format and

anchored in the extremes ranging from zero (never have a problem) to four (very often have a problem).

Martin (1983) factor analyzed the 18 item strain scale and observed three distinct dimensions. These three dimensions consisted of negative affect, psychosomatic complaints and cognitive difficulties.

In an effort to duplicate Martin's findings and to compare other aspects of the strain scale a decision was made to delete the added three items and to use the 18 items of the original scale. After this was accomplished an alpha of .94 was attained. It appears the three items dropped did not enchance internal reliability.

After factor analyzing the 18 item scale a solution using three factors appeared to best represent the data. These three principal factors accounted for 65.4% of the total scale variance. The varimax rotated factor matrix produced three enigmatic factors. A criterion of at least .35 or greater was used for factor loadings.

The principal factor in the three factor solution accounted for 83.6% of the common factor variance. The second and third factors accounted for 9.1% and 7.3% of the common factor variance, respectively.

Based on the item loadings in the varimax rotated factor matrix, a clearly defined multi-dimensionality was not demonstrated. Twelve of the 18 items loaded on the first factor. Nine of these first factor loadings were complex with four loading with factor two and five loading with factor three. Three non-complex items were found to load on each of the three factors.

While there is some obscure hint of dimensionality this scale will be treated as a unidimensional assessment of perceived strain. One of the reasons for this is that all 18 items load on the first factor in the pre-rotated matrix. Another reason is that the internal reliability is quite high (alpha=.94). Also, only three items were "simple" in that they loaded on one and only one factor. Finally, the first factor accounted for 83.6% of the common factor variance in the three factor solution.

The complexity of dimensionality as well as the moderate interpretability of the analysis heavily influence the decision to treat this scale as a generalized index of strain. The results of this analysis indicates that the dimensions reported by Martin (1983) were not replicated.

The theoretical scale range is from zero to four with a middle point of 2.0. This is compared to the observed range of .048 to 3.810 with a mean of 1.66. It seems that in comparing the sample range and mean with the theoretical range and mean this group of military wives are experiencing a moderate to low amount of strain.

3. Quantity-Frequency of Drinking Scale

The purpose of this scale is to obtain a continuous measurement of the sample's alcohol consumption for a given 30 day period. Approximately 47% of the sample (n=56) consumed alcohol during the specified time. The distribution of the drinking sample appeared to be somewhat skewed judging from comparing the mean score (.64) to the median score (.23). The mean of this scale (represented in Table 7) was .64 which is interpreted as an average daily consumption rate of .64 ounces of alcohol. This mean rate

of drinking is approximately equivalent to drinking either a 12 ounce can of beer, a 6 ounce glass of wine, or one mixed drink per day for a period of 30 days. Generally speaking, this is a moderate rate of drinking.

Table 8 reflects the consumption patterns for beer drinkers. It appears that a large percentage of the beer drinkers (71%) drink beer once a week or less. This is contrasted to the 9% that drink beer every day or "nearly" every day. The remaining 20% consume beer between three or four times per week (this represents approximately 12 to 16 days a month).

The number of cans or bottles of beer consumed per drinking day also reflects a moderate beer drinking sample. The percentages of beer drinkers drinking one to three units of beer per drinking day is 76. Only three respondents (9%) drink the maximun 8-11 units of beer per drinking day.

Table 9 reflects the consumption patterns for wine drinkers. Regarding the number of days of drinking wine no wine drinker drank more than once a week. The number of drinks per drinking day is also representing a moderate drinking sample.

Concerning the drinking of hard liquor, Table 10 illustrates that the vast majority (91%) of those who drank hard liquor (n=32) drank once per week or less. A total of 82% (n=26) drank three or less drinks per drinking day. An observation of drinking patterns for all three types of alcoholic beverages reveals a conservative alcohol consuming population.

The total QF scores for all drinkers is represented in

Table 8

Consumption Patterns For Beer Drinkers

Beer Drinkers (n=35)	% of Beer Drinkers	N
Drinking Days		
Everyday	6	2
Nearly everyday	3	1
3-4 times per week	20	7
Once or twice a week	29	10
2-3 times during past 30 days	22	8
Once in past 30 days	20	7
Cans/Bottles consumed per drinking day		
One	22	8
Two	20	7
Three	34	12
Four	6	2
Five	3	1
Six	6	1
Seven	0	0
Eight to eleven	9	3

Table 9

Consumption Patterns For Wine Drinkers

Wine Drinkers (n=33)	% of Wine Drinkers	N
Drinking Days		
Everyday	0	0
Nearly everyday	0	0
3-4 times per week	0	0
Once a week	21	7
2-3 times during past 30 days	42	14
Once during past 30 days	37	12
Glasses of wine consumed per drinking day		
One	18	6
Two	33	11
Three	40	13
Four	3	1
Five	3	1
Six	3	1
Seven	0	0
Eight to eleven	0	0

Table 10

Consumption Patterns For Liquor Drinkers

Liquor Drinkers (n=32)	% of Liquor Drinkers	N
Drinking Days		
Everyday	0	0
Nearly everyday	2	1
3-4 times per week	6	2
Once a week	28	9
2-3 times during past 30 days	25	8
Once during past 30 days	38	12
Number of drinks per drinking day		
One	35	11
Two	19	6
Three	28	9
Four	6	2
Five	0	0
Six	6	2
Seven	0	0
Eight	0	0
Nine or more	6	2

Table 11

Q-F Scores In Percentages

Average Ounces of Alcohol Consumed Daily (n=56)	%	N
0 - .49	62	34
.50 - .99	18	10
1.0 - 1.49	7	4
1.50 - 1.99	3	2
2.0 - 2.49	3	2
2.50 - 2.95	7	4

Table 11. The QF scores support the notion of a moderate drinking population. A total of 80% of those who drank averaged less than one ounce of alcohol per day. Although it has not been determined that a specific QF score leads to problem drinking, Polich and Orvis (1979) have estimated that a person drinking more than two ounces of alcohol per day, the probability of manifesting some alcohol related problem is increased by a factor of two. There were six respondents (10% of the drinking sample) in this category. For those who drank, the QF score range was .016 to 2.954 ounces of alcohol.

4. MAST Scale

The MAST is the shortened version of the Michigan Alcoholism Screening Test. It contains 13 items which have a "yes/no" response alternative. The MAST is used in this study as a dependent variable and was intended to be used as an index of drinking problems. Mast scores were calculated only on those respondents currently drinking (n=56).

In the present study 3 of the 13 items failed to correlate greater than .20 on the total item correlation in the reliability analysis. In order to improve the reliability these three items were dropped from final scale composition. Before these items were omitted from the final scale construction the reliability coefficient was .64. After deleting the three low correlating items a reliability of .75 was obtained. The three items dropped from the final scale composition were:

- Have you ever gotten into trouble at work because of drinking?

- Have you ever been arrested for driving under the influence?

- Have you ever been arrested because of other drunken behavior?

The theoretical scale range was 0 to 1 with a middle score of .5. This is compared to the observed range 0 to .65 with a mean of .12. This suggests that few of the respondents had any serious drinking problems. The Mast scores represent a skewed distribution in that only about half of the drinkers scored greater tha zero. This is partially reflected in the comparison of the mode (0) to the mean (.12).

5. Life Satisfaction Scale

The life satisfaction scale (LSAT) has 28 items and is formated in Likert style. The responses are anchored from one (completely dissatisfied) to five (completely satisfied). The LSAT scale may represent different dimensions of life satisfaction but a factor analysis of this scale could not be accomplished due to an inadequate number of cases. As a consequence the LSAT scale is treated as a unidimensional measure of life satisfaction. The internal reliability is relatively high (alpha=.91). Martin (1983) used a similar scale which contained 22 items and reported an alpha of .92.

The range observed in this study sample was 1.71 to 4.96. The theoretical middle point of this scale is 3, and the observed mean was 3.28. The obtained mean and range for this scale is slightly skewed towards larger life satisfaction scores. The overall sample scores reflect a fairly satisfied group of army wives.

6. Social Support Scale

The social support scale used in this study was a 40 item index which had a "yes/no" response alternative. A factor analysis of this scale could not be accomplished because of the large number of items and the low number of cases. There are four conceptual dimensions to this scale as reported by Mermelstein, et. al. (1983) and Cohen et. al. (1985). The four dimensions (subscales) of this social support measure are:

- appraisal
- belonging
- tangible
- self-esteem

The alphas obtained in this study were .76 for appraisal support, .77 for belonging support, .77 for tangible support, and .64 for the self-esteem subscale. The alphas obtained for these four subscales was very comparable with those observed by Mermelstein, et. al., (1983) and Cohen, et. al., (1985).

Internal reliability of the total scale has been reported as low as.77 (Mermelstein, et. al., 1983) and as high as .86 (Cohen et. al., 1985). The alpha obtain in this study for the complete 40 item scale was .80, which again is quite comparable.

A decision was made to use the 40 item scale as an overall measure of social support. This decision was based on two influencing factors. First, the overall scale reliability was higher than that of the subscales (which had fairly modest reliabilities), and the total scale

reliability was an acceptable .80. The other, and perhaps the most important consideration is a theoretical one. The proposed study model did not in any way suggest that the relationship between strain and the outcome variables would be qualified differently by the types of social support.

The theoretical scale range is from 0 to 1 with a middle score of .5. The observed scale range was .10 to 1.00 with a mean of .76. The study mean is compared to the means of .82 and .86 reported by Mermelstein, et.al. (1983) and Cohen, et. al. (1985), respectively.

7. Coping Skills

The measurement of respondent's coping capabilities for this study is Billings and Moos' (1981) 19 item "coping responses." One item was added to this scale. This item ("tried to reduce the tension by drinking more") was intended to be an avoidance style of coping. The scale items were a list of coping behaviors and the response mode was a five point Likert Format with the extremes anchored from one ("never" exhibit this behavior) to five ("always" exhibit this behavior).

Billings and Moos (1981) reported three distinct dimensions of their scale. These dimensions reflect "active cognitive", "active behavioral", and "avoidance." The reliability of the entire scale was .62 and the alpha for the three subscales of cognitve, behavioral, and avoidance were .80, .72, and .42, respectively. In the current study an overall alpha of .55 was observed with an alpha of .62, .54, and .47 for the three respective subscales.

A factor analysis was accomplished on the 20 item

scale. A solution using three factors best represented the data. These three components accounted for 53.9% of the total scale variance. The varimax rotated factor matrix produced three ambiguous factors. Again, the .35 or greater criterion was used for factor loadings.

The principal factor in the three factor solution accounted for 52.6% of the common factor variance. The second and third factors accounted for 27.3 and 20.1% of the common factor variance, respectively.

Using the observed item loadings in the varimax rotated factor matrix, a clearly defined multi-dimensionality was not found. Ten of the 20 items loaded on the first factor. Two of these items were complex and loaded on the third factor as well. One other item was complex and loaded on the second and third factors. Five items failed to load on any factor. Three non-complex items loaded on the second factor and only one non-complex item loaded on the third factor.

Although there were no clearly defined dimensions it did appear that the first factor was reflecting a coping style consisting of information acquisition and processing. Examples of the items reflecting this style are:

- Talked with friends about the situation.
- Tried to find out more about the situation.
- Talked to my husband about the problem.

The second and third factors reflected a combination of passive coping styles (i.e., "prayed more", "kept feelings to myself," etc.) and socially undesirable coping styles (i.e., "smoking more", "took it out on others", etc.). The

only reasonable interpretation of dimensionality is that the first factor included items which were socially desirable (i.e., information acquisition) and the second and third factors tend to reflect largely socially undesirable coping behaviors. The factor analysis indicates that the factor structure was neither strong or simple and did not confirm the structure reported by the test authors.

A decision was made to use 11 of the items from the coping responses index and form a single dimension coping scale reflecting information acquisition coping behaviors. An alpha of .75 was obtained for the 11 item set, which is considered a low but acceptable level of internal reliability. The decision to reconstruct the coping variable was made for five primary reasons.

1. Ten of the items loaded on the first factor.

2. The internal reliability of the 20 item scale was not acceptable (alpha=.55).

3. Few items clearly loaded on the second and third factors which conveys a lack of meaningful dimensionality.

4. The reliability analysis indicated only 11 items inter-correlated greater than .25.

5. These 11 items were clustering together as indicated both by the reliability analysis in which they had item total correlations exceeding a criterion of .25 and they had substantial loadings on the first factor of the factor analysis. The eleventh item loaded on the first factor but not uniquely, but was included as part of the coping measure.

The exact items used in the final scale composition are starred in Appendix B, Section 11 of the study.

The final 11 item coping scale has a theoretical range of 1 to 5 with a middle value of 3. The observed range was 2.55 to 4.82 with a mean of 3.67.

C. RESULTS

1. Intoduction

One of the main objectives of this study was to provide a useful explanation of the relationships between a number of variables. Figure 1 was presented earlier as a proposed model for understanding the nature of the study variables. The hypotheses are presented in chapter four but will be restated in this section of the study. All tests of the hypotheses will be made at the .05 level of significance.

To test the different hypotheses several different statistical techniques were employed. The variables in the study model were originally constructed as continuous measures. Due to the nature of some of the statistical techniques and/or the shape of a particular distribution these variables were transformed into category variables.

The MAST variable had a number of problems which precluded it's use as an adequate measure for the hypotheses test. The MAST was scorable only for the drinkers (n=56). Regarding those who drank, there were only 35 respondents scoring greater than 0, which further skewed the distribution. Because of this, the MAST is regarded as an inadequate measure for testing the hypotheses. A descriptive report of the MAST variable was presented in the preceding section. It will not be used for the hypotheses test; instead, the other two dependent variables (quantity-

frequency and life satisfaction) will be used as the outcome measures.

When the analysis of variance procedure was employed, the variables of "coping" and "social support" were transformed into category variables. The coping and social support variables were dichotomized to reflect "high" and "low" levels.

The Q-F (quantity-frequency) variable was trichotomized to reflect the levels of no drinking, light drinking and moderate drinking behavior (there were no reports of what may be considered "heavy" drinking behavior). The discriminant analysis procedure was employed to test the fifth hypothesis. As part of the discriminant analysis the Q-F variable was used in the category form. Unless otherwise stated the remainder of the variables were left in their continuous form.

2. Test of the Hypotheses

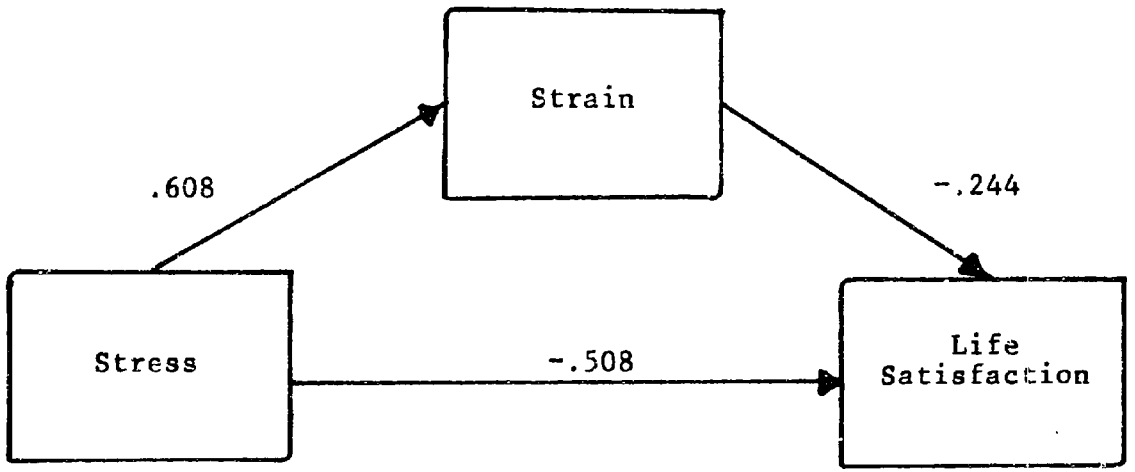
As predicted in H_1 the stress was significantly and positively related with the reported levels of strain (r=.61; p<.001; n=119).

The second hypothesis (H_2) suggested that strain would be related to the dependent variables of quantity-frequency of drinking (Q-F) and general life satisfaction (LSAT). As predicted strain was significantly and positively related to the Q-F variable (r=.42; p<.001) for the 56 respondents who reported drinking behavior "within the past 30 days." Also consistant with (H_2) the reported levels of strain were negatively and significantly associated with life satisfaction (r=-.55; p<.001; n=119).

The third hypothesis predicted that the impact of stress on outcome would operate through the mechanism of strain. To evaluate the third hypothesis (H_3) a path analysis procedure was employed. Path analysis is a mathematical technique that can be used to specify relationships among a set of variables. It provides a way for estimating what portion of an observed association between an independent variable and a dependent variable is attributed to direct causal effect, and what portion is attributed to indirect effects through specified intervening variables (Naditch, 1976).

In this study the path analysis procedure was used to determine if strain functions as an intervening variable between the dependent variable of stress and the outcome variables of life satisfaction and quantity-frequency of drinking alcohol, for those reporting any drinking. In the stress-strain-life satisfaction version of the model the path coefficient from stress to life satisfaction was -.508 (the direct effect). The magnitude of the indirect effect thru strain is obtained by multiplying the correlation between stress and strain (r=.608) times the path coefficient (-.244) on the strain-life statisfaction line. This indirect effect was equal to -.148. A path diagram for the stress-strain-life satisfaction relationship is illustrated in Figure 2. The direct effect of stress on life satisfaction (-.508) is considerably larger than the indirect effect thru strain (.148). The path analysis suggests that strain does have a mediating function, but that the impact of stress on outcome is principally through other variables not specified in the stress-strain-outcome model.

Figure 2: PATH ANALYSIS USING THE VARIABLES STRESS, STRAIN, and LIFE SATISFACTION (n=119)



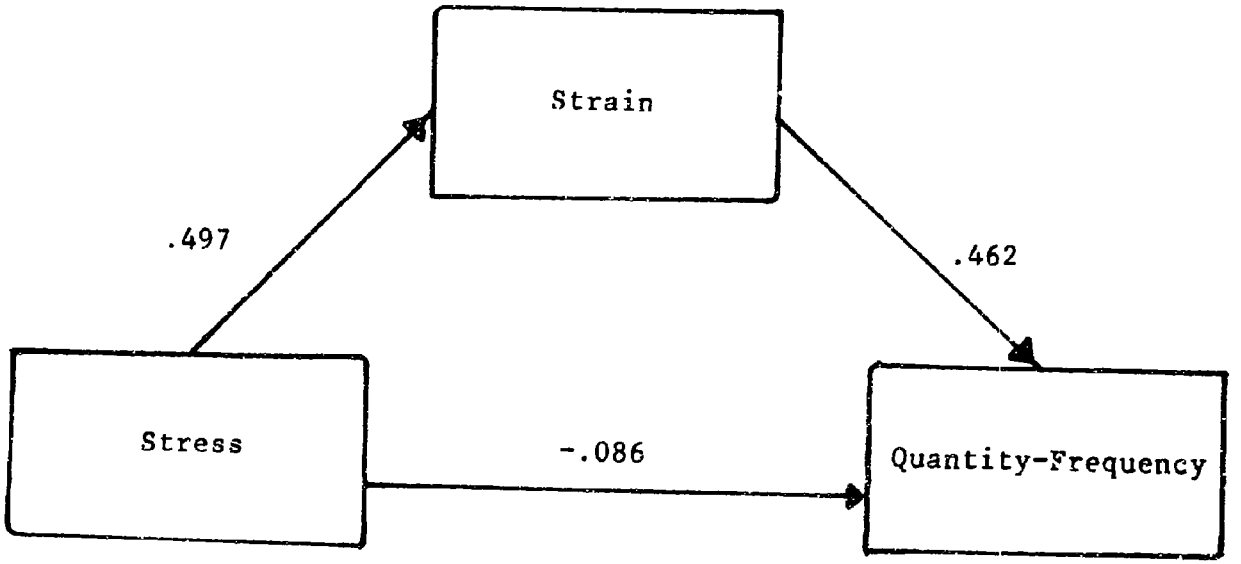
In the stress-strain-Q-F model the results were somewhat different. The path analysis was calculated on only those scoring greater than zero on the Q-F variable (n=56). Refer to Figure 3 for the path diagram. The path coefficient from stress to quantity-frequency of drinking which reflects the direct effect of stress on drinking was -.086 ($p>.05$). This is compared to the magnitude of the indirect path thru strain equal to .229. In this instance, stress appears to be working through the intervening variable of strain to effect drinking behavior. It is concluded from this path analysis that strain appears to have an intervening function, thus supporting H_3.

The fourth hypothesis (H_4) suggests the coping variable will significantly qualify the relationship between stress and strain. This hypothesis was analyzed by two methods. The first of these methods is the Fisher Z test for comparing independent correlations.

The correlation of stress with strain for low coping respondents (n=56) was .61 and the correlation for the high copers (n=63) was also .61. These correlations were obviously not significantly different ($Z= 0.00$), and H_4 was not supported.

The second method of testing this hypothesis was accomplished by employing a factoral analysis of variance (ANOVA) procedure. The independent variable of stress was dichotomized into high (n=65) and low (n=54) stress levels. The moderator variable of coping was dichotomized as it was for the Fisher Z test procedure. Support for hypothesis four would be reflected in a significant interaction between the dichotomized strain and coping variables. Consistent

Figure 3: PATH ANALYSIS USING THE VARIABLES STRESS, STRAIN, and QUANTITY-FREQUENCY OF ALCOHOL CONSUMPTION (n=56)



with the Fisher Z procedure, the interaction effect did not approach significance ($F = 1.12$; $p > .05$). The association of stress and strain was not affected by level of coping. Contrary to expectation, the levels of coping did not qualify the stress-strain relationship.

The social support variable was tested in the same manner as the coping variable in an attempt to understand if levels of social support would moderate the stress-strain association. This particular analysis was exploratory in nature, since support was not predicted to moderate the stress-strain relationship. First the Fisher Z test for comparing independent correlations was employed in the same manner when testing H_4. The correlation for the stress-strain association for low levels of social support (n=59) was .50, and the correlation for the stress-strain relationship for high levels of social support (n=60) was .57. The difference between these two correlations yielded a Z score of .726 ($p > .05$). Both the Fisher Z and ANOVA procedures failed to show any evidence that level of social support qualified the stress-strain relationship.

The fifth hypothesis (H_5) suggested that the social support variable would qualify the strain--outcome association. The outcome measures tested were life satisfaction and quantity-freqency of drinking. The test of this hypothesis was evaluated in the same manner as described for the coping variable in H_4.

The correlation of stress with life satisfaction for low socially supported respondents (n=59) was -.52 and the correlation for the highly supported respondents (n=60) was -.49. The difference between these two correlations yielded a Z score of .426 ($p > .05$).

This procedure was then implemented in a similar manner using Q-F as the outcome measure. The correlation of strain with Q-F (calculated on a drinking sample of 56) for low socially supported respondents (n=26) was .41, and the correlation for the higher socially supported respondents (n=30) was .39. This yielded a Z score of .175, $p>.05$.

A second method of testing H_5 employed the ANOVA procedure. The results of the ANOVA complimented the results of the Fisher Z statistic. This complimentary procedure was done for the dependent variables of life satisfaction and quantity-frequency.

For the outcome variable of life satisfaction the interaction F was 0.43, $p>.05$. The effect of strain on life satisfaction was essentially the same for both levels of social support. The interaction effect was also non-significant when Q-F was used as the outcome measure ($F<1.00$).

The evaluation of the interaction prediction that strain will result in increased drinking behavior only or mainly when social support is low requires a specialized statistical precedure when the drinking outcome variable is represented by categories. Representing drinking outcome in the categories non-drinker (n=59), light drinker (n=26), and moderate-to-heavy drinker (n=30) has the advantage of allowing the use of all of the cases, rather than only those who are drinking to some extent. Conventional moderated regression analysis, however, cannot be applied when the criterion is a category variable, and log-linear analysis would necessitate debasing strain and support into category variables. Consequently, a discriminant analysis was

employed in which the criterion/category variable of drinking behavior was predicted from strain, social support, and their interaction, indicated by a product term, in a discriminant analysis.

The discriminant analysis to test H_5 was done using the Rao procedure (SPSS, p. 453) which allows some control over the entry of variables and approximates the hierarchical regression analysis, though it is somewhat less flexible. It provides a significance test for the increment in prediction from the inclusion of each successive term in the discriminant function. In the present application, the product term representing the strain X stress interaction was tested for significance after the main effects of strain and support had already been entered as potential differentiators of the three drinking categories. The Rao for increment in prediction due to the interaction was significant, Rao=7.71, $p<.05$. In addition, (1) the percent of correct classification of cases increased from 50% to 57% when the interaction was added to the discriminant function, and (2) the canonical correlation which expressed the magnitude of the relationship of the independent variable set with the dependent variable increased to .33 from .26 when the interaction was added.

The discriminant analysis revealed that the first discriminant function was significant ($p<.05$) when these predictor terms were in the function, but that the second discriminant function was not significant. Examination of the group centroids showed that the first function differentiated non-drinkers from drinkers (i.e., low drinkers and moderate-to-heavy drinkers). Since the second discriminant function, which weakly differentiated the two

groups of drinkers was statistically unreliable, the discriminant function analysis seemed to support the following essential conclusions:

1. Drinking outcome can be efficiently represented in this study as a simple dichotomy, drinkers versus non-drinkers.

2. The interaction of strain with social support is a significant contributor to the differentiation of drinkers and non-drinkers.

In order to delineate the nature of the strain-support interaction which was revealed as significant in the discriminant analysis, the drinking outcome was rescored dichotomously as 1= non-drinker, 2=drinker. This two-level scoring of the outcome allowed the Fisher Z test for comparing independent correlation coefficients to be employed to compare the point biserial correlations for strain with drinking outcome under conditions of low versus high social supports. The buffering interaction suggested in H_5 would require that the strain--drinking outcome correlation be higher when social supports are low, than when they are high. The point biserials were equal to .27 ($p<.05$) and .22 ($p>.05$) for the low and high social support categories, respe tively. These correlations were in the direction predicted but were not significantly different when the Fisher Z procedure was employed ($Z=.505$). This result gives some support for the buffering interaction as predicted in H_5. The Fisher Z is not as sensitive a statistical test as the discriminant analysis procedure. This may explain the absence of a significant moderated effect.

As an exploratory analysis, the coping variable was substituted for the social support variable using the Fisher

r to z transformation and the ANOVA to learn if levels of coping rather than social support might qualify the strain-outcome associations. The results indicated that the correlations between strain and life satisfaction (r= -.60 versus r= -.48) were not significantly different (Z= 1.44, p>.05) for the low and high levels of coping, respectively. The same was true for the strain-Q-F association (r=.51 for low copers versus r=.56 for high copers).

The factorial analysis of variance were consistant with the Fisher Zs which gave no indication of a moderated effect.

D. SUPPLEMENTAL FINDINGS

This section of the study is intended to explore relationships beyond those examined as part of the testing of the study model. This supplemental analysis is focused in three areas. First the relationships between the 12 contexts of drinking behavior and the related outcome variables of Q-F and MAST will be presented. The next area of investigation is the presentation of those associations between the 15 listed reasons for drinking and the alcohol related variables of Q-F and MAST. The third portion of the section will be devoted to presenting associations between the demographic variables and the Stress, Strain, Q-F, MAST, and LSAT variables. The last portion of this section will be investigating possible extraneous variables. The correlations involving the Q-F and MAST variables were calculated on a drinking sample of 56.

1. Context of Drinking Items

The 12 items relating to the social context are located in Appendix B, Section 6. Out of these 12 items, 9 were found to exceed the .05 significance level when related to the Q-F variable. None were associated with the MAST variable. The 12 contexts and corresponding associations with the Q-F variable are represented in Table 12. The significant associations will be discussed in the order of their strength.

The strongest correlated context item was "When my husband is gone." This suggests that the drinking behavior of these wives is effected by their husbands' absence.

It was mentioned in the first section of this chapter that solitary drinking is accociated with problem drinking. The results of this study lend partial support for the belief that solitary drinking is potentially harmful. The three solitary contexts of "Drinking by myself at home," "When I go to a bar off post by myself," and "When I go to a club on post by myself" had correlations of .42, .41, and .37 with the Q-F variables, respectively. These three contexts failed to correlate with the MAST variable. This is not too surprising given the fact that the MAST was designed to be sensitive in identifying clinical populations. This sample is not considered clinical, therefore, the MAST may not be sensitive in identifying a lower level of potential problems. Also, it has been established that Q-F is associated with the MAST. The association these three contexts have with the Q-F variable may be identifying a portion of this sample as having a lower level problem, or being at risk for developing drinking problems.

Table 12

Correlations Between Social Context of Drinking Items With Q-F Scores

Context (N=56)	r
1. When I have a meal at home	.15
2. When I get together with my friends at my home or theirs	.40 **
3. When I get together with my family	.37 **
4. When I go to a restaurant	-.04
5. Alone at home	.42 ***
6. When I go to the club on post by myself	.37 **
7. When I go to the club on post with friends	.34 **
8. When I go to a bar off post by myself	.41 **
9. When I go to a bar off post with my friends	.37 **
10. During the day before the evening meal	.30 *
11. Drinking at night after the evening meal	.25
12. When my husband is gone	.52 ***

*** $p < .001$

** $p < .01$

* $p < .05$

Items four, five, six and eight show an association with the Q-F variable and meeting with friends or family. The correlation of these social contexts range from .40 to .34 which are considered to be of moderate strength.

The last item "During the day before the evening meal" had the weakest correlation of all. The interpretation of the meaning of this correlation is not clear. It may be picking up a deviant drinking pattern or it may be that after recreational activities some of these wives have a drink.

The three contexts which did not correlate with the Q-F variable are:

- When I have a meal at home
- When I go to a restaurant
- Drinking at night after the evening meal

The common theme running through these items is drinking while eating or just after eating. This suggests the quantity and frequency of drinking is fairly constant at meal times. Judging from the largely light to moderate Q-F scores the drinking around meal times is light.

2. Reasons For Drinking

The 15 item reasons for drinking index was created in an effort to understand the motivations of the drinking respondents. These items have been correlated with the alcohol outcome variables of Q-F and MAST. The complete list of reasons for drinking are located in Table 13 and Appendix B, Section 7 of the study.

As described in the first section of this study certain

reasons for drinking have been associated with increased drinking behavior and subsequent problems. In summary, people who drink for social reasons (e.g. drinking goes well with entertainment, family meeting, parties, etc.) are less likely to have problems with their alcohol consumption. However, those who define their alcohol use in terms of personal deficiency (e.g. improve self confidence, forget problems, boredom, etc.) are more likely to drink more and manifest problems (Mulford and Miller, 1960). This section of the study will investigate some of these reasons.

The unusual distribution of the MAST variable precludes the use of the Pearson correlation technique. The MAST was categorized into four levels and the "ONEWAY" analysis of variance was employed. The four levels of MAST are those drinkers scoring 0, 1, 2, and 3 or greater. The resulting etas for the 15 reasons are represented in Table 13. The "personal" reasons are noted by the superscript "a" and the "social" reasons are noted by the superscript "b."

As Table 13 illustrates that only three reasons had a significant eta. These three reasons fall into the category of "personal." The remaining 12 reasons had etas whose significance did not approach the .05 criteria. The results lend support for the theorized "personal" versus "social" reasons for drinking and their association (or lack of association) with manifestation of drinking problems.

Table 14 represents the correlations between the 15 particular reasons for drinking and the amount of average daily alcohol consumption. Three of the seven reasons for drinking were also correlated with the MAST scores. This is not too surprising because the Q-F variable positively

Table 13

Correlations of Reasons for Drinking and MAST Scores

Reason (N=56)	eta
1. I drink to be sociable[b]	.26
2. I drink because I like the taste[b]	.17
3. A drink helps me forget my worries[a]	.24
4. I drink to relax[a]	.12
5. A drink cheers me up[a]	.27
6. I drink when I'm bored[a]	.36 *
7. I drink when I'm thirsty[b]	.13
8. I drink to forget everything[a]	.39 *
9. A drink increases my self confidence[a]	.38 *
10. A drink makes me feel more feminine[a]	.17
11. A drink helps me to go sleep[a]	.28
12. I drink because it is socially expected in the military community[b]	.27
13. I drink because alcohol is cheap on post[b]	.31
14. I drink because my husband is gone[a]	.23
15. I drink because it is readily available on post[b]	.27

[a] denotes personal reasons

[b] denotes social, financial and miscellaneous reasons

* $p < .05$

correlated with the MAST variable (r=.51;p<.001;n=56). Item four "I drink because it is readily available on post" and item seven "I drink alcohol because it is cheap on post" both failed to correlate with the MAST variable. These two items suggest that price and availability are not related to manifesting drinking problems, but is related to the consumption of alcohol. In essence, this sample does not perceive the military establishment as promoting alcohol problems in their lives by making alcohol cheap and available.

The "I drink to forget everything" reason had the largest correlation on both the Q-F variable and the MAST variable (.58 with the Q-F and .39 with the MAST). The remaining two reasons that correlated with the Q-F and MAST variables had approximately the same correlations.

3. Demographic Correlates

In this section of the study the relationships between the theoretical variables and the 17 demographic variables will be reported. One of the primary reasons for reporting these correlations is to evaluate the possible spuriousness of the theoretical relationships in a subsequent section. The questionnaire used for this study contained 17 demographic items. Examples of these demographic variables include:

- religious preference
- number of weeks husband had been away
- number of children living at home
- husband's unit
- employment status

Table 14

Correlations of Reasons for Drinking and Q-F Scores

Reason (N=56)		r
1.	I drink to be sociable[b]	.13
2.	I drink because I like the taste[b]	.10
3.	A drink helps me forget my worries[a]	.33 *
4.	I drink to relax[a]	.39 **
5.	A drink helps cheer me up[a]	.31 *
6.	I drink when I'm bored[a]	.45 ***
7.	I drink when I am thirsty[b]	.06
8.	I drink when I want to forget everything[a]	.58 ***
9.	A drink increases my self confidence[a]	.48 ***
10.	A drink makes me feel more feminine[a]	.07
11.	A drink helps me go to sleep[a]	.54 ***
12.	I drink because it is socially expected in the military community[b]	-.15
13.	I drink because alcohol is cheap on post[b]	.27 *
14.	I drink because my husband is gone[a]	.23
15.	I drink becuase it is readily available on post[b]	.48 ***

[a] denotes personal reasons

[b] denotes social, financial and miscellaneous reasons

*** $p < .001$

** $p < .01$

* $p < .05$

The full range of demographic variables are contained in Appendix B, Section 1 of the study. In an effort to understand the relationship these items may have with the main variables of the study model appropriate relationship analyses were accomplished. Each demographic item was correlated with the variables of "stress", "strain", "Q-F" (quantity-frequency), and "LSAT" (life satisfaction).

The appropriate associational analyses were accomplished to see if the demographic variables, be they measured as a continuous scale or as nominal categories, were related to the critical variables of the study model. The next section of the study will examine the possibility of extraneousness. The results of these analyses indicated that the respondent's age, number of years married and her husband's rank were the only three demographic variables which had significant associations with the theoretical variables. It appears that these three variables have a common theme of "life experience." The various correlates are illustrated in Table 15.

The stress variable negatively correlated with 3 of the 17 demographic variables, "number of years married", "age", and "husband's rank." The strength of these relationships are considered to be in the weak to moderate range (see Table 15). It seems that the older the respondent the less she perceive strain. This is also true of the number of years they have been married, a relationship which may be an artifact of the age relationship. The rank association suggests that the higher the husband's rank the less likelihood of experiencing stress. The rank variable is essentially equivalent to the wives' socio-economic status. This relationship may suggest that family finances pay a role in the perception of stress.

Table 15

Demographic Correlates of Model Variables

Demographic Variable	Stress	Strain	Q-F	LSAT
Years Married	-.36 ***	-.20 *	-.31 **	.34 ***
Age	-.22 **	-.15	-.18 *	.21 *
Husband's Rank	-.27 **	-.20 *	.11	.19 *

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

The demographic variables of the number of years married and the husband's rank negatively correlated with the strain variable. As with the stress variable this suggests that the greater the number of years the woman has been married the less likelihood she will experience strain. Because of the high correlation between the stress and strain variables the same rationale as previously stated can be applied. These correlations are relatively small and, therefore, strong inferences cannot be made.

The Q-F variable negatively correlated with the age of the wives ($r=-.18$; $p<.05$) and number of years married ($r=-.31$; $p<.01$).

The LSAT variable was positively related with only the three demographic variables of age, years married and husband's rank. These three variables have a common ground. For example, generally speaking the greater the number of years married is an indication of greater age. The husband's rank is also an indication of age. The older the woman the longer the wife has probably been married. The older the husband the greater his military experience. The greater the military experience generally means the greater his rank and pay. Also, the older one becomes the more life experience he or she may have. This life experience means a greater opportunity to learn how to react to stressful conditions, thus having a greater degree of satisfaction with life.

4. Check For Extraneous Variables

The demographic correlates represented in Table 15 suggest a need to control some of these background variables in order to evaluate the genuiness (versus spuriousness) of the theoretical relationships. A partial correlation was don to obtain the relationships of the theoretical variables controlling for the possibly relevant demographic variables of "years married", "age", and "husband's rank." The theoretical associations entered in the partial correlation were stress-strain, strain-Q-F, and strain-life satisfaction, while controlling for the demographic variables of "years married", "age", and "husband's rank."

After controlling for years married, age and husband's rank the critical theoretical variables were still significantly related. The partial correlations discussed in this section is represented in Table 16. The correlation for the stress-stain relationship (r=.61; p<.001; n=119) was essentially unchanged when controlling for years married (partial r=.56; p<.001; n=107), age (partial r=.59; p<.001; n=107) and husband's rank (partial r=.56; p<.001; n=107). The correlation for strain-Q-F (r=.42; p<.001; n=56) was not effected when controlling for years married (partial r=.39; p<.01; n=51). age (partial r=.41; p<.01; n=51), and husband's rank (partial r=.42; p<.01; n=51). The third theoretical association of strain-life satisfaction (r=-.55; p<.001; n=119) was essentially unchanged when controlling for years married (partial r=-.50; p<.001; n=103), age (partial r=-.52; p<.001; n=103), and husband's rank (partial r=-.51; p<.001; n=103).

In summary, when these third variables were controlled

for minimal change in the correlation of the critical theoretical variables was observed. These demographic variables, though minimally correlated with some of the theoretical variables are not considered extraneous.

Table 16

Table of Partial Correlations

Controlled Variable	Correlated Variables	Partial r
Years Married	Stress→ Strain	.56 ***
	Strain→ Q-F	.39 **
	Strain→ LSAT	-.50 ***
Age	Stress→ Strain	.59 ***
	Strain→ Q-F	.41 **
	Strain→ LSAT	-.52 ***
Husband's Rank	Stress→ Strain	.56 ***
	Strain→ Q-F	.42 ***
	Strain→ LSAT	-.51 ***

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

CHAPTER VII.
DISSCUSSION AND IMPLICATIONS

A. DISSCUSSION OF FINDINGS

In the beginning of this study it was stated that the well being of the wives of active duty military members is important to the morale and welfare of this nation's armed forces. It is true that organizations are dynamic and this is particularly true of the military. Information, such as gathered in this study, is important in enhancing efforts to effectively deal with the issues regarding the role of wives in a military environment.

A sample of 119 women who were separated from their military husbands was identified and information was gathered by means of a self administered questionnaire. The overall response rate was slighty greater than 75%.

The study gathered a wide range of demographic information. In addition, a "stress to life outcome" model was proposed and tested with the data collected from this sample. The analysis included examining the direct and indirect effects of intervening variable relationships and the interaction effects of proposed moderating variables.

From the information gleened in this study some light has been shed on the drinking behavior and life satisfaction of a selected group of military wives.

There were two primary objectives of this study. The first objective of this study was to obtain descriptive information regarding the life conditions, drinking patterns and frequency of problem drinking of the study sample. The second objective was to test a model for conceptualizing the relationship between the stressful life condition associated with being a military wife and the subsequent drinking patterns/behaviors and general life satisfaction within the selected group of wives.

In regards to the first objective an array of descriptive information was presented in the first section of chapter 6. Perhaps the most significant observation is that about half of the 119 wives (n=56) had not consumed any alcohol during the specified time-frame. Also, from the sample of 56 drinking wives, most of them (n=35) had experienced at least one problem associated with their drinking behavior. While many of the drinking sample had experienced problems, only 16% (n=9) of the drinkers experienced more than two problems.

According to their Q-F and MAST scores, these nine individuals may well be categorized as alcoholic or borderline alcoholic and warrant some type of theraputic intervention. Generally speaking this sample of military wives seem to be quite conservative in their drinking behavior.

The second objective was to test a stress-strain-life outcome model. To accomplish this five specific hypotheses were presented. The first hypothesis which stated that stress was directly and positively related to strain was supported. Martin (1983) also found that stress was

significantly and positively related to strain. The results of Martin's study and the current study suggests the validity of the stress-strain relationship.

The second hypothesis stated that strain would be significantly and positively related to the quantity-frequency of drinking and the frequency of problems associated with drinking. When life satisfaction was used as the outcome measure a negative relationship was hypothesized. The data from this study supported this hypothesis. However, the drinking problem index (MAST) was not used to test the hypothesis because of its peculiar distribution. The MAST issue will be further discussed in the limitation section of this chapter.

The third hypothesis predicted that the impact of stress on outcome would operate through the mechanism of strain. Although not supported in it's purest form, there were indications that strain provided considerable clarification of the stress-outcome associations. In a similar study Martin (1983) also found support for the belief that stress often operates through the intervening process of strain to predict the development of negative life outcomes.

The fourth hypothesis predicted that low "copers" would have a significantly higher stress-strain association than high "copers." The data failed to support this prediction. This was also true when social support was substituted for the coping variable. There was not a significant difference in the stress-strain association among high and low socially supported wives.

The last hypothesis indicated that for low socially supported wives the relationship between strain and the Q-F variable would be greater and the relationship between strain and the LSAT variable would be lower. Again, the data failed to support this prediction. This was equally true of the high and low coping wives. It appears that the social support and coping variables fail to moderate the stress-strain-outcome associations.

The complete study model was not fully confirmed by the data. The moderating influences of the coping variable and the buffering variable of social support were not supported. Although the discriminant analysis procedure did indicate a significant interaction, the Fisher test for two independent correlations failed to support the suspected buffering effect of the social support variable. It seems as if the expectation that stress acted exclusively through strain was not supported as well. Though the study delineated one way in which stress may impact a life outcome, it seems that there are probably other ways stress impacts life outcomes.

Perhaps an individual's learned stress management techniques can aid in understanding or even predicting the stress-outcome relationship. Monat and Lazarus (1985) espouses the position that an individual can reduce or prevent the effects of stress by utilizing a technique or a potpourri of stress management techniques. There are three general categories (which tend to overlap) of stress management techniques. The categories have been reported by Girdano and Everly (1979) and Greenberg (1983). The first category of "Environmental/Lifestyle" included techniques such as learning time management, proper nutrition, and proper excercise. The second category of

"Personality/Perceptions" related to techniques of assertive training, refuting irrational ideas, and modifying Type A behavior. The last category of "Biological Responses" consists in part of progressive relaxation, relaxation response, and meditation.

It may be that many individuals have learned some of the different techniques of handling stress as a function of their socialization. No attempt was made in this study to study this type of learned behavior. Perhaps behaviors such as regular exercise and proper eating habits moderate the stress-outcome relationship. Also, learning not to entertain negative or self defeating thoughts effect the stress-outcome association It may well be that a combination of the various techniques mentioned may better explain the stress-outcome relationship. This is certainly an area worthy of further research.

The issue of content validity is raised concerning the coping measure and discussed in the next section of the study.

B. LIMITATIONS OF THE STUDY

There were several limitations that need to be understood before meaningful conclusions can be drawn from the data presented in this study.

The first of these limitations is that of the study design. As previously mentioned, this was a "one-shot" correlational study that employed a self-administered survey instrument. This type of design can demonstrate associations between defined variables, but can only suggest causal relationships.

The sample size (n=119) was small in terms of studying the phenomenon of pathological drinking and impairment in life satisfaction. There were too few cases which truly fit into a pathological category. The sample size was not sufficiently large enough to capture enough people at the impaired level.

This limitation of sample size may in part explain why some of the effects originally hypothesized were not found. Not capturing enough of the sample in the severe end of the impaired continuim may have resulted in the failure of observing significant associations with the theoretical variables. If enough of the sample had been represented in the impaired category the theoretical variables may have related powerfully enough to be significant. Specifically, this may help explain why the coping and social support variables failed to have a moderating effect.

The study model has a limitation in that it specified a certain temporal ordering of the study variables. The various statistical methods used in testing the hypotheses were used based on the assumption of time ordering of some of the elements in the study model.

The time ordering of the variables in this study was attempted through the instructions to the respondent. For instance, the instruction regarding the stress scale asked the respondent to answer the items "since you have become a military wife." The instruction for the strain measure asked the respondent to answer the items "during the past few months." It is understood this effort to impose a time dimension on the data has severe limitations and cannot be equated to the time dimension in a longitudinal study.

Also, a limiting factor in this study may be the assumption that stress leads to drinking or increased drinking behavior. It was assumed in this study that stress caused drinking; however, it may well be that drinking may cause stress. It is commonly known that drinking can adversely interfere with family, work and social relationships. This type of interference may well induce stress. This issue has not been resolved in the stress and alcohol literature and an explanation was not attempted in the present study. This unresolved issue should be considered as a potentially limiting factor. It is impossible to confirm that the study model was correctly specified without using a more refined design such as a longitudinal study.

In correlational studies of this nature every reseacher must be aware of extraneous variables. In this study, 3 of 17 demographic variables (age, husband's rank, and years married) directly related to the main theoretical variables. A check for possible extraneousness was accomplished by controlling for these "third" variables. The results failed to reveal any evidence of spurious relationships. The plausability of the study model is enhanced by, (1) the attempt to place the variables in time, (2) the relationship between drinking and stress is a weaker relationship when contrasted with the stress-strain or the strain-outcome associations, and (3) the absence of spurious relationships. It is concluded that although the directionality issue is raised here it seems the bulk of evidence supports the study model.

In regards to the coping measure used in this study, the issue of content validity is raised. As mentioned in

the preceeding section, the utilization of a range of coping (stress management) techniques is thought to explain positive response to stressful situations. The instrument used to measure coping strategies may well be insufficient. The coping measure was not inclusive of several coping techiques. If the coping variable had encompassed a broad range of coping techniques this may have resulted in observing the kind of relationship to the stress-strain association as hypothesized.

The MAST (Michigan Alcoholism Screening Test) scale provided another limiting factor in this study. The scale was developed as a diagnostic tool for detecting alcoholism. The first problem with this scale was its low variability. Only 35 respondents indicated a score greater than zero and only 9 scored greater than two (scale range was 0 to 10). Consequently, the use of the MAST as an indication of drinking problems in the hypothesis test was impossible. Also, 3 items from the original 13 had to be dropped to ensure a modest reliabilty of .75.

The Q-F variable was limited in that the majority of the wives in this study did not drink. This small number of drinkers (n=56) affects the stability of prediction of the data presented. Also, the Q-F variable attempted to obtain information on the respondent's "typical" drinking behavior. It is suspected that if "atypical" drinking behavior was reported that the volume of alcohol consumed may have been greater, which in turn, may have yielded different results in the significance or the size of some correlations.

The problem with the small sample size in relation to the drinking outcome measures has been discussed, but there

appears to be another potentially limiting factor in relation to the MAST scale. The MAST scale is a clinical diagnostic tool for detecting alcoholism. This is considered a limiting factor given the study sample is not a clinical population. This scale may not be sensitive to problematic drinking which is not considered as pathological in an alcoholic sense. In addition to the problems with sample size, if a more sensitive scale was used variability could have been increased and the shape of the distribution may have also changed. As it was, the nature of the variability and skewness rendered the MAST useless in the hypothesis test.

C. IMPLICATIONS FOR THEORY

This study hypothesized that the coping variable would moderate the stress-strain relationship. Others (Lazarus, 1981; Kasl, 1979) have suggested that coping may be a moderating factor which plays a significant role in understanding the effects of stress on people.

The data from this study does not support the notion that coping responses moderate the stress-strain association. This does not mean that the coping process does not play an important role in understanding stress. Past research in both the human and the animal literature has yielded strong evidence that the way an individual copes with stress is an important modifier of the stress-outcome relationships. What the current study points out is the fact that further work is needed to determine which coping processes are effective in altering the links between stress and negative life outcomes and to unravel the mechanisms involved.

Regarding the coping measure used in this study, it has been pointed out that the manner in which this variable was operationalized may be problematic. It may well be that this scale did not truly capture the significant mechanisms which constituted the moderating influences of the coping process.

Although the coping variable failed to moderate the relationships between the theoretical variables, this variable did have main effects with the variables of stress, strain, social support, and life satisfaction. The relationships found were weak but significant. The coping variable appears to play an important part in the stress literature but without further research the role which coping plays can not be refined.

As reported earlier, social support has been hypothesized to play many varied roles in the relationship between stress and subsequent life adjustment variables. The current study hypothesized that social support was to play a buffering role between the strain and outcome variables. It was found in this study that social support had main effects with the variables of stress, strain, coping, and life satisfaction. The magnitude of these relationships were in the moderate range. The observation of these main effects are consistant with the findings of House (1981) and Lin, Simeone, and Kuo (1979). Again, further research is needed to better understand the function of social support.

The variable of social support was hypothesized in this study to be a buffering agent. It was believed that social support would moderate the strain-outcome relationships.

Monant and Lazarus (1985) point out that it has been suggested that those individuals with many supports are better able to deal with stress. It is thought that social supports buffer the individual from the potentially negative effects of stress and can facilitate the process of coping and adaptation. However, the data from this study do not confirm the buffering hypothesis.

In the social support literature the findings are generally consistent. Cohen (1985) suggested that confounding factors are rarely controlled and there are several studies in which the expected relationships are not found. Some of the most positive findings are open to alternative explanations since other factors (such as the individual's physical state or personality type) may result in a lack of support.

At the other extreme, close personal relationships can involve a high potential for conflict, and some relationships may inhibit personal growth, thereby leaving the individual less able to cope with life stressors. In understanding social support, the fit between need and availability must be considered. For people who are hard to get along with, or who do not like being with others, providing supportive relationships may intensify stress rather than reduce it (Cohen, 1985). This "fit" between need and availability of social support warrants attention in further research efforts.

The cautions in understanding the role of social support discussed here are not considered to be particularly problematic with the social support scale used in this study but do warrant mentioning.

As a secondary goal of this study, the reasons given for drinking, were correlated with the Q-F variable and the categorized MAST variable in an effort to learn more about why individuals drink. There is a paucity of this type of research using women subjects and military wives in specific. The basic tenant of why an individual drinks is ingrained in the Tension Reduction Hypothesis (TRH). Approximately half of the reasons presented to the sample were associated with the TRH. As enumerated in a previous chapter the TRH has two fundamental positions. For the sake of review they are:

1. Alcohol is perceived to reduce tension.
2. People drink alcohol for its tension-reducing effects.

The evaluation of the first proposition was not attempted in this study, but evaluation of the second tenant of the TRH was attempted. After correlations between reasons for drinking and the Q-F variable was accomplished it was apparent that this sample drank for tension-reduction reasons. However, there were other reasons which significantly correlated with the Q-F variable which was not in the TRH rationale.

Perhaps the best interpretation made is that some of the wives drank for TRH reasons (as well as perhaps others) and some of the wives did not drink primarily for TRH reasons. It must be pointed out, however, that the TRH associated reason of "I drink when I want to forget everything" was the reason with the largest correlation with Q-F. Again, the data does not exclusively support the second proposition of the TRH but it does give tenative support.

The categorized MAST scores were also correlated with the reasons for drinking. The result of the correlations indicated only 3 of the 15 reasons correlated with the MAST. All three of the reasons are related to the TRH. This partially implies that problems experienced as a result of drinking are most likely to be found by those who drink for tension-reduction reasons. The validity of any inference must take into account the limitations of the Q-F and MAST scales and the small sample size, as previously described in the preceeding section.

D. IMPLICATION FOR POLICY

The primary focus of the military establishment is the accomplishment of the "mission." This is a fact of life for all families of military members and will be true for future military families. At the same time the sacrifices and significance of family members are also recognized for their powerful contribution. As a response, the different military services respond to these families through the development and implimentation of policies, programs, and services.

As this investigation has demostrated many of the military wives in this sample experience stress related to their military environment. Policy efforts need to be directed toward the expansion of family enrichment seminars. This implication for policy is based on the evidence collected in this study which suggests that stress causes strain and negative outcomes. The family life seminars should address the need for educating all family members to those unique stressors created by the military environment. This type of an educational program could teach the

recognition of stressful events and constructive methods to deal with these stressors. As of yet, there is no known policy in the Department of Defense to achieve this end. There are fragmented efforts by self-help volunteers to accomplish the educating and supporting of the family unit.

Perhaps, as part of the military member's "processing in and out" of an installation the entire family could be briefed as to potential stressors and provide methods or resources for combating stress.

In a slightly different area the Department of Defense requires its members (as part of their reassignment to another post/base) to attend alcohol awareness and human relations seminars. It seems in the best interest of the family that seminars be arranged and conducted for the military family in an effort to assist the family readjustment.

The different military services have developed effective educational and treatment programs regarding alcohol use and abuse for the active duty member. In recent years military policy has continued to broaden its focus on educating and treating families who have a member abusing alcohol. It seems apparent that aggressive efforts reaching distressed families should be supported and continued.

This study has demonstrated that stress is related to strain and strain is related to negative life outcomes. In regards to stress conditions or events there is a limit to what the military establishment can do to minimize them. The mission of the military is to maintain combat readiness and to take quick and swift action in the defense of our

nation when it is ordered. The fact of living in this type of environment is stressful by itself and little can be done to correct it. However, the military community can do more, through policy development, to recognize symptoms of strain and respond to it effectively in an effort to prevent various negative life outcomes from occuring. In essence, recognizing strain and appropriately responding to it has preventive value and should be addressed through development and implimentation of related policy.

One final comment about policy implication was highlighted when this researcher was collecting the data through face-to-face follow-up. One repeated theme surfaced among these women. The conversation with the wife eventually centered around their perceived insensitivity of the military establishment to their needs once their husbands were sent overseas. This theme was not as prevalent among wives whose husbands were on extended temporary duty as compared to the wives whose husbands were permanently reassigned to an overseas location. In essence many of these women felt like second class citizens. These wives felt frustrated and often confused regarding different situations such as handling of the family finances to obtaining a new I.D. card.

It seems appropriate for the military services to develop new policy aimed at ameliorating this problem. Where there are programs and polices developed to address this situation it seems that "teeth" need to be put in them to make them effective. The issues discussed in this section have impication for the role of the social worker working in the military environment. These social workers serve in numerous direct practice settings, mental health

clinics, drug and alcohol programs, etc. Social workers have an extremely important role to play in advocating, initiating and managing many of the services and programs mentioned.

The social worker needs to develop a sensitivity to the unique dilemmas the wife experiences when involuntarily separated from her husband. In addition to being a clinician, advocate, and policymaker, the social worker needs to develop effective skills as a resource broker. Many of these wives need to know how to get things accomplished within the military structure.

As an educator the social worker needs to be aware of and share stress management skills. This will assist the separated wives in effectively dealing with stressful situations. In turn this will encourage her personal development and general welfare and discourage passive dependent status.

The support and development of this faction of military wives can only enhance overall family relationships. This promotes increased morale of the active duty member. The social worker is in a good position to identify issues and policies which treat the military wife as a second class citizen and to advocate positive change. It is impairative that social workers take leadership roles that will enhance the military wife's opportunites for positive change and to be respected as an active, important member of the military community even if her husband is stationed elsewhere.

CHAPTER VIII.
SUMMARY

This study investigated the concept that stress was related to the life outcomes of quantity-frequency of drinking, prevalence of problems associated with drinking and one's life satisfaction. It was believed that the variable of strain would act as an intervening influence. Also, the variables of coping and social support would have a moderating impact on the stress-strain-outcome model.

The study sample was a non-random selected group (n=119) of military wives who were living on a military installation in the southeastern portion of the United States. These women were experiencing separation from their husbands, who were stationed overseas for an extended amount of time (6 months or longer). They were given a self-administered questionnaire which covered various life issues. The response rate was approximately 77%.

In addition to the background and demographic data gathered in this study, an analysis involving the theoretical variables revealed that stress is useful in prediction life satisfaction. Stress did not predict the quantity-frequency of drinking, but the strain variable did. The MAST variable was not used in testing the study model due to its distributional properties. The concept of strain did appear to have an intervening function, though not in its purest, hypothetical form. The data generally failed to

support the idea that the variables of coping and social support provided moderating influences.

Another goal of this study was to collect and analyze data relevant to the respondent's social context of drinking and their reasons for drinking, in order to gain an understanding of the impact these variables have on the consumption variable (Q-F) and the drinking related problems variable (MAST). The analysis of these data revealed several of the social context items (9 out of 12) significantly correlated with the Q-F variable. However, none of the social contexts items correlated with the MAST.

The analysis of the reasons for drinking variable revealed that 9 of the 15 drinking reasons were associated with the Q-F variable. The majority of these reasons (6 of 9) were associated with the tension reduction hypothesis (TRH). The correlation of the reasons for drinking variable and the categorized MAST variable revealed that only three of the reasons were significantly associated with the MAST. The three significant reasons were compatable with the TRH. The analysis lends support for the TRH.

Further analysis was conducted to learn if any of the demographic variables were significantly correlated with the main study variables. The variables of "years married", "age", and "husband's rank" were significantly correlated with the main study variables. A check for extraneousness was conducted and the critical relationships remained significant after controlling for the three demographic variables of "age", "husband's rank", and "years married."

This study also provided some suggested implications of

the data in regards to theory, research and social work related policy.

APPENDIX A

DEPARTMENT OF THE ARMY
WALTER REED ARMY INSTITUTE OF RESEARCH
WALTER REED ARMY MEDICAL CENTER
WASHINGTON, D.C. 20307

IN REPLY REFER TO:
SGRD-UWI-A

SUBJECT: Military Wives Research Study

Dear Spouse of a Military Member:

Under the sponsorship of the 1st Cavalry Division, the Walter Reed Army Institute of Research, is collecting information at Ft. Campbell, KY on issues that may be important to the health and general well-being of military families. As the spouse of a military service member, you are being asked to participate in this effort by completing and returning the attached questionnaire.

It is important to point out that your participation in this study is voluntary, and any information we collect will be considered as confidential medical information. At the same time the information that is collected, when combined with that from other spouses, is important for helping military planners to better meet the needs of military families.

A representative from our research Institute, CPT Nelson L. Henning will be available at Ft. Campbell sometime during the month of November. If you are having difficulty completing the questionnaire or have concerns or questions about the study or questionnaire, he will be glad to answer them for you.

Thank you for taking the time to participate in this study. You are making a valuable contribution toward improving the quality of life for all Army families.

Sincerely

David H. Marlowe
Chief
Department of Military Psychiatry

APPENDIX B

1 2 3

Section 1: GENERAL INFORMATION

We would like to ask you some general questions about yourself, your background, and your current life. Some of these questions will ask you to write down your answer. Other questions will ask you to circle the number next to your answer.

1. How old were you on your last birthday? _____ (4,5)
(Specify years)

2. What is your race/ethnic group? (Circle only one number)

1. White
2. Asian
3. Black
4. Hispanic
5. Other _____ (6)
(Specify)

3. What is your native language? (Circle only one number)

1. English
2. Spanish
3. Korean
4. Vietnamese
5. Thai
6. Japanese
7. German
8. Other _____ (7)
(Specify)

4. How many years have you been married? _____ (8,9)
(Specify years; If less than 1 year, please put a "1")

5. Is this your first marriage? (Circle only one number)

1. No
2. Yes (10)

6. How many years have you been a military wife? _____ (11,12)
(Specify years; If less than 1 year, please put a "1")

7. At the present time, are you pregnant?
(Circle only one number)

1. No
2. Yes (13)

8. How many children are living in your home? _____ (14,15)

General Information Cont'd

9. What is your religious preference? (Circle only one number)

1. Catholic	4. Protestant	(16)
2. Jewish	5. Other _____ (Specify)	
3. Moslem	6. No religious preference	

10. Religion is an important part of my daily life.
(Circle only one number)

1. Strongly disagree (17)
2. Disagree
3. Agree
4. Strongly agree

11. What is your educational level? (Circle only one number)

1. Less than high school diploma (18)
2. High school diploma
3. Some college
4. College degree
5. Advanced college degree

12. What is your husband's current rank/grade?
(Circle only one number)

1. E1-E4 (19)
2. E5-E6
3. E7-E9
4. W1-W2
5. W3-W4
6. O1-O3
7. O4-O6

13. How long has your husband been in the military? _____ (20,21)
(Specify number of years; if less than 1, please put a "1")

14. Is your husband currently deployed, TDY, field training, PCS, etc.?
(Circle only one number)

1. No (22)
2. Yes

15. If yes, how many weeks has he been away? _____ (23,24)
(If less than 1 week, please put a "1")

General Information Cont'd

16. To what unit is your husband assigned?

1. Combat Arms _____
2. Medical Battalion _____
3. Aviation Battalion _____
4. Engineer Battalion _____
5. Other _____
6. Don't know

(25)

17. Are you currently employed?

1. No
2. Yes, part-time
3. Yes, full-time

(26)

27

Section 2: The following is a list of problems that sometimes bother Army wives. Please answer the following items in the context of "since I've become an Army wife."

For each problem, circle the number that best describes how you feel about it.

Not a Problem 0	Slight Problem 1	Moderate Problem 2	Severe Problem 3	Very severe Problem 4

1.	Thoughts of having to move again.....	0	1	2	3	4	(28)
2.	Trying to stay in touch with my own family (parents, brothers, sisters, etc.)....	0	1	2	3	4	(29)
3.	Finding a good job.....	0	1	2	3	4	(30)
4.	Finishing my education.....	0	1	2	3	4	(31)
5.	Finding a good friend.....	0	1	2	3	4	(32)
6.	Worrying about my husband's safety at work...	0	1	2	3	4	(33)
7.	The neighborhood where we live.....	0	1	2	3	4	(34)
8.	The time and energy my husband's military duties require.....	0	1	2	3	4	(35)
9.	Army rules and regulations.....	0	1	2	3	4	(36)
10.	Giving up a good job.....	0	1	2	3	4	(37)
11.	The possibility that my husband may have to go someplace where actual fighting (combat) may occur.....	0	1	2	3	4	(38)
12.	Losing a good friend.....	0	1	2	3	4	(39)
13.	Not having enough money at the end of the month.....	0	1	2	3	4	(40)
14.	"Getting along" when my husband is away (field duty, TDY, etc.).....	0	1	2	3	4	(41)
15.	Trying to keep my marriage going.....	0	1	2	3	4	(42)
16.	Being a "good" Army wife.....	0	1	2	3	4	(43)

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Section 3: Here is a list of common problems people often experience. Please indicate how often you have experienced any of these problems during the past few months. Circle your response.

Never 0	Rarely 1	Sometimes 2	Often 3	Very Often 4

1.	Worn out	0	1	2	3	4	(45)
2.	Confused	0	1	2	3	4	(46)
3.	General aches and pains	0	1	2	3	4	(47)
4.	Misunderstanding something being said to me	0	1	2	3	4	(48)
5.	Muscle tension	0	1	2	3	4	(49)
6.	Helpless feeling	0	1	2	3	4	(50)
7.	Unhappy	0	1	2	3	4	(51)
8.	Forgetful	0	1	2	3	4	(52)
9.	Heart beating rapidly	0	1	2	3	4	(53)
10.	Irritable	0	1	2	3	4	(54)
11.	Mind wanders	0	1	2	3	4	(55)
12.	Trouble falling asleep	0	1	2	3	4	(56)
13.	Stomach pains	0	1	2	3	4	(57)
14.	Dwelling on thoughts	0	1	2	3	4	(58)
15.	Things going wrong	0	1	2	3	4	(59)
16.	Nervous	0	1	2	3	4	(60)
17.	Emotionally exhausted	0	1	2	3	4	(61)
18.	Difficulty concentrating	0	1	2	3	4	(62)
19.	Problems with my menstrual cycle	0	1	2	3	4	(63)
20.	A rapid weight gain	0	1	2	3	4	(64)
21.	A rapid weight loss	0	1	2	3	4	(65)

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Section 4: Please rate how you feel about each of these issues as they affect your own life. There are six possible answers; these are listed below. Circle the number corresponding to the answer that best describes the way you feel about each aspect of your life.

	Completely Dissatisfied 1				Completely Satisfied 5	
1. Marriage	1	2	3	4	5	(67)
2. Family life	1	2	3	4	5	(68)
3. Health	1	2	3	4	5	(69)
4. Neighborhood	1	2	3	4	5	(70)
5. Friendships	1	2	3	4	5	(71)
6. Community	1	2	3	4	5	(72)
7. Housing	1	2	3	4	5	(73)
8. Standard of living	1	2	3	4	5	(74)
9. Family income	1	2	3	4	5	(75)
10. The amount of my education	1	2	3	4	5	(76)
11. Savings	1	2	3	4	5	(77)
12. My life as a whole	1	2	3	4	5	(78)
13. My husband's unit	1	2	3	4	5	(79)
14. My husband's duty hours	1	2	3	4	5	(80)
15. The geographical location of this post	1	2	3	4	5	(81)
16. The leave/time off policies of my husband's unit	1	2	3	4	5	(82)
17. The training and field exercise schedule of my husband's unit	1	2	3	4	5	(83)
18. The concern my husband's unit has for families	1	2	3	4	5	(84)

19.	The Army pay and allowance.....	1	2	3	4	5	(85)
20.	The Army way of life.....	1	2	3	4	5	(86)
21.	The respect the Army shows wives.....	1	2	3	4	5	(87)
22.	The job security in the Army.....	1	2	3	4	5	(88)
23.	The standard of living in the Army.....	1	2	3	4	5	(89)
24.	The Army's retirement benefits.....	1	2	3	4	5	(90)
25.	The family life you can have in the Army.....	1	2	3	4	5	(91)
26.	How I would feel if my husband decided to make the Army a career.....	1	2	3	4	5	(92)
27.	The availability of jobs for wives in the local area.....	1	2	3	4	5	(93)
28.	The overall quality of medical care on post.....	1	2	3	4	5	(94)

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Section 5: The following questions refer to your own drinking practices. Choose the one answer that comes closest to your experience or opinion for each question. Select only one answer for each question. If you don't drink at all skip to Section 9.

A. Think of all the alcoholic beverages (including all the beer, wine, and liquor) you bought during the past 30 days.

Of all the alcoholic beverages you bought during that period, how much would you say you bought off-post?

0. None off-post (96)
1. Almost none off-post (1-10%)
2. About a fourth off-post (25%)
3. About half off-post (50%)
4. About three-fourths off-post (75%)
5. Almost all off-post (90% or more)
6. All off-post (100%)
7. Didn't buy any alcoholic beverages during that period.

B. During the past 30 days, how often did you drink beer?

0. Every day
1. Nearly every day
2. 3-4 times a week
3. Once or twice a week
4. 2-3 times during the past 30 days (97)
5. Once during the past 30 days
6. Didn't drink any beer in the past 30 days (SKIP TO QUESTION E)

C. How much beer did you drink on a typical day (in which you drank beer) during the past 30 days?

0. 1 can (or bottle)
1. 2 cans
2. 3 cans (one quart)
3. 4 cans
4. 5 cans
5. 6 cans (98)
6. 7 cans
7. 8-11 cans (3 or 4 quarts)
8. 12 or more cans (5 or 6 quarts)

D. How large are the cans or bottles that you usually drink?

0. Standard 12-oz. cans or bottles (99)
1. 16-oz. (half-quart) cans or bottles
2. 32-oz. (full-quart) cans or bottles
3. Less than 12-oz. cans or bottles
4. More than 32-oz. cans or bottles
5. Don't drink cans or bottles of beer.

E. During the <u>past 30 days</u>, how often did you drink wine?

0. Every day (100)
1. Nearly every day
2. 3-4 times a week
3. Once or twice a week
4. 2-3 times during the past 30 days
5. Once during the past 30 days
6. Didn't drink any wine in the past 30 days (SKIP TO QUESTION H)

F. How much wine did you drink on a typical day (in which you drank wine) during the past 30 days?

0. 1 wine glass (4 oz.) (101)
1. 2 wine glasses
2. 3 wine glasses (12 oz.--about half a fifth or bottle)
3. 4 wine glasses
4. 5 wine glasses
5. 6 wine glasses (24 oz.--about one fifth or bottle)
6. 7 wine glasses
7. 8-11 wine glasses
8. 12 wine glasses or more (48 oz.--about two fifths)

G. During this period, did you usually drink a regular wine or a fortified wine such as sherry, vermouth, port, or Dubonnet?

0. A regular wine (102)
1. A fortified wine (like sherry, vermouth, port, or Dubonnet)

H. During the <u>past 30 days</u>, how often did you drink hard liquor?

0. Every day (103)
1. Nearly every day
2. 3-4 times a week
3. Once or twice a week
4. 2-3 times during the past 30 days
5. Once during the past 30 days
6. Didn't drink any hard liquo during the past 30 days (SKIP TO SECTION #6,

I. How much hard liquor did you drink in a typical day (in which you drank hard liquor) during the past 30 days?

Number of drinks:

0.	1 drink	5.	6 drinks	(104)
1.	2 drinks	6.	7 drinks	
2.	3 drinks	7.	8 drinks	
3.	4 drinks	8.	9 or more drinks	
4.	5 drinks			

105

Section 6: For each of the following situations please indicate whether you have drank any alcoholic beverages within the past 30 days. Circle the number which best corresponds to your answer.

Never	Rarely	Sometimes	Most of the Time
1	2	3	4

1.	When I have a meal at home.....	1	2	3	4	(106)
2.	When I get together with friends at my home or theirs.....	1	2	3	4	(107)
3.	When I get together with my family.....	1	2	3	4	(108)
4.	When I go to a restaurant.....	1	2	3	4	(109)
5.	Alone at home.....	1	2	3	4	(110)
6.	When I go to the club on post by myself.....	1	2	3	4	(111)
7.	When I go to the club on post with friends.....	1	2	3	4	(112)
8.	When I go to a bar off post by myself.....	1	2	3	4	(113)
9.	When I go to a bar off post with my friends.....	1	2	3	4	(114)
10.	Drinking during the day before the evening meal.....	1	2	3	4	(115)
11.	Drinking at night after the evening meal.....	1	2	3	4	(116)
12.	When my husband is gone (TDY, field training, etc.).....	1	2	3	4	(117)

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Section 7: People drink wine, beer or liquor for many different reasons. Here are some statements other people have made about why they drink. Please circle one response for each item below which indicates how important that reason is for you.

	Not at all Important 1	Slightly Important 2	Somewhat Important 3	Very Important 4	
1.	I drink to be sociable	1	2	3	4	(119)
2.	I drink because I like the taste	1	2	3	4	(120)
3.	A drink helps me forget my worries	1	2	3	4	(121)
4.	I drink to relax	1	2	3	4	(122)
5.	A drink helps cheer me up when I am in a bad mood	1	2	3	4	(123)
6.	I drink when I am bored and have nothing to do	1	2	3	4	(124)
7.	I drink when I am thirsty	1	2	3	4	(125)
8.	I drink when I want to forget everything	1	2	3	4	(126)
9.	A drink increases my self confidence	1	2	3	4	(127)
10.	A drink makes me feel more feminine	1	2	3	4	(128)
11.	A drink helps me to go to sleep	1	2	3	4	(129)
12.	I drink because it is socially expected in the military community	1	2	3	4	(130)
13.	I drink because alcohol is cheap on post	1	2	3	4	(131)
14.	I drink because my husband is TDY or deployed a lot	1	2	3	4	(132)
15.	I drink because it is readily available on post	1	2	3	4	(133)

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Section 8: The following items ask about your beliefs about your drinking or the consequences of your drinking. Please answer each item by circling either "Yes" or "No".

	0	1	
*1. Do you feel that you are an average drinker? (By average we mean you drink less than or as much as most other people.).....	No	Yes	(135)
*2. Does your wife, husband, a parent, or other near relative ever worry or complain about your drinking?.....	No	Yes	(136)
*3. Do you ever feel guilty about your drinking?.....	No	Yes	(137)
*4. Do friends or relatives think you are an average drinker?.....	No	Yes	(138)
*5. Are you able to stop drinking when you want to?...	No	Yes	(139)
*6. Have you ever attended a meeting of Alcoholics Anonymous?.....	No	Yes	(140)
*7. Has drinking ever created problems between you and your husband, parent, or other close relative or friend?.....	No	Yes	(141)
8. Have you ever gotten into trouble at work because of drinking?.....	No	Yes	(142)
*9. Have you ever neglected your obligations, your family, or your work for two or more days in a row because you were drinking?.....	No	Yes	(143)
*10. Have you ever gone to anyone for help about your drinking?.....	No	Yes	(144)
*11. Have you ever been in a hospital because of your drinking?.....	No	Yes	(145)
12. Have you ever been arrested for driving under the influence of alcohol?.....	No	Yes	(146)
13. Have you ever been arrested, even for a few hours, because of other drunken behavior?.....	No	Yes	(147)

* Denotes the items used in final scale construction.

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Section 9: The following items ask questions dealing with alcohol use in your family. Some of these questions will ask you to write down your answer. Other questions will ask you to circle the number next to your answer. Please answer each item.

---

1. Do you believe that your father has or has had a drinking problem?

   1. No
   2. Yes

   (149)

2. Do you believe that your mother has or has had a drinking problem?

   1. No
   2. Yes

   (150)

3. How old were you when you began to drink alcoholic beverages regularly? (Specify Years) _____

   (151) (152)

4. If you knew you had an alcohol problem would you volunteer for treatment offered by the Army?

   1. No
   2. Yes

   (153)

5. Have you ever quit drinking because you felt that alcohol was hurting you or your family relationships?

   1. No
   2. Yes

   (154)

6. Do you believe your husband has a drinking problem?

   1. No
   2. Yes

   (155)

7. If you knew your husband had an alcohol problem would you ask him to volunteer for treatment offered by the Army?

   1. No
   2. Yes

   (156)

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Section 10: This scale is made up of a list of statements each of which may or may not be true about you. For each statement we would like you to circle probably TRUE (T) if the statement is true about you or probably FALSE (F) if the statement is not true about you.

You may find that many of the statements are neither clearly true nor clearly false. In these cases, try to decide quickly whether probably TRUE (T) or probably FALSE (F) is most descriptive of you. Although some questions will be difficult to answer, it is important that you pick one alternative or the other for each statement.

Please read each item quickly but carefully before responding. Remember that this is not a test and there are no right or wrong answers.

		0	1	
1.	There is at least one person I know whose advice I really trust.....	T	F	(158)
2.	There is someone who will give me suggestions about activities for recreation or entertainment.....	T	F	(159)
3.	There is really no one who can give me objective feedback about how I am handling my problems.....	T	F	(160)
4.	When I need suggestions on how to deal with a personal problem, I know there is someone I can turn to.....	T	F	(161)
5.	There is really no one whom I feel comfortable going to for advice about sexual problems.....	T	F	(162)
6.	There is someone I can turn to for advice about handling hassles over household responsibilities.....	T	F	(163)
7.	I feel that there is no one with whom I can share my most private worries and fears.....	T	F	(164)
8.	If a family crisis arose, few of my friends would be able to give me good advice about handling it.....	T	F	(165)
9.	There are very few people I trust to help solve my problems.....	T	F	(166)
10.	There is someone I could turn to for advice about changing my job or finding a new one.....	T	F	(167)
11.	If I decided on a Friday afternoon that I would like to go to a movie that evening, I could find someone to go with me.....	T	F	(168)
12.	No one I know would throw a birthday party for me.....	T	F	(169)

13. There are several different people with whom I enjoy spending time..... T F (170)

14. I don't often get invited to do things with others.... T F (171)

15. If I wanted to have lunch with someone, I could easily find someone to join me..... T F (172)

16. Most people I know don't enjoy the same things that I do..... T F (173)

17. When I feel lonely there are several people I could call and talk to..... T F (174)

18. I regularly meet or talk with members of my family or friends..... T F (175)

19. I feel that I'm on the fringe in my circle of friends..... T F (176)

20. If I wanted to go out of town (e.g., to the coast) for the day, I would have a hard time finding someone to go with me..... T F (177)

21. If for some reason I were put in jail, there is someone I could call who would bail me out..... T F (178)

22. If I had to go out of town for a few weeks, someone I know would look after my house (the plants, pets, yard, etc.)..... T F (179)

23. If I were sick and needed someone to drive me to the doctor, I would have no trouble finding someone..... T F (180)

24. There is no one I could call if I needed to borrow a car for a few hours..... T F (181)

25. If I needed a quick emergency loan of $100, there is someone I could get it from..... T F (182)

26. If I needed some help in moving to a new home, I would have a hard time finding someone to help me..... T F (183)

27. If I were sick, there would be almost no one I could find to help me with my daily chores..... T F (184)

28. If I got stranded 10 miles out of town, there is someone I could call to come get me..... T F (185)

29. If I had to mail an important letter at the post office by 5:00 and couldn't make it, there is someone who could do it for me..... T F (186)

30. If I needed a ride to the airport very early in the morning, I would have a hard time finding anyone to take me..... T F (187)

31. In general people don't have much confidence in me..... T F (188)

32. I have someone who takes pride in my accomplishments... T F (189)

33. Most of my friends are more successful at making changes in their lives than I am..... T F (190)

34. Most people I know think highly of me..... T F (191)

35. Most of my friends are more interesting than I am..... T F (192)

36. I am more satisfied with my life than most people are with theirs..... T F (193)

37. I have a hard time keeping pace with my friends..... T F (194)

38. I think that my friends feel that I'm not very good at helping them solve problems..... T F (195)

39. I am closer to my friends than most other people..... T F (196)

40. I am able to do things as well as most other people..... T F (197)

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Section11: As the wife of a soldier you may have faced one or more stressful situations such as moving to a new location, having your husband away from home or facing some other difficult problem. The following items ask about the methods that you may use to help yourself when these problems occur.

Please circle the response which most closely reflects your approach.

Never 1	Rarely 2	Sometimes 3	Frequently 4	Always 5

*1.	Tried to see positive side	1	2	3	4	5	(199)
*2.	Tried to step back from the situation and be more objective	1	2	3	4	5	(200)
*3.	Prayed for guidance or strength	1	2	3	4	5	(201)
*4.	Considered several alternatives for handling the problem	1	2	3	4	5	(202)
*5.	Drew on my past experience; I was in a similar situation before	1	2	3	4	5	(203)
*6.	Tried to find out more about the situation	1	2	3	4	5	(204)
*7.	Talked with a professional person (e.g., chaplain, doctor, clergy, lawyer) about the situation	1	2	3	4	5	(205)
*8.	Took some positive action	1	2	3	4	5	(206)
*9.	Talked with my husband or other relative about the problem	1	2	3	4	5	(207)
10.	Talked with a friend about the situation	1	2	3	4	5	(208)
*11.	Exercised more	1	2	3	4	5	(209)
12.	Prepared for the worst	1	2	3	4	5	(210)
13.	Sometimes took it out on other people when I felt angry or depressed	1	2	3	4	5	(211)
14.	Tried to reduce the tension by eating more	1	2	3	4	5	(212)

15. Tried to reduce the tension by smoking more..... 1 2 3 4 5 (213)

16. Tried to reduce the tension by drinking more..... 1 2 3 4 5 (214)

17. Kept my feelings to myself..... 1 2 3 4 5 (215)

18. Didn't worry about it; figured everything would probably work out fine..... 1 2 3 4 5 (216)

*19. Took things one step at a time..... 1 2 3 4 5 (217)

20. Got busy with other things in order to keep my mind off the problem..... 1 2 3 4 5 (218)

If, as a result of completing this questionnaire you have questions concerning alcohol use or abuse, feel free to call the Army's Drug and Alcohol Abuse Control Program at (502) 798-7273 or 798-7275.

* Denotes items used in final scale construction.

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