APPENDIX V: REGRESSION ANALYSIS RESULTS

Multivariate regression analysis of the survey data allowed us to examine relationships between key response items and individuals' demographic and service characteristics, assessments of their current units, and past unit experiences with Service members believed to be gay or lesbian. Two sets of regression analyses were conducted. One examined the factors influencing Service members' assessments of their current unit, and a second examined the variables associated with Service members' perceptions about the impact of a repeal of Don't Ask, Don't Tell (DADT).

Factors Influencing How Service Members Rate Their Current Units

We specified regression equations to examine the factors that influence how Service members rated their current units in each of the following areas:

- Unit cohesion;
- Unit effectiveness, combat;
- Unit effectiveness, non-combat;
- Morale; and
- Readiness.

The dependent variables for each of these regression equations were constructed from responses to survey questions that asked Service members to rate items on a 5-point Likert scale. Although the dependent variables were ordinal, each had five or more categories and therefore could be treated as continuous variables, allowing us to use a linear regression model of the following form:

$$Y_i = \beta_o + \Sigma\beta_j X_{ij} + e_i$$

where

Y_i = the outcome for person i

X_{ij} = the jth individual characteristic for person i

β_j = the regression coefficient for the jth individual characteristic

β_o = the intercept term

e_i = the random error term

Dependent variables were constructed for each of the five regression equations in a similar manner. For example, for the current unit cohesion regression analysis, an overall rating for Service members' perceptions of cohesion in their current immediate units was constructed. To do this, we combined

the responses to eight survey items related to unit cohesion (Q14 and Q15 in the survey) by coding responses in the following manner:

- Strongly disagree = -2
- Disagree = -1
- Neither agree nor disagree = 0
- Agree = 1
- Strongly agree = 2

and summing across the eight items. Coded values for the combined unit cohesion outcome variable ranged from a possible -16 to +16.

When the same methods and the relevant survey questions for each outcome variable were used, possible values for non-combat unit effectiveness (Q16) ranged from -4 to +4, possible values for combat unit effectiveness ranged from -6 to +6 (Q17), possible values for morale (Q21 and Q22) ranged from -4 to +4, and possible values for readiness (Q23 and Q24) ranged from -4 to +4.

With one exception, the same independent variables were used in each regression equation. The independent variables were:

- A set of 4 dummy variables for Service (Q1), with Army as the reference category;
- A dummy variable for gender (Q99), with female = 1;
- Age group, as indicated in the survey (Q98), which included seven age categories that were coded as 1 (for the youngest group) to 7 (for the oldest group);
- A dummy variable for minority/non-minority status (Q100 and Q101), with minority = 1;
- A dummy variable for Component (obtained from the survey frame), with Reserve Component = 1;
- A dummy variable for "currently serving with" (Q34), with "not currently serving with" = 1;
- Whether a unit has good NCO/PO leaders (Q12), with response categories coded as 1 (none) to 5 (all);
- Whether a unit has good officers (Q13) over it, with response categories coded as 1 (none) to 5 (all).

All equations included these 12 variables. In addition, the unit effectiveness, morale, and readiness equations included a 13th independent variable—Service members' assessments of cohesion in their current immediate units.

Table V1 presents some simple descriptive statistics (means and standard deviations) and a correlation matrix for the dependent and independent variables used in these five regression equations.

Table V1

Mean, Standard Deviations, and Correlations for Variables Used in the "Current Assessment" Regression Analyses

			Correlation Coefficients																
Variables	**Mean**	**SD**	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**	**(15)**	**(16)**	**(17)**
(1) Current unit cohesion	7.5150	5.7123	--																
(2) Current non-combat deployed unit effectiveness	2.3907	1.3434	0.636*	--															
(3) Current combat deployed unit effectiveness	1.3268	0.6856	X	X	--														
(4) Current morale	0.5651	0.9527	0.500*	0.357*	X	--													
(5) Current readiness	1.9981	1.3140	0.486*	0.539*	X	0.427*	--												
(6) Navy	0.1687	0.3900	-0.033*	-0.005	0.017*	-0.034*	0.006	--											
(7) Marine Corps	0.1054	0.3515	0.030*	0.010*	0.058*	0.001	0.040*	-0.155*	--										
(8) Air Force	0.2219	0.4736	0.040*	0.101*	0.087*	0.003	0.082*	-0.241*	-0.183*	--									
(9) Coast Guard	0.0218	0.2456	0.003	0.029*	-0.005	-0.013*	0.004	-0.067*	-0.051*	-0.080*	--								
(10) Female	0.1559	0.3754	-0.100*	-0.064*	-0.068*	-0.059*	-0.064*	0.010*	-0.073*	0.048*	-0.012*	--							
(11) Age group	2.4062	1.3577	0.060*	0.002	0.013*	0.091*	0.046*	-0.001	-0.177*	0.075*	-0.007*	-0.068*	--						
(12) Minority	0.3306	0.4398	-0.081*	-0.080*	-0.060*	0.025*	-0.021*	0.050*	0.009*	-0.050*	-0.034*	0.124*	0.008*	--					
(13) Reserve Component	0.3683	0.4997	0.085*	-0.026*	-0.054*	0.146*	-0.045*	-0.189*	-0.149*	-0.022*	-0.068*	0.047*	0.209*	-0.037*	--				
(14) Served with in the past	0.4074	0.4984	0.070*	0.048*	0.040*	0.029*	0.029*	-0.012*	0.014*	0.022*	0.022*	-0.054*	0.122*	-0.050*	-0.026*	--			
(15) Never served with	0.2335	0.4214	0.121*	0.063*	0.060*	0.093*	0.060*	-0.092*	0.074*	0.042*	-0.004	-0.086*	-0.069*	0.017*	0.078*	-0.458*	--		
(16) Good NCOs	3.5342	0.9170	0.608*	0.425*	0.254*	0.365*	0.332*	-0.069*	0.006	0.019*	0.002	-0.066*	0.062*	-0.053*	0.100*	0.059*	0.131*	--	
(17) Good Officers	3.6233	0.9935	0.523*	0.391*	0.250*	0.364*	0.320*	-0.022*	0.038*	0.035*	0.009*	-0.040*	0.004	-0.041*	0.038*	0.037*	0.138*	0.584*	--

X - The current combat deployed unit effectiveness variable is derived from questions about current and past units, while the other "current" variables are asked about the current unit only. Therefore no correlations are presented.

*p < .05

Regression Results

Tables V2–V6 present the regression results for the five equations examining how Service members rated their current immediate units. The tables present the regression coefficient (unstandardized estimate), the standard error, and the standardized regression coefficient (standardized estimate or beta weights) for the intercept term and each independent variable. The standardized estimates addressed the differences in units among the independent variables and therefore allowed us to determine the relative importance of the independent variables in predicting the outcome variable. The R-square and adjusted R-square values and the number of observations are presented at the bottom of each table.

Unit Cohesion. Unit cohesion results are presented in Table V2. The independent variables included in this regression equation accounted for 39% of the variance in how Service members rated current unit cohesion. Significance tests showed that each independent variable in this equation was a significant predictor of current unit cohesion at the $p < .01$ level. The standardized estimates revealed that having good NCOs/POs was by far the most important predictor of current unit cohesion, followed by having good officers.

Table V2

Regression Results for Service Members' Assessment of Their Immediate Unit's Current Unit Cohesion

Variable	Unstandardized Estimate (Coefficient)	Standard Error	Standardized Estimate
Intercept	-7.1143**	0.0801	0.0000
Navy	0.6699**	0.0437	0.0457
Marine Corps	0.9763**	0.0481	0.0602
Air Force	0.5710**	0.0372	0.0473
Coast Guard	0.1764**	0.0657	0.0074
Female	-0.7391**	0.0392	-0.0486
Age group	0.1895**	0.0111	0.0451
Minority	-0.5366**	0.0329	-0.0415
Reserve Component	0.1375**	0.0303	0.0121
Currently serving with	-0.4906**	0.0317	-0.0401
Good NCOs	2.3583**	0.0195	0.3748
Good Officers	1.6879**	0.0178	0.2934
R-Square	0.3880		
Adj. R-Square	0.3879		
No. observations	96,615		

*p < .05 **p < .01

The regression results for unit cohesion indicate the following (controlling for all other variables included in the regression equation):

- Service members in the Navy, Marine Corps, Air Force, and Coast Guard rated cohesion in their current immediate units more highly than Service members in the Army did. Marine Corps Service members had the highest ratings for cohesion in their current immediate units.
- Being female and being minority had negative coefficients. The negative coefficients indicate that female and minority Service members rated their immediate units' current unit cohesion lower than male and non-minority Service members did, respectively.
- Reserve Component Service members (including the Reserves and the National Guard) rated their current unit cohesion more highly than Active Duty Service members did.
- Those who report currently serving with a Service member believed to be gay or lesbian (who may or may not be in their immediate unit) rated the cohesion of their current immediate unit lower than those who reported they were not currently serving with a Service member they believe to be gay or lesbian.
- Having good NCOs/POs and having good officers over a unit were both positively associated with unit cohesion.

Note that the estimated coefficients in this regression equation were relatively small in size, indicating that the average differences between subgroups in how they rated current unit cohesion were small. For instance, the coefficient for the variable "female" was -0.7391, which means that Service members of different genders, but who are otherwise identical, differed in their assessments of unit cohesion by an average of -0.7391 points on the -16 to +16 scale constructed for overall unit cohesion.

Unit Effectiveness. Unit effectiveness results are presented in Tables V3 (non-combat) and V4 (combat). R-squares were statistically significant for both equations. The independent variables accounted for 44% of the variance in Service members' ratings of non-combat unit effectiveness and 48% of the variance in combat unit effectiveness. For non-combat unit effectiveness, all independent variables were statistically significant at the $p < .01$ level. For the combat unit effectiveness regression equation, however, being in the Navy or the Coast Guard and gender were not significant—that is, the values of their coefficients were not significantly different from zero. In both equations, current unit cohesion was by far the largest predictor of current unit effectiveness, followed by being a member of the Air Force, whether the unit had good officers above it, Component for non-combat effectiveness, and age and having good officers for combat effectiveness. Note that the number of observations for the current combat effectiveness equation was small (6,777

observations), because the dependent variable used data from survey question 17 only, which was asked only of those currently deployed to a combat zone.

Table V3

Regression Results for Service Members' Assessments of Immediate Unit (Non-Combat) Effectiveness

Variable	Unstandardized Estimate (Coefficient)	Standard Error	Standardized Estimate
Intercept	0.7394**	0.0297	0.0000
Navy	0.1299**	0.0162	0.0379
Marine Corps	0.1069**	0.0202	0.0236
Air Force	0.3126**	0.0138	0.1132
Coast Guard	0.2764**	0.0193	0.0669
Female	0.0444**	0.0121	0.0142
Age group	0.0136**	0.0036	0.0149
Minority	-0.0638**	0.0114	-0.0214
Reserve Component	-0.1998**	0.0113	-0.0740
Currently serving with	0.0559**	0.0112	0.0194
Good NCOs	0.0363**	0.0071	0.0258
Good Officers	0.0949**	0.0064	0.0713
Current unit cohesion	0.1399**	0.0011	0.5977
R-Square	0.4350		
Adj. R-Square	0.4348		
No. observations	39,770		

*p < .05 **p < .01

Table V4

Regression Results for Service Members' Assessments of Immediate Unit Combat Effectiveness

Variable	Unstandardized Estimate (Coefficient)	Standard Error	Standardized Estimate
Intercept	1.1693**	0.1074	0.0000
Navy	0.0844	0.0533	0.0152
Marine Corps	0.1345*	0.0648	0.0197
Air Force	0.1270*	0.0538	0.0224
Coast Guard	-0.1983	0.1188	-0.0149
Female	0.0610	0.0626	0.0088
Age group	-0.1090**	0.0165	-0.0627
Minority	-0.0931*	0.0443	-0.0188
Reserve Component	-0.1057*	0.0436	-0.0229
Currently serving with	0.1512**	0.0418	0.0332
Good NCOs	0.0579*	0.0288	0.0235
Good Officers	0.0963**	0.0249	0.0438
Current unit cohesion	0.2412**	0.0042	0.6598
R-Square	0.4810		
Adj. R-Square	0.4800		
No. observations	6,777		

*p < .05 **p < .01

The regression results for unit effectiveness indicate the following (controlling for all other variables included in the regression equation):

- Current unit cohesion was a significant (and positive) predictor of current unit effectiveness for both the combat deployed and non-combat deployed. It was the strongest predictor in both equations.
- Service members in the Navy, Marine Corps, Air Force, and Coast Guard rated non-combat effectiveness more highly than those in the Army did. This was also true for combat effectiveness with the exception of the Navy and the Coast Guard, whose ratings of combat effectiveness were not significantly different from those of the Army. For the Coast Guard, this may have been due in part to the small numbers of Coast Guard members who reported combat deployment.
- Gender, age, and minority status were significant predictors of non-combat effectiveness. Service members' ratings of non-combat effectiveness were higher among women and rose as age rose, but were lower for minorities. For combat effectiveness, gender was not significant and both age and minority status had negative coefficients. Older Service members rated combat effectiveness lower than younger Service members did.

- Reserve Component was significant (and negative) in both equations, indicating that Service members in the Reserves and the National Guard rated unit effectiveness lower than Active Duty Service members did.
- Currently serving with a Service member believed to be gay or lesbian was a significant (and positive) predictor of both non-combat and combat effectiveness, indicating that Service members who currently serve with a Service member believed to be gay or lesbian rated unit effectiveness more highly than those not currently serving with a Service member believed to be gay or lesbian.
- Having good NCOs/POs and good officers were significant in both the combat and non-combat unit effectiveness regressions, although having good officers was a relatively stronger predictor than having good NCOs/POs in each equation.

Morale. The current morale regression results are shown in Table V5. The independent variables included in this regression equation accounted for 28% of the variance in how Service members rated both their own morale and immediate unit morale. Significance tests showed that each independent variable in this equation was a significant predictor of current morale at the $p < .01$ level with the exception of "Navy." The standardized estimates revealed that current unit cohesion was the strongest predictor of current morale.

The regression results for morale indicate the following (controlling for all other variables included in the regression equation):

- As with unit effectiveness, a Service member's assessment of current unit cohesion was a significant positive predictor of current morale.
- Morale was no different in the Navy than in the Army, higher on average in the Marine Corps, and lower on average in the Air Force and the Coast Guard.
- Gender, age, and minority status were significant predicators of morale. Female Service members rated morale lower than male Service members did, but rising age and minority status were both associated with higher morale.
- Reserve members rated morale more highly on average than Active Duty members did.
- Those who believe they are currently serving with a Service member believed to be gay or lesbian rated morale lower than those not currently serving with a Service member they believe to be gay or lesbian.
- Having good NCOs/POs and having good officers were both positive, significant predicators of morale, although having good officers was the stronger predictor.

Table V6

Regression Results for Service Members' Assessments of Current Morale

Variable	Unstandardized Estimate (Coefficient)	Standard Error	Standardized Estimate
Intercept	-0.6450**	0.0150	0.0000
Navy	-0.0048	0.0079	-0.0019
Marine Corps	0.0328**	0.0087	0.0121
Air Force	-0.0468**	0.0067	-0.0233
Coast Guard	-0.0721**	0.0118	-0.0182
Female	-0.0799**	0.0071	-0.0316
Age group	0.0367**	0.0020	0.0524
Minority	0.1324**	0.0059	0.0616
Reserve Component	0.1542**	0.0055	0.0813
Currently serving with	-0.0170**	0.0057	-0.0083
Good NCOs	0.0286**	0.0038	0.0274
Good Officers	0.1218**	0.0033	0.1273
Current unit cohesion	0.0686**	0.0006	0.4126
R-Square	0.2849		
Adj. R-Square	0.2848		
No. observations	96,413		

*p < .05 **p < .01

Readiness. The current readiness regression results are shown in Table V6. The independent variables included in this regression equation accounted for 25% of the variance in how Service members rated both their personal and unit readiness. Significance tests showed that each independent variable in this equation was a significant predictor of current readiness at the $p < .01$ level. The standardized estimates revealed that, as with unit effectiveness and morale, current unit cohesion was the strongest predictor of the dependent variable.

The regression results for morale indicate the following (controlling for all other variables included in the regression equation):

- Readiness was rated higher by members of the Navy, Marine Corps, Air Force, and Coast Guard than by members of the Army. Air Force members had the highest ratings for current readiness.
- Gender, age, and minority status were significant predictors of a Service member's assessment of unit and personal readiness. Female Service members rated readiness lower than male service members did, but readiness was rated higher with rising age and with minority status.

- Reserves rated readiness lower than Active Duty Service members did.
- Those who currently serve with a Service member they believe to be gay or lesbian rated readiness higher than did those not currently serving with a Service member believed to be gay or lesbian.
- Having good NCOs/POs and good officers were significant and positive predictors of current readiness.

Table V6

Regression Results for Service Members' Assessments of Immediate Unit Readiness

Variable	Unstandardized Estimate (Coefficient)	Standard Error	Standardized Estimate
Intercept	0.5372**	0.0212	0.0000
Navy	0.1092**	0.0112	0.0324
Marine Corps	0.1738**	0.0123	0.0467
Air Force	0.2471**	0.0095	0.0892
Coast Guard	0.0679**	0.0168	0.0124
Female	-0.0496**	0.0100	-0.0142
Age group	0.0515**	0.0028	0.0534
Minority	0.0468**	0.0084	0.0158
Reserve Component	-0.1783**	0.0077	-0.0681
Currently serving with	0.0830**	0.0081	0.0296
Good NCOs	0.0597**	0.0053	0.0413
Good Officers	0.0885**	0.0047	0.0670
Current unit cohesion	0.0960**	0.0008	0.4182
R-Square	0.2471		
Adj. R-Square	0.2470		
No. observations	96,274		

*p < .05 **p < .01

Factors Influencing Service Members' Perceptions About the Impact of a Repeal of DADT

Regression analysis of Service members' views concerning the impact of a repeal of DADT was conducted for six issues: unit cohesion, combat unit effectiveness, non-combat unit effectiveness, morale, readiness, and retention. The first five of these issues were analyzed using multiple linear regression equations similar to the ones discussed earlier for the regression analysis of how Service members' rated their current units. Dependent variables were generally also constructed in the same manner as described earlier, combining item responses from the relevant survey questions and summing coded responses across items. However, in this analysis, the morale dependent variable represented personal morale only, because the survey did not include a question about the impact of the repeal of DADT on unit morale.

For the analysis of how repeal may affect Service members' career plans (i.e., retention), a logistic regression equation was used. The dependent variable for this analysis was constructed by coding retention responses as either 1 or 0. Responses were coded as 0 if the Service member said "my military career plans will not change," "I will stay longer than I had planned," or "I will think of staying longer than I had planned." Responses were coded as 1 if the Service member said "I will leave sooner than I had planned" or "I will think about leaving sooner than I had planned."

The regression equations used the following independent variables:

- A set of 4 dummy variables for Service, with Army as the reference category;
- A dummy variable for gender, with female = 1;
- Age group as indicated in the survey, which included seven age categories that were coded as 1 (for the youngest group) to 7 (for the oldest group);
- A dummy variable for minority/non-minority status, with minority = 1;
- A dummy variable for Component, with Reserve Component = 1;
- A dummy variable for whether or not a Service member is "currently serving with someone they believe to gay or lesbian, with yes (i.e., "currently serving with") = 1;
- Whether a unit has good NCO/PO leaders, with response categories coded as 1 (none) to 5 (all);
- Whether a unit has good officers over it, with response categories coded as 1 (none) to 5 (all).

- Service members' assessments of their immediate units in terms of current unit cohesion, current non-combat effectiveness, current combat effectiveness (Q8 and Q17), current morale, and current readiness.
- A set of 3 dummy variables constructed using survey questions that asked Service members to rate the task cohesion of a unit in which a leader, coworker or subordinate was believed to be gay or lesbian (Q39a, Q47a, and Q55a). Task cohesion was rated on a 1 (*Very poor*) to 5 (*Very good*) scale. An average response < 3 was coded as low, an average response ≥ 3 but < 4 was coded as medium, and an average response ≥ 4 was coded as high. The reference category was Service members who have never served in a unit with someone they believed to be gay or lesbian. (Using this group as the reference category allowed us to include past experience in the regression equation while keeping those who have never served with someone they believed to be gay or lesbian in the analysis.)
- A set of 3 dummy variables constructed using survey questions that asked Service members to rate the morale of a unit in which a leader, coworker or subordinate was believed to be gay or lesbian (Q39b, Q47b, and Q55b). Morale was rated on a 1 (*Very poor*) to 5 (*Very good*) scale. An average response < 3 was coded as low, an average response ≥ 3 but < 4 was coded as medium, and an average response ≥ 4 was coded as high. The reference category was Service members who have never served in a unit with someone they believed to be gay or lesbian.
- A set of 3 dummy variables constructed using survey questions that asked Service members to rate the performance of a unit in which a leader, coworker or subordinate was believed to be gay or lesbian (Q39c, Q47c, and Q55c). Performance was rated on a 1 (*Very poor*) to 5 (*Very good*) scale. An average response < 3 was coded as low, an average response ≥ 3 but < 4 was coded as medium, and an average response ≥ 4 was coded as high. The reference category was Service members who have never served in a unit with someone they believed to be gay or lesbian.
- [For retention] A set of 3 dummy variables that described Service members' current military career intentions (Q32), with definitely/probably stay until retirement as the reference category.
- [For retention] A set of 3 dummy variables that indicated how important repeal of DADT will be to Service members' decisions on whether to remain in the military compared with other factors Service members consider when making career decisions. In the survey, Service members were asked to identify three factors that were important to them when

deciding whether to remain in the military (Q33) and then were asked to compare the importance of each factor with repeal (Q82). The responses to this question were used to form four groups of Service members: (1) those who said all of their selected factors were more important than repeal, (2) those who said all of their selected factors were equally as important as repeal, (3) those who said all of their selected factors were less important than repeal, and (4) those who had mixed responses (some factors were more important than repeal, some less). The last group was the reference category.

- [For retention] Military years of service. Military years of service (obtained from the frame data set) was the total number of years a Service member has spent in both the Active Duty military and in the Reserves/Guard.

Regression Results

Tables V7–V12 present the regression results for the six equations examining Service member perceptions regarding the impact of a repeal of DADT. Like the earlier tables, these tables present the regression coefficient (unstandardized estimate), the standard error, and the standardized regression coefficient (standardized estimate or beta weights). The R-square and adjusted R-square values and the number of observations are presented at the bottom of each table.

Unit Cohesion. The "post-repeal" unit cohesion results are presented in Table V7. The independent variables included in this regression equation accounted for 21% of the variance in Service members' perceptions about how a repeal of DADT would affect unit cohesion. Significance tests showed that each independent variable in this equation was a significant predictor of current unit cohesion at the $p < .01$ level, with the exception of Reserve Component. (That is, the Reserve and Active Duty Service members did not differ in their perceptions of how repeal would affect unit cohesion.) The standardized estimates revealed that Service members based their perceptions of the impact of DADT repeal on their past experience working with others they believed to be gay and lesbian. The three dummy variables representing Service members' ratings of task cohesion in units in which a member was believed to be gay or lesbian were the strongest predictors of perceptions about the impact of repeal.

Table V7

Regression Results for Service Members' Perceptions About the Impact of DADT Repeal on Unit Cohesion

Variable	Unstandardized Estimate (Coefficient)	Standard Error	Standardized Estimate
Intercept	-4.0250**	0.1208	0.0000
Navy	0.8886**	0.0600	0.0506
Marine Corps	-1.7797**	0.0660	-0.0917
Air Force	0.2244**	0.0511	0.0155
Coast Guard	1.0760**	0.0898	0.0378
Female	1.7652**	0.0541	0.0969
Age group	-0.2755**	0.0153	-0.0547
Minority	1.9081**	0.0452	0.1233
Reserve Component	-0.0012	0.0417	-0.0001
Currently serving with	1.0823**	0.0457	0.0739
Good NCOs	0.1125**	0.0287	0.0149
Good Officers	0.3116**	0.0255	0.0453
Current unit cohesion	0.0699**	0.0044	0.0584
High past unit cohesion	1.9067**	0.0514	0.1383
Medium past unit cohesion	-2.5610**	0.0705	-0.1264
Low past unit cohesion	-7.2846**	0.0930	-0.2509
R-Square	0.2132		
Adj. R-Square	0.2130		
No. observations	95,060		

*p < .05 **p < .01

The regression results for post-repeal unit cohesion indicate the following (controlling for all other variables included in the regression equation):

- Service members in the Navy, Air Force, and Coast Guard had, on average, more positive perceptions about the impact of DADT repeal on unit cohesion than Service members in the Army did, but Marine Corps Service members' perceptions, on average, were more negative.
- Being female and being a minority were associated with more positive assessments of the impact of DADT repeal on unit cohesion, while rising age was associated with more negative assessments.
- Reserve Component was not significant. Active Duty and Reserve Service members did not differ in their perceptions about how a repeal of DADT would impact unit cohesion.
- Currently serving with a Service member believed to be gay or lesbian was a significant and positive predictor of Service members' perceptions about how repeal would affect unit cohesion. Those currently serving with a Service member they believe to be gay or lesbian

were more likely to be positive about repeal's impact on unit cohesion than those who were not.

- Having good NCOs/POs and having good officers over a unit were both positively associated with Service members' views about the impact of repeal on unit cohesion.
- Current unit cohesion also was a significant and positive predictor of Service members' perceptions. Service members in immediate units that they rated highly in terms of unit cohesion had more positive views regarding the effects of a DADT repeal.
- The dummy variables representing the assessments Service members made of units in which they served with someone they believed to be gay or lesbian were also significant. Service members who rated these past units as having poor unit cohesion were more likely to report that the impact of repeal would be negative. "Low past unit cohesion" was the strongest predictor of Service members' views on the impact of repeal and had a substantially larger coefficient ($\beta = -7.2846$) than any of the other independent variables. Those who rated their past units as having good unit cohesion were more likely to perceive that the impact of repeal would be positive, but this influence was not as strong.

Unit Effectiveness. The "post-repeal" unit effectiveness results are presented in Table V8 (non-combat) and Table V9 (combat). The independent variables included in these regression equations accounted for 18% of the variance in Service members' perceptions about how a repeal of DADT would affect non-combat unit effectiveness and 22% of the variance in Service members' perceptions about repeal's effect on combat unit effectiveness. Significance tests showed that for non-combat unit effectiveness, all independent variables were significant at the $p < .01$ level with the following exceptions: current non-combat deployed unit effectiveness and the medium and high ratings Service members gave to past units in which they served with a Service member they believed to be gay or lesbian. Those variables were not significant. For the impact of repeal on combat effectiveness, Reserve Component and current unit cohesion were the only nonsignificant variables; all others were significant at the $p < .01$ level. The extent to which Service members' ratings of past units in which they served with someone they believed was gay or lesbian influenced their views on the impact of repeal was less clear with regard to unit effectiveness than it was with unit cohesion. The standardized estimate for "low past non-combat deployed unit effectiveness" was the strongest predictor of Service members' assessments about the impact of repeal, but variables representing medium and high ratings for past units were not significant. For combat effectiveness, low past unit cohesion was the strongest predictor of Service members' assessments on how repeal would impact combat effectiveness.

Table V8

Regression Results for Service Members' Perceptions About the Impact of DADT Repeal on Unit (Non-Combat) Effectiveness

Variable	Unstandardized Estimate (Coefficient)	Standard Error	Standardized Estimate
Intercept	-0.5587**	0.0470	0.0000
Navy	0.1044**	0.0244	0.0245
Marine Corps	-0.4708**	0.0305	-0.0838
Air Force	-0.0619**	0.0209	-0.0181
Coast Guard	0.0904**	0.0291	0.0176
Female	0.3723**	0.0183	0.0961
Age group	-0.0800**	0.0055	-0.0707
Minority	0.4138**	0.0172	0.1118
Reserve Component	-0.0582**	0.0170	-0.0174
Currently serving with	0.2235**	0.0179	0.0624
Good NCOs	0.0287**	0.0107	0.0164
Good Officers	0.0394**	0.0097	0.0239
Current non-combat deployed unit effectiveness	0.0099	0.0076	0.0080
HiEffectivenessNCDPast	-0.0118	0.2857	-0.0035
MedEffectivenessNCDPast	-0.4541	0.2873	-0.0862
LowEffectivenessNCDPast	-1.2080**	0.2917	-0.1373
High past unit cohesion	0.4089	0.2859	0.1220
Medium past unit cohesion	-0.2418	0.2873	-0.0462
Low past unit cohesion	-0.9605**	0.2910	-0.1211
Current unit cohesion	0.0135**	0.0020	0.0465
R-Square	0.1764		
Adj. R-Square	0.1760		
No. observations	39,543		

*p < .05 **p < .01

Table V9

Regression Results for Service Members' Perceptions About the Impact of DADT Repeal on Unit Combat Effectiveness

Variable	Unstandardized Estimate (Coefficient)	Standard Error	Standardized Estimate
Intercept	-1.9014**	0.0655	0.0000
Navy	0.3685**	0.0308	0.0528
Marine Corps	-0.6030**	0.0315	-0.0852
Air Force	0.1539**	0.0267	0.0260
Coast Guard	0.3851**	0.0761	0.0196
Female	0.6089**	0.0330	0.0715
Age group	-0.1118**	0.0087	-0.0512
Minority	0.7138**	0.0238	0.1144
Reserve Component	-0.0203	0.0215	-0.0037
Currently serving with	0.3325**	0.0241	0.0573
Good NCOs	0.0512**	0.0154	0.0164
Good Officers	0.1139**	0.0136	0.0409
Current combat deployed unit effectiveness	-0.1420**	0.0164	-0.0359
HiEffectivenessCDPast	0.6324**	0.0257	0.1059
MedEffectivenessCDPast	-0.3450**	0.0511	-0.0271
LowEffectivenessCDPast	-1.2939**	0.0923	-0.0560
High past unit cohesion	0.6868**	0.0292	0.1249
Medium past unit cohesion	-0.9987**	0.0376	-0.1287
Low past unit cohesion	-2.4419**	0.0491	-0.2261
Current unit cohesion	0.0015	0.0024	0.0030
R-Square	0.2162		
Adj. R-Square	0.2160		
No. observations	55,406		

*p < .05 **p < .01

The regression results for post-repeal unit effectiveness indicate the following (controlling for all other variables included in the regression equation):

- The Marine Corps and Air Force were more negative than the Army in their assessments about the impact of repeal on non-combat effectiveness, but only the Marine Corps had more negative views than the Army when considering the impact on combat effectiveness.
- Being female and being a minority were associated with more positive perceptions about the impact of DADT repeal on both combat and non-combat unit effectiveness, while rising age was associated with more negative assessments of the impact on effectiveness.
- Reserve Component was negative and significant for non-combat effectiveness but was not significant for combat effectiveness.

- Currently serving with a Service member believed to be gay or lesbian was a significant and positive predictor of Service members' assessments about the impact of repeal on unit effectiveness in both equations. Those currently serving with a Service member they believe to be gay or lesbian were more likely to have positive views about repeal's impact on unit effectiveness than those who were not.
- Having good NCOs/POs and having good officers over a unit were both positively associated with Service members' perceptions about the impact of repeal on unit effectiveness.
- Current non-combat effectiveness was not a predictor of Service members' perceptions about the impact of repeal on non-combat unit effectiveness. Current combat unit effectiveness was a significant, but negative, predictor of Service members' views about the impact of repeal on combat effectiveness.
- The dummy variables representing the assessments Service members made of unit effectiveness in units in which they served with someone they believed to be gay or lesbian were all significant in the combat-deployed equation, but only low ratings were significant in the non-combat deployed equation.
- Service members' assessments of current unit cohesion was a significant predictor of the impact of repeal on non-combat effectiveness, but was not a significant predictor of views on combat effectiveness. Service members' ratings of unit cohesion in past units in which they served with someone they believed to be gay or lesbian were significant predictors of the post-repeal impact on non-combat unit effectiveness only when the Service member rated the past unit cohesion as low. For combat unit effectiveness, all three dummy variables representing how Service members' rated unit cohesion in past units were significant. Those who rated unit cohesion in these past units as high were more likely than those who had never served with a gay or lesbian Service member to have positive views about the impact of repeal on combat effectiveness, whereas those who rated unit cohesion in these past units as medium or low were less likely to have positive views about the impact of repeal on combat effectiveness.

Morale. The "post-repeal" morale results are presented in Table V10. The independent variables included in this regression equation accounted for 22% of the variance in Service members' views about how a repeal of DADT would affect personal morale. Significance tests showed that almost all independent variables were significant at the $p < .01$ level with the exception of the following: medium and high ratings of morale that Service members gave to past units in which they served with a Service member they believed to be gay or lesbian, medium and high (significant, but only at the $p < .05$ level) ratings of unit cohesion in past units, and current unit morale (also significant, but

only a the $p < .05$ level). The strongest predictors of Service members' views on the impact of repeal on morale were low ratings of morale and unit cohesion in past units in which the Service member served with someone they believed was gay or lesbian.

Table V10

Regression Results for Service Members' Perceptions About the Impact of DADT Repeal on Service Members' Own Morale

Variable	Unstandardized Estimate (Coefficient)	Standard Error	Standardized Estimate
Intercept	-0.5052**	0.0151	0.0000
Navy	0.0941**	0.0074	0.0452
Marine Corps	-0.1618**	0.0081	-0.0702
Air Force	0.0376**	0.0063	0.0220
Coast Guard	0.1233**	0.0112	0.0359
Female	0.2487**	0.0067	0.1159
Age group	-0.0387**	0.0019	-0.0649
Minority	0.1347**	0.0056	0.0731
Reserve Component	-0.0233**	0.0052	-0.0144
Currently serving with	0.1184**	0.0056	0.0687
Good NCOs	0.0104**	0.0035	0.0116
Good Officers	0.0209**	0.0032	0.0256
Current morale	-0.0064*	0.0030	-0.0075
HiMoralePast	0.1034	0.1052	0.0639
MedMoralePast	-0.1475	0.1054	-0.0662
LowMoralePast	-0.4099**	0.1057	-0.1430
High past unit cohesion	0.2091*	0.1052	0.1277
Medium past unit cohesion	-0.1255	0.1055	-0.0517
Low past unit cohesion	-0.4831**	0.1061	-0.1436
Current unit cohesion	-0.0070**	0.0006	-0.0493
R-Square	0.2221		
Adj. R-Square	0.2220		
No. observations	86,777		

*p < .05 **p < .01

The regression results for post-repeal morale indicated the following (controlling for all other variables included in the regression equation):

- The Navy, Air Force, and Coast Guard were more positive about repeal's impact on morale than the Army. The Marine Corps was more negative about repeal's impact on morale than the Army.

- Female and minority Service members were more positive about repeal's impact on morale than male and non-minority Service members were. Perceptions about the impact on morale were more negative as age increased.
- The Reserves had more negative perceptions about the impact of repeal on morale than Active Duty Service members.
- Having good NCOs/POs and having good officers over a unit were both positively associated with Service members' perceptions about the impact of repeal on personal morale.
- Those who currently serve with someone they believe to be gay or lesbian viewed the impact of repeal on morale more positively than those not currently serving with someone they believe to be gay or lesbian.
- Current unit morale and current unit cohesion were small, negative predictors of Service members' views regarding the impact of repeal on morale.
- Service members' ratings of morale and unit cohesion in past units in which they served with someone they believed to be gay or lesbian were significant predictors of the post-repeal impact on morale only when the Service member rated the past morale and past unit cohesion as low and when past unit cohesion was rated as high.

Readiness. The "post-repeal" readiness results are presented in Table V11. The independent variables included in this regression equation accounted for 20% of the variance in Service member views about how a repeal of DADT would affect readiness. Significance tests showed that almost all independent variables were significant at the $p < .01$ level with the exception of Reserve Component, which was not significant, and current readiness, which was significant at the $p < .05$ level. The strongest predictors of Service members' perceptions about the impact of repeal on readiness were low ratings of unit cohesion in past units in which Service members served with someone they believed was gay or lesbian, followed by high ratings of unit cohesion in past units in which Service members served with someone they believed to be gay or lesbian.

The regression results for post-repeal readiness indicate the following (controlling for all other variables included in the regression equation):

- Service was significant. The Navy, Air Force, and Coast Guard were more positive about repeal's impact on readiness than the Army. The Marine Corps was more negative about repeal's impact on readiness than the Army.
- Female and minority Service members had more positive views about repeal's impact on readiness than male and non-minority members. Views on the impact on readiness were more negative as age increased.
- Reserve Component was not significant.

- Those who currently serve with someone they believe to be gay or lesbian perceived the impact of repeal on readiness more positively than those not currently serving with someone they believe to be gay or lesbian.
- Current unit readiness was a significant and positive predictor and current unit cohesion was a significant and negative predictor of Service members' views regarding the impact of repeal on readiness.
- Service members' ratings of unit cohesion in past units in which they served with someone they believed to be gay or lesbian were significant predictors of the post-repeal impact on readiness. Service members who rated cohesion in these past units highly were more likely to view repeal's impact on readiness positively than those who never served in a unit with someone they believed to gay or lesbian, but when they rated cohesion in these units as medium or low they were more likely to view repeal's impact on readiness negatively.

Table V11

Regression Results for Service Members' Perceptions About the Impact of DADT Repeal on Readiness

Variable	Unstandardized Estimate (Coefficient)	Standard Error	Standardized Estimate
Intercept	-2.4076**	0.0683	0.0000
Navy	0.4926**	0.0338	0.0503
Marine Corps	-0.9496**	0.0373	-0.0877
Air Force	0.2218**	0.0289	0.0275
Coast Guard	0.7082**	0.0507	0.0446
Female	1.0091**	0.0305	0.0994
Age group	-0.1586**	0.0086	-0.0565
Minority	0.8927**	0.0255	0.1034
Reserve Component	0.0149	0.0236	0.0020
Currently serving with	0.4725**	0.0258	0.0579
Good NCOs	0.0422**	0.0162	0.0100
Good Officers	0.1558**	0.0144	0.0406
Current readiness	0.0227*	0.0098	0.0078
High past unit cohesion	1.1297**	0.0290	0.1469
Medium past unit cohesion	-1.0800**	0.0398	-0.0956
Low past unit cohesion	-4.2187**	0.0524	-0.2607
Current unit cohesion	-0.0107**	0.0027	-0.0160
R-Square	0.1969		
Adj. R-Square	0.1968		
No. observations	94,880		

*p < .05 **p < .01

Retention. Retention was analyzed with a logistic regression model of the following form:

$$\ln(p/1\text{-}p) = \beta_o + \Sigma\beta_j X_{ij} + e_i$$

where

ln = the natural logarithm

p = the probability that Y (the dependent variable) = 1

1-p = the probability that Y = 0

X_{ij} = the jth individual characteristic for person i

β_j = the regression coefficient for the jth individual characteristic

β_o = the intercept term

e_i = the random error term

The dependent variable for this analysis was coded as 0 if the Service member said [in response to Q81] "my military career plans will not change," "I will stay longer than I had planned," or "I will think of staying longer than I had planned." The dependent variable was coded as 1 if the Service member said "I will leave sooner than I had planned" or "I will think about leaving sooner than I had planned." The probability of Y = 1 (i.e., the percentage of Service members who responded to Q81 by saying "I will think about leaving sooner than I had planned" or "I will leave sooner than I had planned) was .246.

Table V12 presents the results of the retention analysis. The logistic regression model included both dichotomous and continuous independent variables and had a max-rescaled R-square of 0.3174 (i.e., the model accounted for 32% of the variance in how repeal will affect the military career plans of Service members.) Almost all independent variables were significant at the $p < .01$ level with the exception of Reserve Component, having current intentions of leaving upon completion of their present obligation, and years of service. Those three variables were not significant.

Table V12

Regression Results for Service Members' Perceptions About How Repeal Will Affect Military Career Plans

Variable	Unstandardized Estimate (Coefficient)	Standard Error	Odds Ratio
Intercept	0.0201	0.0364	--
Navy	-0.4926**	0.0273	0.6111
Marine Corps	0.3551**	0.0267	1.4264
Air Force	-0.3404**	0.0224	0.7115
Coast Guard	-0.6661**	0.0421	0.5137
Female	-1.0857**	0.0299	0.3377
Age group	-0.0536**	0.0130	0.9478
Minority	-0.4259**	0.0210	0.6532
Reserve Component	-0.0050	0.0183	0.9950
Served with in the past	0.2554**	0.0209	1.2910
Never served with	0.3086**	0.0243	1.3615
StayBeyondObl	0.3808**	0.0301	1.4635
LeaveAfterObl	0.0469	0.0291	1.0480
MetRetireElig	0.2620**	0.0302	1.2995
AllMoreImp	-1.9762**	0.0205	0.1386
AllEqualImp	-0.9861**	0.0248	0.3730
AllLessImp	1.1961**	0.0308	3.3072
YOS	0.0004	0.0021	1.0004
Max-rescaled R-Square	0.3174		
No. observations	96,819		

*p < .05 **p < .01

The regression results for retention post repeal—that is, if DADT is repealed—indicate the following (controlling for all other variables included in the regression equation):

- The odds ratios for the Navy, Air Force, and Coast Guard Service members were less than one, indicating they were less likely to be considering leaving post repeal than Army Service members were. The odds that a Marine Corps Service member was considering leaving post repeal were 43% higher than the odds that an Army Service member was considering leaving post repeal.
- The odds that a female was considering leaving the military post repeal were only 34% of the odds that a man was considering leaving; the odds that a minority Service member was considering leaving post repeal were 65% of the odds that a non-minority Service member was considering leaving post repeal.
- Age group entered the model as a non-dummy variable; it was coded from 1 to 7 and treated as a continuous variable. The odds ratio value of .9478 tells us that each one-unit increase

in age group was associated with a 5.2% increase in the predicted odds of reporting that you were considering leaving sooner.

- Service members who have served in the past with a Service member they believed to be gay or lesbian and those who have never served with a Service member believed to be gay or lesbian had greater odds of considering leaving the military post repeal (29% and 36%, respectively), compared with those currently serving with someone they believe to be gay or lesbian.
- Both the Service members who said their current military career intentions are to definitely or probably stay in beyond my present obligation, but not necessarily until retirement and those who said they have met retirement eligibility but continue to serve had greater odds of reporting that they will leave sooner or will consider leaving sooner (46% and 30%, respectively), compared with Service members who said they will definitely or probably stay until retirement.
- Those Service members who said that all the factors they consider most important when deciding whether to remain in the military are more important to them than repeal had odds of saying they were considering leaving that were just .14 times those of Service members who gave a mixed response to Q82 (i.e., they reported that some factors are more important than repeal and some are less important).
- Those Service members who said that all the factors they consider most important when deciding whether to remain in the military are less important to them than repeal had odds of saying they were considering leaving that were 3.31 times those of Service members who gave a mixed response to Q82 (i.e., they reported that some factors are more important than repeal and some are less important).