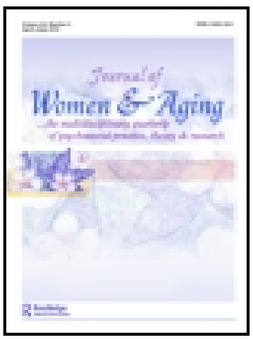

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Social Support Among Women Veterans

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ABSTRACT. The beneficial effects of social support on well-being have been shown in various studies. Less is known about factors which constrain or enhance the availability of social support. The present study profiles social support among women veterans and attempts to identify factors which enhance or constrain perceptions of support and social integration for women of different military eras. Data are derived from a national sample of women veterans who had at least one VA out-patient visit during a one year time period. Twenty percent of women veterans report having no one to depend on. Social support is lowest among Vietnam and Post-Vietnam era women. Chronic strains (such as having problems with relatives, housing, and paying bills) are important factors which are associated with levels of perceived support. Factors related to loneliness/alone status appear to be associated with constraints in group activities and perceived support. This research illustrates the importance of examining factors which constrain and enhance supportive activities and relationships.

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KEYWORDS. Social support, women veterans, military eras

Social support has been extensively studied over the past thirty years and a variety of dimensions, types, and functions of support have been suggested. Although numerous studies illustrate that social support has beneficial effects on health and well-being, either directly or through buffering the effects of stressors (Cohen and Syme 1985; Turner and Marino 1994; Sarason, Pierce, and Sarason 1994), Turner, Pearlin, and Mullan (1998) note that less is known about the processes through which people gain access to support. Even among people in similar life circumstances there can be a great deal of diversity in the degree to which social support is available. House, Landis, and Umberson (1988) suggest that in order to understand the causal relationships among social support and health, work is needed in identifying factors which enhance or constrain supportive relationships.

Although research shows that women are more aware and responsive to the crises that occur to members of their networks (Veroff, Douvan, and Kulka 1981), they provide support to both men and women (Turner 1994), and they report higher levels of perceived support than men (Cotten 1997; Turner 1994; Ross and Mirowsky 1989), the experiences of women *veterans* have not been as well explored.[1] Preliminary results from the VA Women's Health Project, upon which this study is based, revealed a large proportion of women veterans report not talking to partners, parents, and/or children about their military experiences; similarly, 20% of these women report having no one to depend on during times of crises (Skinner, Kressin, and Sullivan 1997). These preliminary findings suggested the need to further examine and profile the social support of women veterans.

Women veterans are a unique group in several ways. First, they have lived and are living lives that do not follow a traditional track. Particularly for older groups of women veterans, joining the military was extremely non-normative. In addition, normal sequencing of life events (such as marriage and children) was often postponed until after women left the military. Joining a traditionally male occupational arena may have led many of these women to feel marginalized. Some would suggest that this is still the case today.

Women veterans may have experienced stigma associated with being in the military and fear of stigmatization may have led many of these women not to disclose their military history to others outside the military. Particularly after women leave the military, their support networks are apt to change in composition and be primarily comprised of non-military members. In these scenarios, network members have little experience with military life events, and fewer coping resources for military related experiences may be available. As Schultz and Rau (1985) point out, events which are unexpected or that occur to only a small segment of people are more likely to be harder to cope with and are less likely to be associated with effective support.

The group of women veterans in this study are even more unique because they use Veterans Administration (VA) health care services. Only about four percent of women veterans utilize VA health care services (Skinner and Furey 1998). Studies have shown that women veterans who seek care through the VA have a variety of health problems, their functional health status is low (compared to non-VA care seekers) (Skinner et al. 1998), and they have higher rates of schizophrenia and other affective disorders than do other groups of women (Romeis, Gillespie, and Thorman 1988). The life experiences and the health status of these women veterans may result in different types of giving, receiving, and obtaining of social support.

Given the preliminary results from the VA Women's Health Project, the lack of understanding of the conditions that foster or interfere with access to social support, and the nontraditional life course of these women, the objectives of the present study are to profile the social support among women veterans and to identify factors which strengthen or constrain the acquisition of support. These objectives are examined within the context of military service era.

We incorporate a historical perspective into the profiling of the social support of women veterans through the examination of differences across cohorts of women veterans. Studying cohorts is a way to illustrate that different historical circumstances at every stage of life separate members of a society from others (Elder 1987). Our approach expands previous research on women veterans. Much of the previous research has ignored cohort differences or focused upon one cohort (usually Vietnam). Five distinct cohorts (Riley 1987) of women veterans who have shared similar military experiences are identified and

examined in this study: World War II and before, Korean War, Vietnam Conflict, Post-Vietnam, and Persian Gulf eras.

FACTORS WHICH ENHANCE AND CONSTRAIN SOCIAL SUPPORT

It is only possible to speculate as to the factors which might constrain or enhance the availability of social support, given the nature of the group being examined. In addition to era of military service, the conditions that are theoretically relevant fall within one of four main categories: (1) location in the social structure, indicative of social and economic resources; (2) strains related to everyday lived experience and feeling welcome, as a woman, receiving treatment at a VA hospital; (3) factors related to being alone and feeling lonely; and (4) social functioning.

Era of Military Service

Women's experiences in the military varied considerably from World War II through the Persian Gulf era. Research on women from the World War II era indicates that the women's services were highly selective in their recruitment strategies (Campbell 1984), with women needing strong educational backgrounds or work experiences to be admitted. Women who were able to enlist were paid higher wages than in non-military employment and they gained new proficiencies, skills, and an increased sense of self worth (Willenz 1994), which led some to suggest that they would require a greater period of readjustment into civilian life than men (Caldwell 1984). The Korean era saw a strong post war economy, an availability of jobs, and increasing numbers of women entering the labor force. The Vietnam era was more controversial. The war was never officially declared, the goals of the Vietnam Conflict were not clearly articulated to the American public, and there were public demonstrations denouncing the United States involvement. In previous wars, veterans were applauded and celebrated for their military endeavors; this was not the case for Vietnam veterans. The social climate became more supportive towards women during the Post-Vietnam era than in earlier eras (Willenz 1994) and job opportunities both within and outside the military widened considerably. The elimination of the cap on the percentage of women in the military, decreases in male enrollments, aggressive recruitment strategies aimed

at women, and the elimination of restrictions aimed at married and/or pregnant women contributed to the increasing numbers of women joining the military. The Persian Gulf era also saw changes including the expansion of noncombat assignments to women, women being allowed to participate in combat aviation, opportunities for occupational roles and military careers not previously available to women, and the placement of men and women on the same promotion rosters (Stanley 1993). Given the differences in the historical experiences among women veterans, it seems appropriate to think that both the level and determinants of support could vary across different eras of military service.

No studies have examined how social support varies for women veterans of different military eras. However, if we use age as a proxy for era of service, previous research findings may guide us in this research. Fischer (1982) reports that support resources and size of networks decline with age, while Schulz and Rau (1985) suggest that network size and frequency of contact is relatively stable across the life span. With regard to perceived support, some studies report a decline in perceived support as people get older (Zautra 1983), some studies find no age differences in perceived support (Turner and Noh 1988), and others find that increasing age is associated with increasing levels of perceived support (Lin, Dean, and Ensel 1986). As Turner and Lloyd (1998) note, the relationship between age and social support is not clearly established.

An integration of these areas leads us to suggest that women from the World War II cohort should report higher levels of social support. Elder and Clipp (1989) suggest that veterans of World War II era would have a lower risk of experiencing feelings of isolation and alienation than other era veterans. They have had opportunities to build support networks throughout their life course, join more groups, and adjust to life changes. We also suggest that Persian Gulf women will report high levels of social support because many of these women may still be involved with military networks and friendships. Younger people also tend to have larger networks. We would expect Vietnam and Post-Vietnam era women to be lower on social support given the nature of their homecoming and the fact that studies often report that these groups of veterans have readjustment problems. Korean era women veterans should be close to World War II era women in their perceptions of social support. They benefited from the increasing

numbers of women joining the military and they saw changes in work force patterns which expanded roles for women.

Placement in the Social Structure

Determining how support may be distributed differently across women veterans occupying different positions in the social structure represents a first step in identifying the social conditions through which support is acquired and experienced. Marital status, socioeconomic status, and employment status have been related to social support (Turner and Marino 1994; Mirowsky and Ross 1989). Cotten (1997) found that people who are married often report larger networks and higher levels of perceived support than do nonmarried groups, particularly separated/divorced people. People with higher levels of socioeconomic status often report larger networks, greater network contact, and more sources of support than do people with lower levels of education, income, and nonwhite status (Veroff et al. 1981). Similarly, Turner et al. (1998) suggest that work status (i.e., working full or part time) is related to opportunities for larger support networks and potential support from more sources. We hypothesize that women veterans who are married and who are in higher socioeconomic status positions will report higher levels of social support. We also suggest that women veterans from Vietnam and Post-Vietnam eras may be particularly subjected to lower socioeconomic statuses and this may be associated with lower social support.

Strains Related to Lived Experience

The relationship between stress exposure and social support is complicated. Support is often viewed as a stress moderator. However, stressful circumstances may affect levels of emotional support and social interactions, and strains related to interpersonal problems may be particularly detrimental to perceptions of support (Turner et al. 1998). For example, we expect that strains resulting from problems with relatives or with one's neighborhood may lead to decreased perceptions of support, given that much social support is derived from friends and families. Having trouble paying bills and having problems with housing may leave less time to engage in group activities and/or fewer options for participating in activities which involve monetary costs. Feeling unwelcome in one setting (i.e., as a woman receiving treatment at the VA) may be associated with lower levels of participa-

tion in other activities or organizations. Women veterans from older cohorts may experience lower levels of strains related to lived experience. These strains may be more strongly associated with social support for younger cohorts of women, since many of these women may be less stable in their careers and family situations. Given the controversial nature of the Vietnam eras, reacculturation into society might be harder for women from these eras. Therefore factors related to economic resources, feeling unwelcome, and strains may be key factors associated with social support for these women.

Alone/Loneliness Factors

Although it has been argued that the existence of social contact with others does not always mean that support is experienced (Barrera 1986), this factor very likely contributes to the perception of the availability of social support and may promote engaging in integrative activities (Turner et al. 1998; Vaux and Harrison 1985). We expect that people who eat alone most or all of the time or who live alone may experience lower levels of support and group participation. The reporting of feeling lonely while in the military may be associated with overall feelings of social isolation and lower support. For World War II women, these factors may be particularly salient. Given their older age, many of these women may live alone due to death of a spouse or significant other.

Social Functioning

Social functioning relates to the level individuals are hindered by physical or emotional problems with regards to normal social activities (like visiting with friends, relatives, etc.) (Ware and Sherbourne 1992). We hypothesize that individuals with lower levels of social functioning will be less likely to engage in social activities and they may report lower levels of perceived support. Once again, this factor may be more strongly associated with social support for World War II era women due to general declines in health status as people age.

METHODS

Sample

The present study draws upon a national sample of women veterans who have used VA ambulatory care to examine issues surrounding

social support and interpersonal relations. The sample includes a randomly selected national sample of women veterans who had at least one VA out-patient visit between July 1, 1994 and June 30, 1995. Self-administered mailed surveys, which took approximately one hour to complete, were mailed to eligible subjects. The sample size equals 3632, with a response rate of 58.4%. See Skinner and Furey (1998) for detailed information on sample selection procedures, survey administration, and follow up protocols.

Measures

Social Support

Social support is a complex construct with a variety of dimensions. We examine three measures of social support: two measures assess perceived support while a third measure assesses social integration. The first measure is a composite scale which includes five items from the Medical Outcomes Study (MOS) social support scale (Sherbourne and Stewart 1991). This measure addresses how often the following kinds of support are available to the respondent: someone to confide in or talk to about yourself or your problems (emotional/informational support); someone to get together with for relaxation (positive social interaction); someone to help with daily chores if you were sick (tangible support); someone to turn to for suggestions about how to deal with a personal problem (emotional/informational support); and someone to love and make you feel wanted (affectionate support). Response categories for each item include: none of the time; a little of the time; some of the time; most of the time; and all of the time. Responses to the five items are summed, producing a social support scale, with higher scores representing higher levels of social support. The scale is scored from 0 to 100. The internal consistency reliability (Cronbach's alpha) of the five item scale is 0.90. The second perceived support measure examines whether there was any one person that the respondent knew that she felt very close and intimate with-someone she could share confidences and feelings with, someone she could depend on. The response category was a yes/no format.

Social integration is assessed through a measure of group participation. Respondents were asked which of the following group activities they participate in regularly: social group, religious/spiritual group, veterans organization, exercise group, and other group activities. A

dichotomous group activity measure was constructed which assesses whether or not they participate in any group activities.

Era of Service

Military era of service is based upon responses to a question asking what years the respondent served in the military. Military era groups are divided as follows: World War II or before (1947 and earlier; mean age = 75); Korean War (1948 to 1955; mean age = 64); Vietnam Conflict (1956 through 1975; mean age = 47); Post-Vietnam (1976 through 1987; mean age = 37); and Persian Gulf (1988 and later; mean age = 29).

Sociodemographic Characteristics

Marital status is classified as: currently married, widowed, separated/divorced, and never married. Age is measured in years. Race is classified as white and nonwhite. Education is measured as the number of years of formal education. Income is assessed as total family income and income categories are coded to the midpoints. Work status is divided into those working full or part time versus other.

Strains

Four items designed to assess strains related to everyday lived experience are included: problems with relatives, paying bills, housing, and neighborhood. Response categories are recoded to Yes (if respondent answered some, great extent, or very great extent) and No (if respondent answered slight extent or very little extent). A fifth item assesses how welcome the respondent feels, as a woman, receiving treatment at a VA hospital. Responses of not welcome and slightly welcome are classified as No, and moderately welcome, very welcome, and extremely welcome are classified as Yes.

Alone/Loneliness Status

Three items assess whether respondents (1) eat alone, (2) live alone, and (3) felt lonely while in the military.[2] Eat alone and felt lonely response categories of most or all of the time are classified as Yes, and

none, a little, or some of the time are classified as No. Living alone is assessed through an item which asked how many people live in respondent's household (including respondent). A response of one person is defined as living alone; more than one person in the household is defined as not living alone.

Social Functioning

The social functioning scale of the Medical Outcomes Study Short Form 36-Item Health Survey (SF-36) (Ware and Sherbourne 1992) is composed of two items which assess to what extent and how often the respondent's physical or emotional health has interfered with her normal social activities in the past four weeks.[3] The scale is scored from 0 to 100, with higher scores indicating more social functioning. The internal consistency reliability coefficient (Cronbach's alpha) for the two item scale is 0.86.

Analytic Procedures

Descriptive statistics were generated for each measure of social support for the total sample and then stratified by era of military service. Descriptive statistics were also generated for each candidate independent variable. The independent variables were classified into blocks which included sociodemographic characteristics, strains, alone/loneliness variables, and social functioning.

Bivariate analyses were conducted to assess the relationships between each candidate independent variable and each outcome measure (i.e., measures of social support) using correlation analysis, analysis of variance, and two independent samples t-tests. Independent variables significant at the $p < 0.05$ level or considered substantively meaningful were included in the multiple regression analysis.[4]

Multiple linear regression techniques were used to assess relationships between continuous measures of social support and independent variables determined to be important based on bivariate analysis and/or substantive assessments. Multiple logistic regression techniques were used to assess relationships between dichotomous measures of social support and independent variables determined to be important based on bivariate analysis and/or substantive assessments. In both cases, independent variables were entered into the multiple regression

models by blocks and a final set of independent variables was determined based on models developed among the total sample. Direct entry models were then developed relating the final set of independent variables to the measures of social support, stratified by era of service. Two way interaction effects were also investigated in the final models.

RESULTS

Table 1 presents sociodemographic characteristics of the sample. More than a third of respondents are married, 32% are separated/divorced, and 20% report being never married. The mean age for the sample is 48 years (age range 20-95) and most are white (76%). The mean level of education is 14 years and the mean total family income is $26,836. Approximately 43% of the women veterans in this study report working either full or part time.

The distribution of key study variables for the total sample and across eras of military service is shown in Table 2. Most noteworthy, 10% of the total sample reports having no one to confide in. Across eras, women who served during the Vietnam era report lower levels of social support. Mean scores on the Social Support Scale are lowest among the Vietnam and Post-Vietnam era groups. Twenty percent of the total sample reports having no one to depend on. The Korean, Vietnam, and Post-Vietnam era groups have the highest percentages reporting no one to depend on.

The World War II group has the highest group participation levels, across types of groups. Over a third of the WWII group report participating in a social group and over 40% in a religious group. Of note is the fact that almost none (2%) of the women who served during the Persian Gulf era report participating in a veterans group, while over a fifth of the WWII era women report participating in this type of group.

Over a third of respondents report eating alone most or all of the time; approximately 55% of these women report living alone. Twenty-nine percent of the total sample reports living alone. Of the women who live alone, approximately 74% report eating alone most or all of the time. Fifteen percent of women veterans in this study report feeling lonely while in the military. There appears to be a cohort/age group effect with both eating and living alone. Older cohorts have higher percentages reporting eating and living alone than do younger cohorts. The reverse is true for feeling lonely while in the military: percentages increase for women in more recent military eras.

TABLE 1. Description of Sample by Sociodemographic Characteristics

	N	%
Marital Status		
Married	1332	(37%)
Sep./Div.	1138	(32%)
Widowed	382	(11%)
Never Married	723	(20%)
Age (years)	Mean: 48	
Under 40	1294	(36%)
40-64	1565	(44%)
65 and Older	713	(20%)
Race		
White	2699	(76%)
Non-white	859	(24%)
Education (years)	Mean: 14	
1-11	126	(3%)
12	856	(24%)
13-16	2246	(63%)
17 and higher	357	(10%)
Total Family Income	Mean: $26,836	
Less than $10,000	730	(22%)
$10,001-19,999	530	(25%)
$20,000-29,999	674	(20%)
$30,000-39,999	447	(13%)
$40,000-49,999	281	(8%)
$50,000 and Over	376	(11%)
Employment Status		
Full/part time	1560	(43%)
Other	2031	(57%)
Military Eras		
World War II	578	(16%)
Korean	276	(8%)
Vietnam	1061	(30%)
Post-Vietnam	1232	(35%)
Persian Gulf	389	(11%)

The mean level of social functioning for the total sample is 57.5. There appears to be a curvilinear relationship among social functioning and military era. WWII, Korean, and Persian Gulf era women report the highest levels of social functioning, while the Vietnam and Post-Vietnam groups report much lower levels.

At least twenty percent of the total sample reports experiencing

TABLE 2. Distribution of Select Study Variables Across Military Eras

	Total	WWII	Korean	Vietnam	Post-Viet.	P-Gulf	Sig. Across Eras
% Reporting NO ONE to:							
Confide in	10%	9%	10%	11%	10%	6%	*
Get together with	12%	10%	8%	13%	13%	9%	***
Help with chores	22%	25%	23%	23%	21%	19%	*
Turn to for advice	14%	16%	14%	15%	12%	10%	*
Love and be loved	15%	15%	19%	17%	13%	9%	***
Mean Social Support Level (Scaled 0-100)	58.5	60.3	60.4	56.4	57.9	62.7	**
% Reporting NO ONE to Depend on	20%	14%	22%	22%	21%	18%	***
% Participating in Each Type of Group:							
Social Group	23%	39%	27%	22%	18%	19%	***
Religious Group	31%	42%	30%	31%	29%	23%	***
Veterans Group	10%	22%	16%	11%	6%	2%	***
Exercise Group	8%	11%	6%	6%	7%	11%	***
Other Groups	19%	21%	17%	19%	19%	19%	NS
% Participating in Group Activities	58%	73%	57%	57%	54%	51%	***
% Reporting Alone/Lonely Characteristics:							
Eat alone	39%	50%	47%	38%	34%	31%	***
Live alone	29%	57%	49%	26%	18%	16%	***
Felt Lonely in Military	15%	3%	3%	16%	21%	25%	***
SF-36 Social Functioning Mean Level: (Scaled 0-100)	57.5	62.6	61.9	56.2	54.2	61.8	***
Strains:							
Problems with Relatives	32%	15%	24%	36%	36%	37%	***
Problems Paying Bills	42%	19%	26%	45%	49%	51%	***
Problems with Housing	40%	27%	31%	41%	44%	44%	***
Problems with Neighborhood	22%	15%	19%	22%	26%	22%	***
Feel Unwelcome at VA Hospital	20%	6%	9%	20%	26%	29%	***

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

each of the strains examined in this study. Close to a third, or more, of respondents report having problems with relatives, paying bills, and with housing, and the percentages appear to be related to era of military service. The lowest levels are reported by the earliest military era groups while the highest levels are reported by the more recent mili-

tary era groups. Over 50% of the Persian Gulf women veterans report having trouble paying bills.

Multivariate Analysis

Preliminary multivariate analysis revealed that approximately sixteen percent of the total sample had missing data on two combined variables: social functioning and income. In order to assess whether respondents with missing data on these variables were different from other respondents, we examined differences in study variables for these two groups using chi-square analysis and t-tests for mean differences. Results indicate that nonresponders do not differ from responders on any of the three social support outcome measures. Significant differences, although not necessarily substantive differences, between nonresponders and responders do exist on some variables. Those missing on social functioning are slightly less likely to be married, more likely to report having problems with their neighborhood, more likely to feel welcome at the VA, and more likely to eat alone and live alone. Individuals with missing income data are less likely to be married, less likely to be engaged in full or part time work, slightly older, less likely to report problems with housing, have slightly lower levels of social functioning, and they are more likely to be from the World War II era. Although significant, the differences among these groups do not appear to be substantively meaningful in most cases. At worst, the exclusion of these cases may lead to a slight overestimation of support outcomes which may be associated with marriage, employment, and household composition. Given this, the remaining results are presented with missing cases excluded for social functioning and income.[5]

Social Support Scale

The first series of models examine the relationships between social support and sociodemographic characteristics, strains, alone/loneliness factors, and social functioning within each era of military service (see Table 3). Results of multiple linear regression analysis illustrate differences in factors related to level of perceived social support across eras of military service. Having problems with housing, feeling unwelcome at the VA, loneliness factors, and low levels of social

TABLE 3. Relationship Between Social Support and Social Factors by Era of Service: Results of Multiple Regression Analysis[1]

	WWII (n = 367)	Korean (n = 208)	Vietnam (n = 805)	Post-Viet. (n = 967)	Persian Gulf (n = 301)
Sociodemographic Factors:					
Widowed	4.901	6.405	8.580	0.636	4.653
Separated/Divorced	3.608	1.694	**4.857***	0.919	6.513
Never Married	1.848	0.003	2.346	2.697	0.920
White	5.337	5.007	0.757	0.346	2.555
Income	0.000	0.000	**0.000****	**0.000****	0.000
Strains:					
Relatives	1.072	7.407	**10.165*****	**8.049*****	**6.463***
Bills	1.712	3.523	-3.442	**4.020***	2.301
Housing	**7.402***	**12.482****	**5.513****	3.053	**10.526****
Neighborhood	2.756	**11.440***	**5.681***	**5.503****	1.678
Welcome at VA	**12.227***	9.220	2.403	**5.785****	**7.241***
Loneliness Factors:					
Eat Alone	**9.463****	8.537	**12.529*****	**13.683*****	**12.844*****
Live Alone	**10.530****	4.803	0.880	4.447	3.360
Lonely While in Military	**19.261***	4.073	4.346	**6.409****	2.471
Social Functioning:					
SF	**0.217*****	**0.166***	**0.136*****	**0.153*****	**0.144****
Adj R^2	**.17**	**.25**	**.31**	**.28**	**.20**

*p < .05 **p < .01 ***p < .00l
[1]Unstandardized regression coefficients reported.

functioning are associated with lower levels of social support for women who served during the WWII military era. Approximately 17% of the variation in social support is explained by the variables in this model.

Problems with housing and the neighborhood lived in, and low levels of social functioning are significantly associated with social support levels in women veterans from the Korean War era. The variables in this model explain 25% of the variation in social support scores.

The pathways to social support among the Vietnam and Post-Viet-

nam era women veterans are very similar. Being separated/divorced, having low total family income, problems with relatives, housing, one's neighborhood, eating alone, and having low levels of social functioning are each significantly associated with lower social support scores among Vietnam era women veterans. Almost a third (31%) of the variation in social support is explained by these factors. Having low total family income, problems with relatives, problems paying bills, problems with one's neighborhood, eating alone, feeling lonely while in the military, and low levels of social functioning are associated with lower levels of social support in women from the Post-Vietnam era. Twenty-eight percent of the variation is explained in this model.

Strains related to relatives and housing, feeling unwelcome at the VA, eating alone, and low levels of social functioning are related to low levels of social support among women veterans from the Persian Gulf era. Twenty percent of the variation in social support scores is explained by the factors in this model.

Group Activity

Multiple logistic regression analysis is used to examine the relationships between participation in group activities and sociodemographic factors, strains, alone/loneliness factors, and social functioning within each era of military service (see Table 4). Education, eating alone, and levels of social functioning are significantly associated with group activity participation among the WWII and Korean era women.[6] Among the women from the Vietnam era, education, income, and social functioning are associated with participating in group activities. Compared to nonwhites, white Post-Vietnam era women are more likely to report participating in group activities. Education, eating alone, and social functioning also affect group participation levels for Post-Vietnam era women. Social functioning is the only factor related to participation in group activities among the women from the Persian Gulf era.[7]

Someone to Depend On

The final series of models examine factors which are associated with reports of having someone to depend on (see Table 5). Multiple

TABLE 4. Relationship Between Group Participation and Social Factors by Era of Service: Results of Multiple Logistic Regression Analysis[1]

	WWII (n = 382)	Korean (n = 209)	Vietnam (n = 810)	Post-Viet. (n = 972)	Persian Gulf[2] (n = 295)
Sociodemographic Factors:					
Widowed	1.449	1.337	1.758	1.573	- - -
Separated/Divorced	0.920	2.005	0.801	1.032	0.855
Never Married	1.377	3.297	0.635	0.971	0.629
Race	2.489	2.512	1.410	**1.483****	1.249
Education.	**1.200****	**1.197***	**1.162****	**1.155****	1.116
Income	1.000	1.000	1.000*	1.000	1.000
Strains:					
Relatives	1.362	1.298	0.902	0.973	0.669
Bills	1.491	1.114	1.050	1.037	1.240
Welcome at VA	1.600	1.387	1.133	1.344	1.053
Loneliness Factors:					
Eat Alone	**0.401***	**0.346***	0.902	**0.544*****	1.166
Live Alone	1.905	0.974	1.268	0.967	1.479
Lonely While in Military	0.486	0.000	1.151	1.129	0.652
Social Functioning:					
SF	**1.020*****	**1.013***	**1.013*****	**1.011*****	**1.015****

*p < .05 **p < .01 ***p < .001 [1]Table entries are odds ratios.
[2]There were too few Persian Gulf women who were widowed to include in this analysis (n = 5). We reran this model without the widowed variable. The results are substantively the same as with the variable included.

logistic regression results show that WWII era women who are never married and who report having problems related to housing are less likely to report having someone to depend on. Increases in levels of social functioning are associated with increased odds of reporting having someone to depend on for this group.

Eating alone is the only factor significantly related to the outcome measure for the Korean era women. Women who eat alone more often are less likely to report having someone they can depend on.

A variety of sociodemographic factors, strains, and loneliness factors are significantly associated with having someone to depend on among the Vietnam era women. Compared to married women, widowed, separated/divorced, and never married women are less likely to

TABLE 5. Relationship Between Someone to Depend on and Social Factors by Era of Service: Results of Multiple Logistic Regression Analysis[1]

	WWII (n = 383)	Korean (n = 209)	Vietnam (n = 819)	Post-Viet. (n = 976)	Persian Gulf (n = 301)
Sociodemographic Factors:					
Widowed	0.485	2.126	**0.421***	**0.294***	0.472
Separated/Divorced	0.499	1.338	**0.545***	**0.404*****	**0.168*****
Never Married	**0.271***	0.775	**0.518***	**0.512****	**0.381***
Race	1.681	1.759	0.807	**0.701***	1.061
Income	1.000	1.000	**1.000****	1.000	1.000
Strains:					
Relatives	0.522	1.159	**0.472*****	0.913	0.966
Bills	0.983	0.883	1.104	0.773	1.095
Housing	**0.472***	0.516	**0.637***	0.754	**0.417***
Neighborhood	1.042	0.711	0.806	0.975	2.040
Welcome at VA	2.555	1.138	1.027	1.273	1.905
Loneliness Factors:					
Eat Alone	0.686	**0.349***	**0.539****	**0.558****	0.558
Lonely While in Military	0.570	0.258	**0.510****	**0.643***	0.684
Social Functioning:					
SF	**1.013***	1.011	1.006	**1.009****	1.008

*p < .05 **p < .01 ***p < .001 [1]Table entries are odds ratios.

report having someone to depend on. Increases in income are associated with higher odds of having someone to depend on. Stressors associated with relatives and housing, eating alone, and feeling lonely while in the military are associated with less chance of reporting having someone to depend on.

Compared to the married, the widowed, separated/divorced, and never married Post-Vietnam era women are less likely to report having someone to depend on. Similarly, white women, those who eat alone, and those who felt lonely while in the military are also less likely to report having someone to depend on. Increased social functioning leads to increased reporting of having someone to depend on.

Only three factors are associated with the outcome measure of having someone to depend on among the Persian Gulf women. Mar-

ried women are more likely than separated/divorced and never married women to have someone to depend on. Problems associated with housing are associated with decreased levels of having someone to depend on.

DISCUSSION

The findings of the present study help to identify factors associated with social support and social integration among women veterans. The results suggest that certain conditions can strengthen or constrain perceptions of support. Although these findings are only generalizable to women veterans who have utilized VA ambulatory care services and the cross-sectional nature of the associations precludes the determination of causality, several relationships emerge which suggest further examination is needed.

First, these results suggest stressors resulting from chronic strains are important factors which are associated with levels of perceived social support. While the specific stressors vary across military era groups, stressors related to problems with relatives, housing, and paying bills appear to be the most important. Over 30% of women report having each of these problems, and these percentages are even higher among Vietnam era and younger cohorts. Fifty percent of Persian Gulf era women report having trouble paying bills. Social factors related to economic hardship and inequality appear to be important, particularly for younger cohorts of women veterans.

These findings suggest the need for further research which examines the consequences of leaving the military for younger women. The question arises as to why these women report such high levels of economic hardship. Are the skills which they acquired in the military transferrable to comparable non-military occupational arenas? Previous research has shown that stress has negative implications for health and well-being. And, as this research has shown, stress related to economic hardship and inequality also has negative implications for perceptions of support.

A second pattern concerns the issue of loneliness/alone status. Factors related to loneliness are particularly important for the WWII military era women. This may be a reflection of stage in the life cycle. Over 95% of WWII era women are aged 65 and older and the average number of people living in the household for this group is 1.6. In other

words, most of these older women live alone. The social control and regulatory functions (Umberson 1987) provided by spouses and others in the household are not available for these women. Aging status and household composition may contribute to the importance of loneliness related factors. Level of social functioning is a contributor to perceived social support across eras of service. Additional investigations which assess interrelationships among eating patterns, loneliness, and social functioning of elderly women veterans who live alone may potentially provide further insight into these issues.

A third issue, and a limitation of this study, concerns the group activity measure utilized to assess social integration. Given that the analysis is structured to look at differences within eras of military service, this measure may not fully reflect differences in social participation which may exist. Younger people may have less time to participate in group activities due to family and work demands, which may not be captured in this operationalization of social integration. A better measure would assess a wider variety of social activities which reflect the diversity associated with family and occupational responsibilities.

The results presented here indicate that education is strongly associated with increased social participation. It may be that education leads to more social resources, larger networks, and/or more opportunities for social interaction (Reynolds and Ross 1998). It appears to be an important social resource related to group participation. Eating alone also appears to be an important factor associated with group participation, for older military era groups of women. This measure may reflect unmeasured factors related to geographic location, mobility, and access to immediate others. Future researchers should examine more qualitative aspects of what it means to eat alone most or all the time.

A final issue concerns the women from the Vietnam and Post-Vietnam eras. Given the controversial nature of the Vietnam military era, these women may be particularly disadvantaged in terms of social resources when compared to other cohorts of women. Inequalities associated with income and stressors, and loneliness factors appear particularly important for the Vietnam era women. An interesting finding was the race differences among Post-Vietnam era women. Previous research has found conflicting results with regards to race differences in social support. It may be that African Americans have more extensive kin networks, while whites have more extensive social

and resource networks. It is not apparent why this difference is manifested only among the Post-Vietnam era women.

The results of this study highlight the importance of examining the factors associated with different dimensions of social support. Too often researchers only examine social support as a predictor or mediating variable when studying health and well-being. This research illustrates the importance of looking at support as an outcome in itself. Given that prior research has shown that social support is an important aspect of social relationships and has beneficial effects on health and well-being, it is important to continue attempts to better identify the factors and conditions that promote supportive experiences.

As more women enter the military, the information gained from women who were previously in the military can aid in the understanding and elucidation of how military experience affects relationships and health status throughout the life course. Future research should investigate the role of other military characteristics on the health and well-being of women veterans. Specifically, occupational role, age at entrance, deployment status, perceptions of support while in the military, and overall perceptions of military experience should be examined to determine how they affect current social relations and well-being for women of varying eras of military service. Additional types of social support should also be examined. The present study utilized measures of perceived support and social integration. Studies which incorporate a wider variety of dimensions of support and examine the specific functions provided by these types of support may also help to clarify the importance of social support for health and well-being and the interrelationships among different types of support.

Once again, we would like to highlight that these findings can only be generalized to other women veterans who use VA ambulatory care services. Research is needed which examines whether these patterns hold for women veterans in general, regardless of where they receive health care.

NOTES

1. Many studies which have examined women and the military have had methodological limitations and generalizability problems. The majority of these studies have either been event recollections, oral histories, have utilized small purposive samples of women veterans, or have focused on one particular era of military service (e.g., Walker 1985; Gruhzit-Hoyt 1995; Schnair 1986; Paul 1985). The most rigorous stud-

ies of women veterans have examined issues related to the Vietnam Conflict (Schnair 1986; Paul 1985; Norman 1988), the Gulf War (Pierce 1997; Wolfe et al. 1992), and the description and examination of women veterans who utilize VA health care services (Skinner and Furey 1998; Coyle and Wolan 1996).

2. The time relevance of the loneliness question may introduce measurement error. The question asks respondents if they felt lonely while in the military. Memories tend to fade and things look less disturbing as time passes. This measure may be more reflective of actual experienced loneliness for younger military cohorts.

3. Some might suggest that the social functioning measure would be highly related to the outcome measure of perceived support. Results indicate that this is not the case. The correlation among these items is moderate. Results without social functioning included in the model yield very similar patterns to those presented here.

4. Two of the independent variables were significant at the $p. < 0.10$ level. However, these variables were substantively meaningful and were included in the final model.

5. Regression results excluding social functioning and income reveal substantively similar results.

6. There is a possibility of a quasicomplete separation in the sample points for the Korean era group. Although the results for this group should be taken with caution, the results are very similar to other era groups.

7. The same problem exists as with the Korean era group. Given that social functioning is the only factor which affects group activity among the group of Persian Gulf women, we might take these results with caution.

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