Predictors of Retention Intentions Among Active Duty Service Members

Abstract

This survey note examines the relationship between reported retention intentions of active duty members and other critical factors that could affect Service members' motivations to remain in the military. Prior research has found a link between member-reported retention intentions and actual retention behavior among military members using results from the annual Status of Forces surveys (SOFS). However, the key factors predicting member-reported retention intentions of active duty Service members have not yet been fully explored. Data collected from the *2014, September 2016, and 2017 Status of Forces Survey of Active Duty Members* were used to analyze the relationship of certain factors hypothesized to have an effect on retention intentions and member-reported intentions. The direction and magnitude of these factors in predicting retention intentions were analyzed through the use of separate and full regression models, as well as dominance analyses for each of the survey administrations. The results of these analyses indicate that the three most important factors in predicting an individual's intention to remain on active duty are *spousal and familial support to stay on active duty*, *affective commitment to the military*, and *overall satisfaction with military way of life*. These findings support the results of prior research on Reserve component members and the military as a whole, and may help provide insight needed to create policies that effectively maintain the necessary retention rates for a mission-ready force.

Introduction

The retention of Service members is a key metric of the military's overall organizational well-being. A greater retention rate among current members translates to a higher degree of readiness, lessens the financial burdens associated with recruitment and new recruit training—which accounted for nearly $2 billion of the Department of Defense's overall spending in 2019—and allows the military to maintain the viability of the All Volunteer Force (Office of the Under Secretary of Defense [Comptroller]/Chief Financial Officer, 2020). In order to effectively maintain the necessary retention rates across the Services, it is critical for the Department to be proactive by monitoring the retention intentions of members. The annual Status of Forces Survey of Active Duty Members (SOFS-A) has regularly asked respondents about their intentions to remain in the military, providing the Department with insight into potential retention concerns that may lie ahead. However, to be able to address members' underlying motivations to stay or leave, data from other topics on the SOFS-A can be analyzed in relation to reported retention intentions. Identifying correlations between retention intention and other factors may provide insight needed to formulate more effective policies aimed at maintaining the required retention rates for a mission-ready force.

Although there is available research literature on retention within the active duty population, much of this research focuses on specific subgroups within the active duty population or is years—even decades—old, highlighting the importance of this current research effort. However, there are themes that emerge consistently across the existing work, which influenced the potential predictive variables included in the current analysis. Familial support, both on the part of spouses specifically and families as a whole, is one of the most commonly discussed factors when examining retention in the military. The military way of life can have strong impacts, both positive and negative, on a member's entire

family unit. Support from a member's family has been shown to be significantly correlated with both their sentiments regarding remaining in the military and ultimate decision to stay or leave (Griffith, Rakoff, & Helms, 1992; Gade et al., 2003). For this reason, the effects of spousal support on retention are of interest. OPA has previously used data from the *2012 Survey of Active Duty Spouses*, in conjunction with record data from the *Active Duty Master File*, to examine the relationship between spousal support to stay in the military and members' actual retention decisions. This analysis found a positive correlation between spousal support to stay and actual retention behavior; the association was present across all Services and among both enlisted members and officers (OPA, 2017b). This reported association mirrors the results of an earlier analysis of member-reported data collected on the *August 2006 Status of Forces Survey of Active Duty Members* regarding spousal/significant other support to stay in the military. Regression analyses were done using these data and actual retention rates based on personnel records from May 2008. The results indicate that, for every one-point increase in spousal/significant other support to stay, members were anywhere from 1.52 times (for junior enlisted members) to 1.98 times (for senior officers) more likely to remain in the military after two years (DMDC, 2010). Additionally, support to stay from the larger overall family may play a key role in Service member retention. Past research has examined members and the impact of work–home conflict (Heilmann, Bell, & McDonald, 2009). The effects of military life on members' families may weigh heavily on the decision to stay or leave the military, both when it comes to stated intentions on a survey and their resultant behavior.

Affective commitment, defined on the *2017 SOFS-A* as "an emotional attachment to, an identification with, and an involvement in an organization," has also been linked to retention of military members. In the context of the military, affective commitment can be represented by a member's perceived duty to serve their country, duty to their unit, and duty to their family—all of which are tied to their affective, or emotional, experiences of service (Griffith, 2008). The SOFS-A survey includes items that measure all three facets of organizational commitment: affective commitment, continuance commitment (commitment based upon the "perceived costs of leaving an organization"), and normative commitment (commitment based upon what an individual "should" do in the context of applicable social norms) (Meyer & Allen, 1991; Gade et al., 2003; OPA, 2018b). Past analyses on retention within the Reserve population have found affective commitment to have the strongest correlation with member retention (OPA, 2021). In addition to commitment, other organizational metrics, such as personal/unit morale and readiness, stress, and overall satisfaction, are included in the present analyses. Past research has found a correlation between these factors and retention among the active duty population (LaRocco et al., 1977; Doering & Grissmer, 1985).

The aim of the current analyses is to measure the relationship between member-reported retention intentions and other domains hypothesized to play a role in affecting these intentions based upon previous research. Familial support, individual morale level, personal commitment to the military, and organizational metrics such as unit morale, readiness, and overall satisfaction stand out as commonly noted factors related to both reported retention intentions and actual retention behavior, all of which are included on the Status of Forces survey (DMDC, 2015; OPA, 2017a; OPA, 2018a). Additionally, financial condition and suicidal thoughts were also selected for inclusion in this analysis given their saliency in military personnel research in recent years. Given the previously demonstrated association between retention intentions and actual retention behavior, further understanding the factors that predict retention intention could prove valuable in shaping policies pertaining to these factors along with programs aimed to keep retention rates high (OPA, 2018b).

Methodology

Data

Three SOFS-A data sets from 2014,[1] September 2016,[2] and 2017[3] were used in this analysis.[4] Retention intentions were measured using a SOFS item that has served as the DoD standard survey retention item since 2002. Members are asked to indicate how likely they would be to continue to participate in active duty if they had to choose whether to stay or leave. Response options range from 1 ("very unlikely") to 5 ("very likely"). Higher responses indicate greater retention intentions. Table 1 displays the descriptive statistics for each survey administration.

Table 1.
Retention Intentions Descriptive Statistics (Weighted Percentages)

	2017 SOFS-A (%)	Sep 2016 SOFS-A (%)	2014 SOFS-A (%)
Very Likely/Likely	60	61	63
Neither Likely nor Unlikely	14	13	12
Unlikely/Very Unlikely	26	25	25
Observations	*18,040*	*14,761*	*13,447*

A systematic effort was undertaken to find the best variables to explain retention intentions. Using relevant questions from each survey, 24 questions fitting into eight broader categories were identified and outlined below (see Appendix A for information on individual variables):

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[1] Data were collected on behalf of the Office of the Under Secretary of Defense for Personnel and Readiness (OUSD[P&R]) from September 24, 2014, to November 12, 2014. Completed surveys were received from 13,447 eligible respondents. The overall weighted response rate was 21%.

[2] Data were collected on behalf of the Office of the Under Secretary of Defense for Personnel and Readiness (OUSD[P&R]) from September 7, 2016, to November 18, 2016. Completed surveys were received from 14,761 eligible DoD respondents. The overall weighted response rate was 20%.

[3] Data were collected on behalf of the Office of the Under Secretary of Defense for Personnel and Readiness (OUSD[P&R]) from September 25, 2017, to December 29, 2017. Completed surveys were received from 18,040 eligible DoD respondents. The overall weighted response rate was 21%.

[4] Data collected from Coast Guard, National Oceanic and Atmospheric Administration (NOAA), and Public Health Service (PHS) members are excluded. No survey was administered in 2015 due to delays in approval; instead, two surveys were administered in 2016.

1) **Satisfaction/morale in the military:**
   Satisfaction with military way of life, average satisfaction with specific aspects of the military, personal morale, and unit morale.
2) **Familial support/military background:**
   Spouse or family support to stay on active duty; relatives who served on active duty or in the National Guard and Reserve.
3) **Stress:**
   Stress in work life and in personal life, and average feelings of stress scale (noted in Appendix A).
4) **Preparation for civilian life:**
   Perceptions of education opportunities, finding civilian jobs, and lack of civilian-base alternatives.
5) **Suicidal thoughts:**
   Thoughts of suicide ever in life.
6) **Personal financial condition:**
   Perception of personal financial status.
7) **Organizational commitment:**
   Affective commitment, continuance commitment, and normative commitment.[5]
8) **Readiness:**
   Perceptions of readiness of unit, training, joint operations trainings, and self.

In addition, several background/demographic variables, traditionally used by OPA for similar types of analyses, were controlled in each model. These eight variables were identified for use in further linear regression models: gender, age, Service, paygrade, marital status, deployment status in past two years, Armed Forces Qualification Test (AFQT) score (for enlisted member models only), and off-base versus on-base housing location (off-base vs. on-base housing location was not available for *2014 SOFS-A* but was present in all other models). In all cases, survey variables were used before administrative records, if possible. Statistical significance was set at a *p*-value of 0.01.

Modeling Techniques

Ordinary least squares (OLS) and ordinal logistic regressions were the primary tools used in evaluating these variables. Analyses were run using weighted and unweighted regressions for comparison purposes. Interpretation of results did not differ between the two and, as a result, unweighted results from the OLS regressions are reported.

Regressions are a useful way to interpret the direction and magnitude of explanatory variables. However, differing model specifications can overfit the data or alter an individual model's results, particularly if the explanatory variables exhibit multicollinearity[6] with each other, as this can

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[5] After the 2016 survey, FMG performed an item reduction analysis on these three scales. As a result, the *2017 SOFS-A* survey included only a subset of items for these three scales. For this analysis, COMMITA, COMMITC, and COMMITN in 2016 and 2014 were recalculated to be an average of only the items available on the 2017 survey in order for these three scales to be comparable over the years. Analyses using the full three scales for 2016 and 2014 showed that the overall R squared value was higher for the full scale compared to the reduced scale.

[6] Multicollinearity occurs when two or more of the independent variables in a regression analysis are significantly correlated with one another; the presence of this phenomenon may result in inaccurate interpretations of individual independent variables' regression coefficients in an analysis.

undermine the statistical significance of any explanatory variable (Farrar & Glauber, 1967). Analysts often seek to avoid issues of overfitting and multicollinearity by reducing the number of explanatory variables within an individual model.

OLS and ordinal logistic regression-based dominance analyses were conducted to avoid omitting variables. Dominance analysis computes a variable's relative importance by determining its contribution to the prediction of the criterion in the presence of a specific set of variables (see Budescu, 1993; Azen & Budescu, 2003). This involves running every possible subset regression with all variables and furnishing a rank of relative importance based on a variable's direct effect (i.e., when considered by itself), unique effect (i.e., conditional on all other variables in the full model), and partial effect (i.e., conditional on all subsets of variables). Although dominance analysis does not indicate the direction of an explanatory variable's impact on the dependent variable, it effectively ranks each explanatory variable in order of impact and allows for the inclusion of many explanatory variables without the consequences of multicollinearity.[7]

The analysis structure for each SOFS-A administration followed a three-step process, which is run for enlisted active duty models and for equivalent all active duty models across the three surveys. First, each explanatory variable was analyzed in separate linear regression models—each incorporating all control variables—and R^2 values were compared. Second, explanatory variables of interest for a particular survey year and control variables were deployed in a "full model," which is run as an OLS regression model to identify which explanatory variables possess statistically significant regression coefficients. Finally, a dominance analysis was run on 10 of the top predictors from the previous two steps to understand the relative importance of these factors.

Results

Separate Regression Models

Nearly all explanatory variables obtained statistical significance within their individual OLS regression models. The exceptions are having relatives on active duty and Reserve/National Guard, which was not statistically significant in 2016 or 2014 (it was not included on the *2017 SOFS-A*); and the constructed stress scale, which was only significant in 2016. All results are positive, indicating that higher values associated with the scales correspond to higher likelihood of intention to stay on active duty.

Seven explanatory variables were able to produce high R^2 values over 20%, regardless of whether they were measured in enlisted-only models or total DoD models. Table 2 displays the seven explanatory variables which produced the highest R^2 values for total DoD—results for enlisted were similar and can be found in Appendix B. Support from spouse/significant other produced the highest R^2 value, at 43.8% in 2014 among total DoD. Affective commitment and spousal and familial support contain the next highest R^2 values. Most R^2 values are quite stable across surveys, although the spousal and familial support had a notable decline in R^2 values from 2014 to 2017. For comparison, the base

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[7] Barni (2015) notes that dominance analysis addresses the issue of multicollinearity, as dominance statistics are computed using all possible combinations of variables, building in adjustments for overlap between variables. A key advantage of dominance analysis is that it controls for the contribution of the other variables, and thus, the measured effect of one explanatory variable on retention intentions can be considered wholly separate from that of another explanatory variable. Previous OPA analyses have deployed such techniques; see OPA (2020) for an example.

model with only demographic control variables contains R^2 values ranging from 4.8%–7.0% among total DoD.

Table 2.
Explanatory Variables Producing Highest R^2 Values, Total DoD

Model	*p*-value	2017 SOFS-A R^2	Sep 2016 SOFS-A R^2	2014 SOFS-A R^2	Direction
Support from spouse/significant other	<0.0001	41.1%	41.6%	43.8%	+
Affective commitment	<0.0001	38.4%	37.4%	37.4%	+
Spousal and familial support	<0.0001	37.4%	38.9%	41.0%	+
Overall satisfaction with military way of life	<0.0001	34.5%	32.9%	31.6%	+
Support from family	<0.0001	30.4%	31.5%	32.9%	+
Average satisfaction with aspects of the military	<0.0001	25.8%	25.2%	24.1%	+
Personal morale	<0.0001	NA	23.2%	23.1%	+

Note: Variables not included on certain survey administrations are labeled with values of NA (Not Applicable).

Full Models

Variables with high R^2 values, identified by single variable models, were placed in full variable models; variables such as military service among members' relatives, which contain R^2 values below 10% in all survey administrations and are therefore not discussed in the previous section, were dropped. When placed in a single model, most explanatory variables were found to have statistically significant regression coefficients, and six variables are significant for all survey years in which they were fielded (see Table 3). The six variables include average satisfaction with aspects of the military, average feelings of stress, perceived lack of civilian-base alternative opportunities, perceived personal financial status (only included in 2017 and 2016 analyses), organizational commitment, and constructed spousal and familial support scale. The organizational commitment scale measures obtained the largest *t*-values, followed by spousal and familial support. Of these, only average feelings of stress are negatively associated with retention.

Several explanatory variables were significant for only one or two of the administrations. Specific to the total DoD models, stress in personal life was statistically significant only in 2014 and 2016 and stress in work life was statistically significant only in 2014. Thoughts of suicide was statistically significant only in 2017, and only among enlisted soldiers. Average feelings of stress and thoughts of suicide are the only non-control variables that are negatively associated with retention intentions. Stress in personal life and stress in work life are positively associated with retention, which seems somewhat counter-intuitive. This may be related to the presence of other correlated variables, such as perception of personal finance and perceived lack of civilian-based alternatives.

In general, the full model follows the individual models in which organizational commitment, average satisfaction with aspects of the military, and spousal and familial support for staying on active duty obtained high t-values—similar to high R^2 values in the individual models.

Table 3.
Explanatory Variables Estimated Regression Coefficients, Total DoD

	2017 SOFS-A		Sep 2016 SOFS-A		2014 SOFS-A	
Explanatory Variables	**t Value**	**Pr > |t|**	**t Value**	**Pr > |t|**	**t Value**	**Pr > |t|**
Organizational commitment scale	61.4	<.0001	48.77	<.0001	49.32	<.0001
Spousal and familial support	58.09	<.0001	53.4	<.0001	55.49	<.0001
Average satisfaction with aspects of the military	13.38	<.0001	10.73	<.0001	11.42	<.0001
Perceived lack of civilian-base alternative opportunities	8.15	<.0001	4.87	<.0001	6.2	<.0001
Navy (Binary)	6.48	<.0001	4.17	<.0001	2.96	0.0031
Married/Separated (Binary)	6.08	<.0001	2.85	0.0044	2.52	0.0119
Perception of personal financial status	5.42	<.0001	3.8	0.0001	NA	NA
Women (Binary)	3.49	0.0005	1.43	0.1519	-1.87	0.062
Army (Binary)	2.07	0.0383	2.61	0.009	0.34	0.7311
Deployment (Binary)	1.8	0.0719	0.17	0.8648	1.81	0.0703
Stress in personal life	1.72	0.086	3.55	0.0004	3.34	0.0008
W1 – Warrant Officer (Binary)	1.61	0.1081	2.18	0.0295	4.01	<.0001
Marine Corps (Binary)	1.59	0.1117	0.64	0.5213	1.18	0.2387
Stress in work life	1.58	0.1134	1.28	0.2007	2.11	0.0346
Perceived difficulty finding a civilian job	1.1	0.2733	0.24	0.8115	0.47	0.6404
E5 – Enlisted (Binary)	0.76	0.449	-0.25	0.8044	-0.16	0.8724
Living off base	0.04	0.9704	-0.74	0.4582	NA	NA
Thoughts of suicide ever in life	-1.14	0.2547	1.39	0.1649	NA	NA
Age	-1.33	0.1831	-0.84	0.4018	-0.71	0.4791
O1 – Officer (Binary)	-4.2	<.0001	-4.22	<.0001	-3.47	0.0005
E1 – Enlisted (Binary)	-7.74	<.0001	-8.43	<.0001	-8.25	<.0001
Average feelings of stress	-7.91	<.0001	-6.13	<.0001	-8.08	<.0001
Intercept	-9.54	<.0001	-7.23	<.0001	-6.14	<.0001
N	17,648		12,613		13,237	
R²	0.56		0.56		0.57	

Note: In order of 2017 SOFS-A *t* values, these variables were controlled for in each model: Navy (Binary), Married/Separated (Binary), Women (Binary), Army (Binary), W1 – Warrant Officer (Binary), Marine Corps (Binary), E5 – Enlisted (Binary), Age (Continuous), O1 – Officer (Binary), and E1 – Enlisted (Binary). Variables not included on certain survey administrations are labeled with values of NA (Not Applicable).

Dominance Analysis

Dominance analysis was conducted on the R^2 values of OLS regressions (see Appendix C). The top three explanatory variables predictive of retention intentions are 1) spousal and familial support, 2) the affective commitment scale, and 3) overall satisfaction with military way of life. These three were ranked the highest in all three survey years for enlisted and total DoD.

Personal morale was somewhat predictive, ranking fourth in 2016. In 2014, personal morale was ranked fourth for total DoD, but only sixth for enlisted—marking the largest ranking divide between total DoD and enlisted for any explanatory variable. This contrasts with unit morale, which was ranked seventh in 2016 and eighth in 2014 for both total DoD and enlisted. Overall, the least predictive explanatory variables were unit morale and stress; in 2017, thoughts of suicide and perception of personal financial status were measured and ranked lower than stress (unit morale was not measured in 2017). The total standardized dominance statistic[8] among each explanatory variable ranges from 83.4%–89.8%, indicating that the combined contribution of the control variables contributes to only 10.2%–16.6% of the R^2 statistic.

Discussion

The analyses conducted for this survey note found a strong relationship between reported retention intentions of active duty members and these factors: organizational commitment scales (most notably affective commitment), spousal and familial support, satisfaction with the military way of life, satisfaction with aspects of the military, and personal morale. These results add support to findings in past analyses on retention within the military, including the strong correlation that affective commitment has with Reserve component member retention (OPA, 2021).

A comparable analysis that was conducted on a sample of the Reserve population using data from the *2016*,[9] *2017*,[10] and *2018*[11] *SOFS-R* indicates that affective commitment and overall satisfaction with the military way of life are the most consistent predictors of retention intentions among Reserve component members (OPA, 2021).[12] Similar to the results of the present analyses on the active duty population, when individual linear regression models were used to analyze the significance of each explanatory variable (in combination with previously determined control variables) for each of the SOFS-R administrations in predicting retention intentions, most of the explanatory variables were found to be statistically significant. However, in the full SOFS-R linear regression models, which

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[8] The dominance statistic represents the weighted average of R^2 values across all models containing its corresponding explanatory variable. The standardized dominance statistic is the proportional contribution of each explanatory variable to the final R^2 statistic. For example, the standardized dominance statistic of each explanatory variable combined with the standardized dominance statistic of each control variable (not displayed) would equal 100%.

[9] Data were collected on behalf of the Office of the Under Secretary of Defense for Personnel and Readiness (OUSD[P&R]) from June 27, 2016, to October 3, 2016. Completed surveys were received from 19,094 eligible respondents. The overall weighted response rate was 19%.

[10] Data were collected on behalf of the Office of the Under Secretary of Defense for Personnel and Readiness (OUSD[P&R]) from June 6, 2017, to September 26, 2017. Completed surveys were received from 15,980 eligible respondents. The overall weighted response rate was 17%.

[11] Data were collected on behalf of the Office of the Under Secretary of Defense for Personnel and Readiness (OUSD[P&R]) from July 19, 2018, to October 11, 2018. Completed surveys were received from 12,831 eligible respondents. The overall weighted response rate was 13%.

[12] Data collected from Coast Guard members were excluded.

include all of the explanatory variables found to be statistically significant in the separate models, only affective commitment and overall satisfaction remain significant across all three administrations. Continuance commitment remained significant in the two survey administrations for which it was available. Additionally, normative commitment and spousal/significant other support to stay remained significant in the full model for the *2017 SOFS-R* administration, while military stress and days spent in compensated status remained significant in the full *2016 SOFS-R* model (with military stress having a negative correlation with retention intentions).

The top predictors of retention intention vary across active duty and Reserve component members. The dominance analyses conducted on the variables of interest in the SOFS-A models ranked spousal and familial support as having the most relative importance in predicting retention intentions among total active duty and enlisted members across all three SOFS-A administrations, followed by affective commitment and overall satisfaction with the military way of life. In contrast, in the Reserve study, the dominance analyses conducted on the explanatory variables that remained significant in the full models show that affective commitment has the most relative importance across all of the SOFS-R administrations, followed by overall satisfaction with the military way of life. Continuance commitment was the third most important predictor in the *2016* and *2018 SOFS-R* models, while normative commitment was third in the *2017 SOFS-R* model.

When comparing these top three predictors of member-reported retention intentions for active duty and Reserve component members, it is notable that affective commitment and overall satisfaction are important measures in predicting retention intentions across both populations, but familial support was found to be more important in predicting active duty members' retention intentions. This could be explained by the degree to which families are affected by various aspects of the active duty experience, such as deployments, permanent change of station (PCS) moves, and personnel tempo (PERSTEMPO), which Reserve component members and their families do not face to the same extent.

The results of these analyses highlight the importance of familial support in predicting retention intentions of active duty members, and further illustrate the significant correlation between support from a member's family and sentiments regarding remaining in the military reported by Gade et al. (2003). They also add support to the findings of previous OPA research regarding the correlation between spousal support to stay and actual retention behavior (OPA, 2017).

The interconnectedness of this issue across the lives of members and their families alike suggests that the needs and sentiments of those closest to Service members should be recognized. Taking this into account, there are a number of ways in which this research could be expanded upon in the future to gain a more concrete understanding of how these predictors could be addressed. Cross-survey analyses of data from both SOFS-A surveys and Active Duty Spouse Surveys (ADSS) have the potential to shed additional light on this topic. Moreover, the results produced from this analysis, along with those from the related analyses that preceded it, may become easier to contextualize when bolstered by research conducted using qualitative methodologies, such as interviews or focus groups of members, spouses, and/or other family members. Ultimately, irrespective of future research plans, the data used in this analysis, sourced from three separate SOFS-A administrations, demonstrate a high degree of consistency when it comes to predictive factors of retention intention. The repeated demonstration of the correlation between spousal and familial support and members' retention intentions emphasizes the importance of these considerations from both a research and policymaking perspective.

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Appendix A: Analysis Variables

Satisfaction/morale in the military:

SATOVER: Overall satisfaction with military way of life
SATISSCALE: Average satisfaction scale
              (SATMLB, SATMLC, SATMLD, SATMLE, and SATOVER)
CRMORAL: Personal morale
CRUMORAL: Unit morale

Familial support/military background:

PRSTAYAB: Spouse/significant other support for staying on active duty
PRSTAYC: Family support for staying on active duty
SUPPORT: Average spousal/familial support to stay on active duty
              (PRSTAYAB, PRSTAYC)
ADFMBRR: Had a relative who served on active duty
NGRFMBR: Had a relative who served in Reserve/National Guard

Stress:

PSTRESS: Stress in personal life
WSTRESS: Stress in work life
STRESSSC: Average feelings of stress
              (PSFRQSA, PSFRQSB, PSFRQSC, PSFRQSD, PSFRQSE, PSFRQSF)

Preparation for civilian life:

ORGCOMI: Perceived difficulty finding a civilian job
ORGCOMN: Perceived lack of civilian-base alternative opportunities
SATEDU: Opportunities to pursue education

Suicidal thoughts:

SUITHGTS: Thoughts of suicide ever in life

Financial condition:

MNYCOMFORT: Perception of personal financial status

Organizational scales:

COMMITA: Affective commitment
COMMITC: Continuance commitment
COMMITN: Normative commitment
ORGCOMMSC: Organizational commitment scale
              (ORGCOMA, ORGCOMB, ORGCOMD, ORGCOME, ORGCOMK, ORGCOMO)

Preparedness:

PREPRD1:   Perceptions of readiness of self

PREPRD2:   Perceptions of readiness in unit
PREPRD3:   Perceptions of readiness in trainings
PREPRD4:   Perceptions of readiness in joint operations trainings

Appendix B: Enlisted Results for Separate and Full Models

Table 4.
Explanatory Variables Producing Highest R² Values, Enlisted

Model	*p*-value	2017 SOFS-A R²	Sep 2016 SOFS-A R²	2014 SOFS-A R²	Direction
Affective commitment	<.0001	39.9%	40.7%	39.8%	+
Support from spouse/significant other	<.0001	39.5%	39.0%	42.2%	+
Overall satisfaction with military way of life	<.0001	35.4%	35.1%	32.4%	+
Spousal and familial support	<.0001	35.1%	36.5%	38.4%	+
Support from family	<.0001	28.8%	30.3%	30.9%	+
Average satisfaction with aspects of the military	<.0001	25.9%	26.8%	23.6%	+
Personal morale	<.0001	NA	26.4%	23.9%	+

Note: Variables not included on certain survey administrations are labeled with values of NA (not applicable).

Table 5.
Explanatory Variables Estimated Regression Coefficients, Enlisted

Explanatory Variables	2017 SOFS-A		Sep 2016 SOFS-A		2014 SOFS-A	
	t Value	Pr > |t|	t Value	Pr > |t|	t Value	Pr > |t|
Organizational commitment scale	53.52	<.0001	36.93	<.0001	39.26	<.0001
Spousal and familial support	40.33	<.0001	31.61	<.0001	33.58	<.0001
Average satisfaction with aspects of the military	8.03	<.0001	6.71	<.0001	5.41	<.0001
Perceived lack of civilian-base alternative opportunities	6.82	<.0001	3.97	<.0001	5.19	<.0001
Navy (Binary)	5.6	<.0001	2.5	0.0123	2.34	0.0192
Married/Separated (Binary)	5.24	<.0001	3.59	0.0003	3.24	0.0012
Perception of personal financial status	4.01	<.0001	3.32	0.0009	NA	NA
High AFQT Score (Binary)	2.8	0.005	2.29	0.0218	NA	NA
Women (Binary)	2.66	0.0077	0.73	0.4662	-0.73	0.465

Explanatory Variables	2017 SOFS-A		Sep 2016 SOFS-A		2014 SOFS-A	
	t Value	Pr > |t|	t Value	Pr > |t|	t Value	Pr > |t|
Deployment (Binary)	1.86	0.0623	-0.06	0.9551	1.59	0.1117
Stress in work life	1	0.3183	0.11	0.9091	-0.25	0.8026
Army (Binary)	0.89	0.3752	0.29	0.7726	-1.06	0.29
Living off base (Binary)	0.83	0.4051	-0.1	0.9184	NA	NA
Stress in personal life	0.82	0.4099	1.89	0.0585	2.56	0.0104
Perceived difficulty finding a civilian job	0.7	0.481	1.57	0.1165	1.31	0.189
Marine Corps (Binary)	0.32	0.7469	-1.15	0.2492	0.59	0.5566
Age	-2.44	0.0149	-1.46	0.1451	-2.22	0.0264
Thoughts of suicide ever in life	-3.06	0.0022	1.01	0.3122	NA	NA
Intercept	-6.08	<.0001	-4.27	<.0001	-2.93	0.0034
Average feelings of stress on specific measures	-6.99	<.0001	-5.58	<.0001	-5.04	<.0001
E1 – Enlisted (Binary)	-11.32	<.0001	-10.08	<.0001	-10.29	<.0001
N	11,203		6,205		6,658	
R^2	0.56		0.56		0.57	

Note: In order of 2017 SOFS-A *t* values, these variables were controlled for in each model: Navy (Binary), Married/Separated (Binary), Women (Binary), Army (Binary), W1 – Warrant Officer (Binary), Marine Corps (Binary), E5 – Enlisted (Binary), Age (Continuous), O1 – Officer (Binary), and E1 – Enlisted (Binary). Variables not included on certain survey administrations are labeled with values of NA (Not Applicable).

Appendix C: Dominance Analysis Results

Table 6.
2017 Dominance Statistics

Explanatory Variable	Total DoD			Enlisted Only		
	Domin. Stat.	Std. Domin. Stat.	Rank	Domin. Stat.	Std. Domin. Stat.	Rank
Spousal and familial support	0.157	28.7%	1	0.130	23.9%	1
Affective commitment	0.128	23.3%	2	0.127	23.2%	2
Overall satisfaction with military way of life	0.104	19.1%	3	0.100	18.4%	3
Normative commitment	0.032	5.8%	4	0.037	6.8%	4
Continuance commitment	0.028	5.2%	5	0.031	5.6%	5
Average feelings of stress	0.015	2.8%	6	0.016	3.0%	6
Stress in work life	0.006	1.1%	7	0.006	1.2%	7
Stress in personal life	0.003	0.5%	8	0.003	0.5%	9
Thoughts of suicide ever in life	0.002	0.4%	9	0.003	0.6%	8
Perception of personal financial status	0.001	0.2%	10	0.001	0.2%	10
Total	**0.476**	**87.0%**		**0.455**	**83.4%**	

Table 7.
Sep 2016 Dominance Statistics

Explanatory Variable	Total DoD			Enlisted Only		
	Domin. Stat.	Std. Domin. Stat.	Rank	Domin. Stat.	Std. Domin. Stat.	Rank
Spousal and familial support	0.167	30.3%	1	0.128	22.5%	1
Affective commitment	0.114	20.7%	2	0.120	21.0%	2
Overall satisfaction with military way of life	0.084	15.2%	3	0.084	14.6%	3
Personal morale	0.042	7.5%	4	0.041	7.2%	4
Continuance commitment	0.029	5.3%	5	0.041	7.1%	5
Normative commitment	0.024	4.4%	6	0.031	5.5%	6
Unit morale	0.014	2.5%	7	0.014	2.4%	7
Average feelings of stress	0.009	1.7%	8	0.013	2.2%	8
Stress in work life	0.004	0.8%	9	0.006	1.1%	9
Stress in personal life	0.002	0.4%	10	0.003	0.5%	10
Total	**0.489**	**88.8%**		**0.481**	**84.2%**	

Table 8.
2014 Dominance Statistics

Explanatory Variable	Total DoD			Enlisted Only		
	Domin. Stat.	Std. Domin. Stat.	Rank	Domin. Stat.	Std. Domin. Stat.	Rank
Spousal and familial support	0.162	29.2%	1	0.134	23.9%	1
Affective commitment	0.115	20.8%	2	0.122	21.8%	2
Overall satisfaction with military way of life	0.081	14.6%	3	0.076	13.5%	3
Personal morale	0.042	7.6%	4	0.040	7.1%	6
Continuance commitment	0.033	6.0%	5	0.043	7.7%	4
Normative commitment	0.029	5.2%	6	0.040	7.1%	5
Average feelings of stress	0.014	2.6%	7	0.014	2.5%	7
Unit morale	0.013	2.4%	8	0.011	1.9%	8
Stress in work life	0.005	1.0%	9	0.007	1.2%	9
Stress in personal life	0.003	0.5%	10	0.003	0.6%	10
Total	**0.496**	**89.8%**		**0.488**	**87.2%**	