

# Online Appendix for “The Effects of Combat Deployments on Veterans’ Outcomes”

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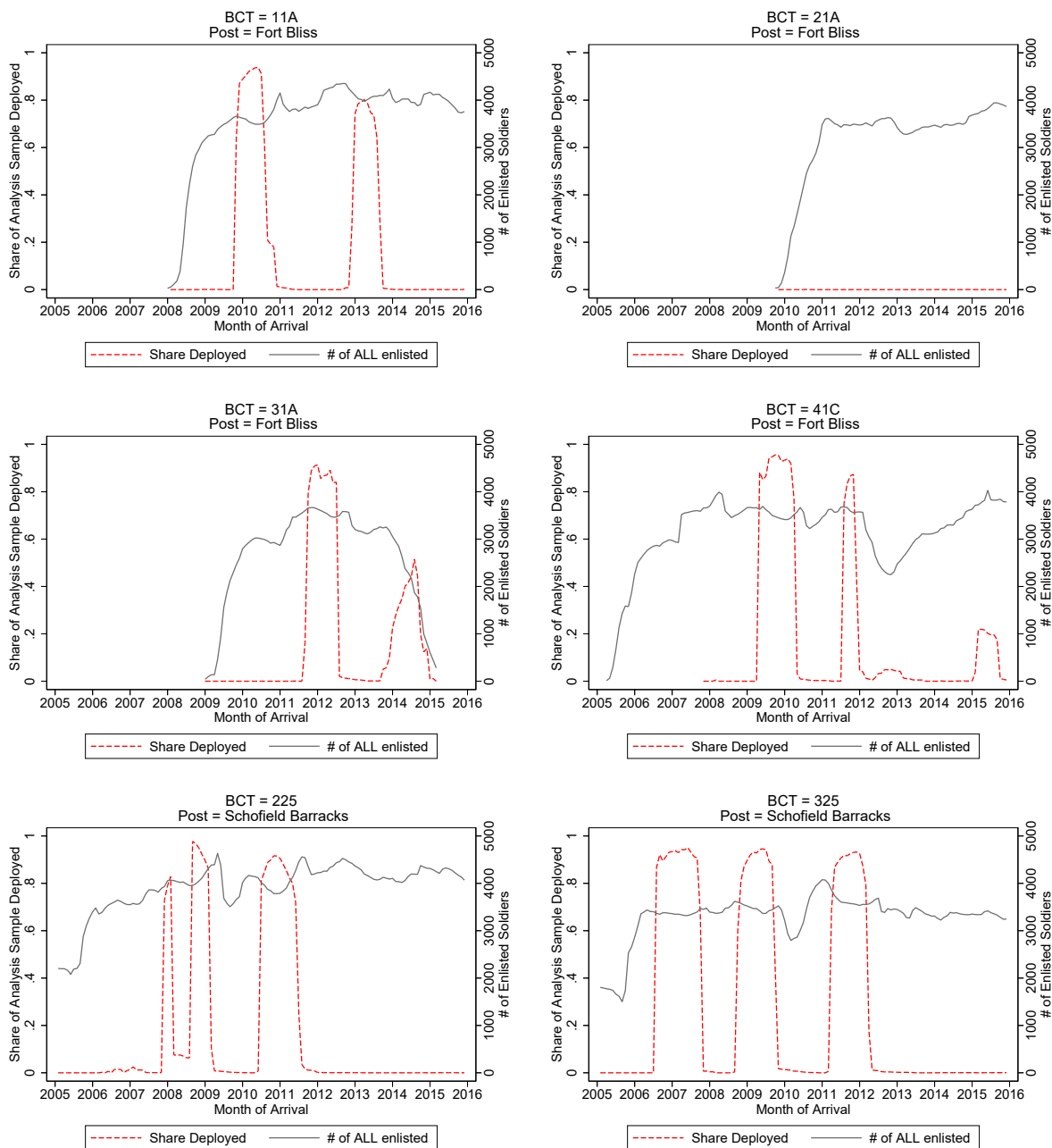
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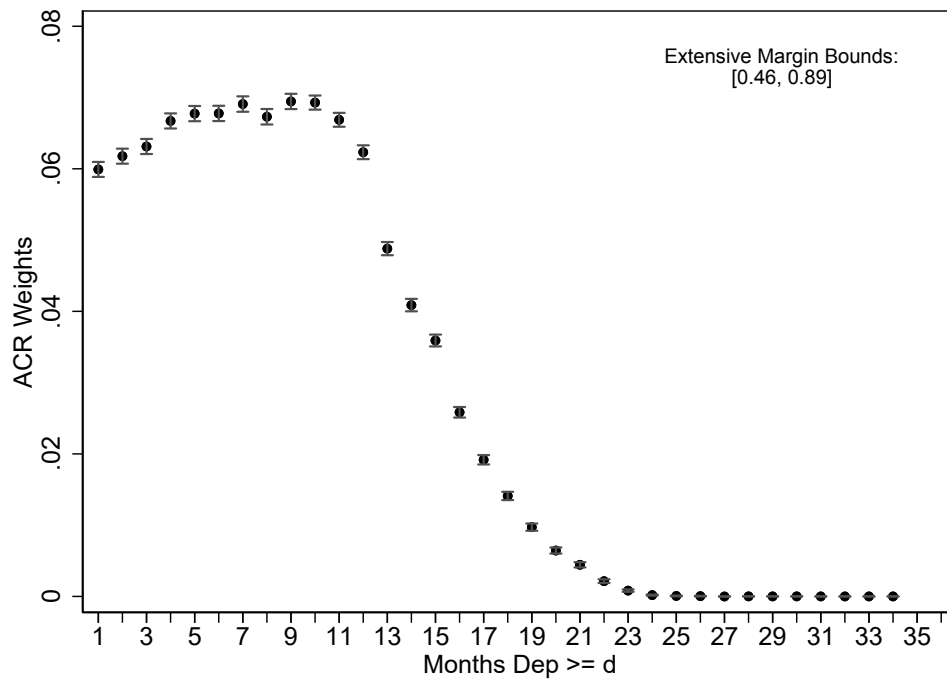
## A Additional Results

**Figure A.1: Share of BCT deployed by month (select BCTs)**



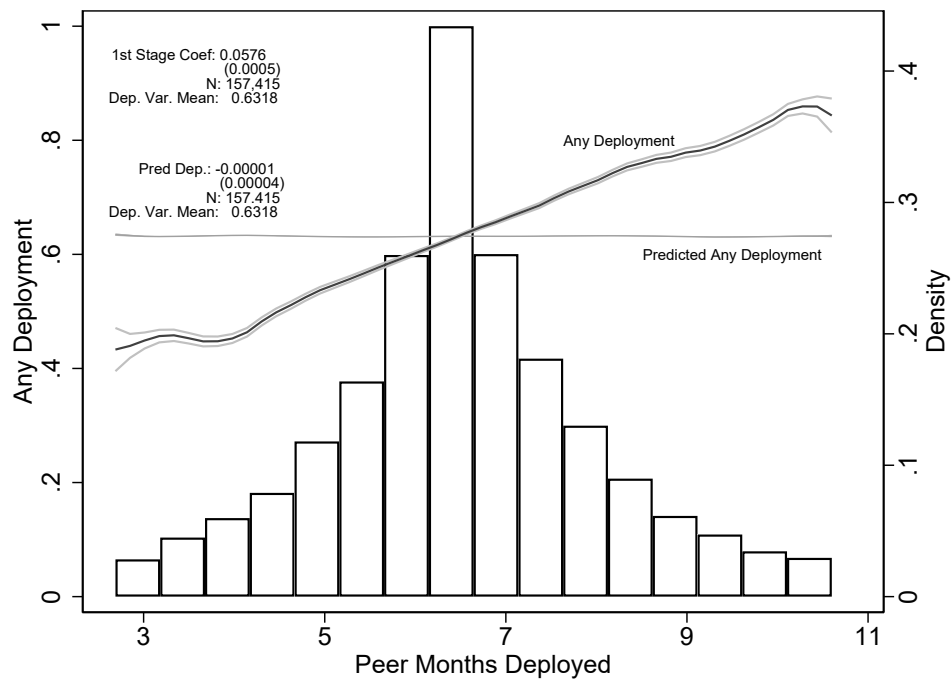
*Notes:* The figures above report the share of all enlisted personnel within each brigade combat team who are deployed to a combat zone by month (left axis) and the total number of enlisted personnel assigned to the BCT by month (right axis). The figures report on the six BCTs that were headquartered in Fort Bliss, Texas or Schofield Barracks, Hawaii during the period of our study (2005-2015).

**Figure A.2:** ACR weights and bounds on extensive margin complier share



*Notes:* This figure reports the  $\omega_d$  weights in the “Average Causal Response” (ACR) identified using 2SLS (see Equation (4)). Each point is an estimate of the change in deployment length induced by the instrument ( $\Pr(D_i(1) \geq d > D_i(0))$ ), which corresponds to the normalized weights in the ACR. These changes reflect the likelihood that a soldier will be deployed for less than  $d$  months if assigned to a BCT with a low value of  $Z_i$  and that would be deployed for  $d$  months or more if assigned to a BCT with a high value of  $Z_i$ . The probabilities  $\Pr(D_i(1) \geq d > D_i(0))$  can be estimated using our reduced-form specification and changing the outcome to an indicator for deploying for  $d$  or more months (i.e.,  $1(D_i \geq d)$ ). The text in the upper-right corner reports bounds on the share of compliers shifted from no deployment to some (i.e., on the extensive margin) estimated using the procedure described in Appendix E of [Garin et al. \(2023\)](#).

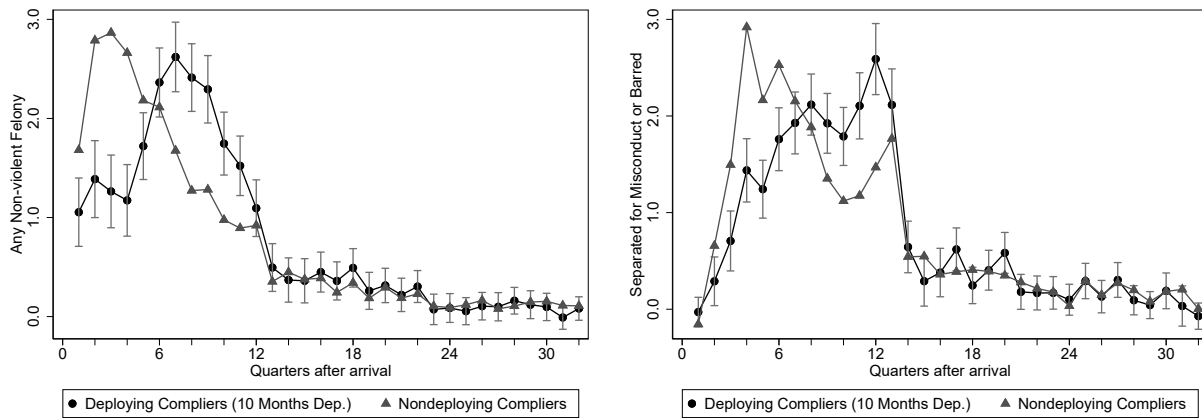
**Figure A.3:** Effects of peer months deployed on any deployment



*Notes:* This figure repeats the exercise in Figure 2, replacing the outcome with any deployment within the first three years after arrival. It shows that our instrument also generates variation in the extensive margin of deployment. See notes to Figure 2 for additional details.

**Figure A.4: Dynamic effects of deployment on misconduct and crime**

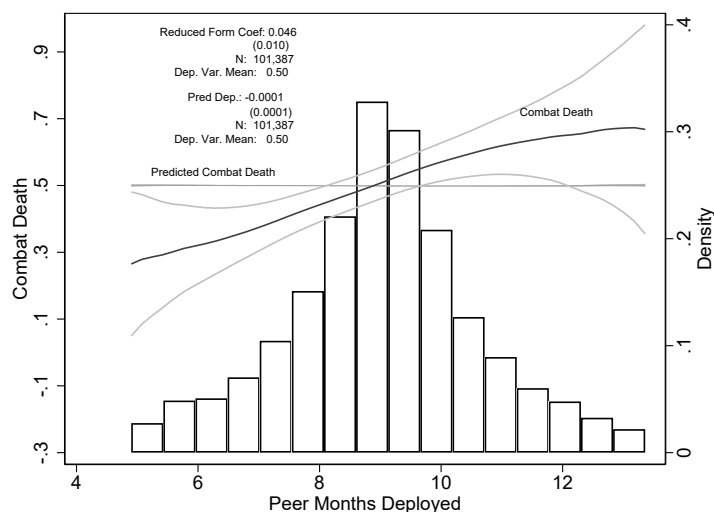
(a) Any Non-Violent Felony *in* given quarter (b) Separated for Misconduct *in* given quarter



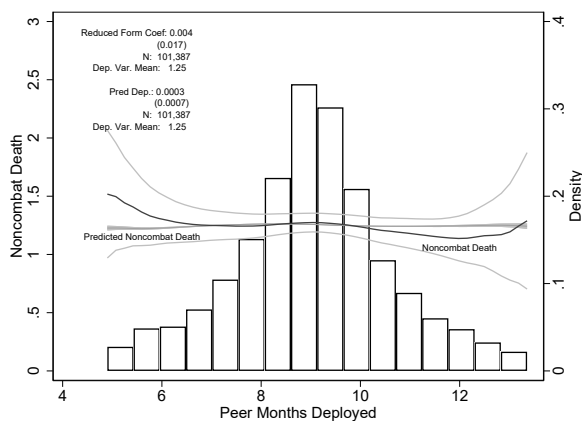
*Notes:* This figure plots expected means among nondeployers (untreated compliers) using triangles and the predicted outcome for deployers (constructed as the untreated complier mean plus the estimated treatment effect of a 10 month deployment) using circles for the outcome in the stated quarter after arrival. Panel (a) plots non-violent felony cases from military records in percentage points, and panel (b) plots separations for misconduct or separations while barred from re-enlistment for misconduct in percentage points. 95% confidence intervals on the estimated treatment effect are depicted by the vertical bars.

**Figure A.5: Reduced form effects of peer months deployed**

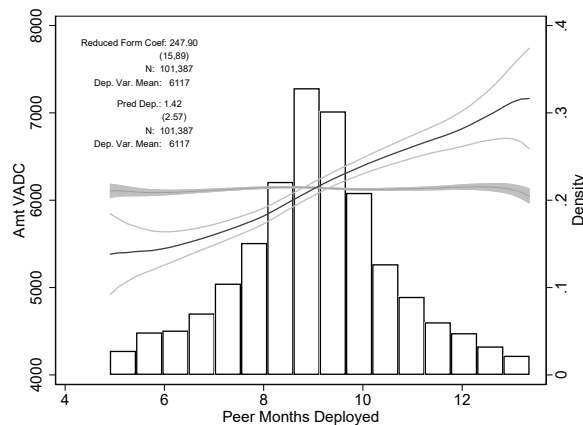
(a) Combat Death



(b) Noncombat Death

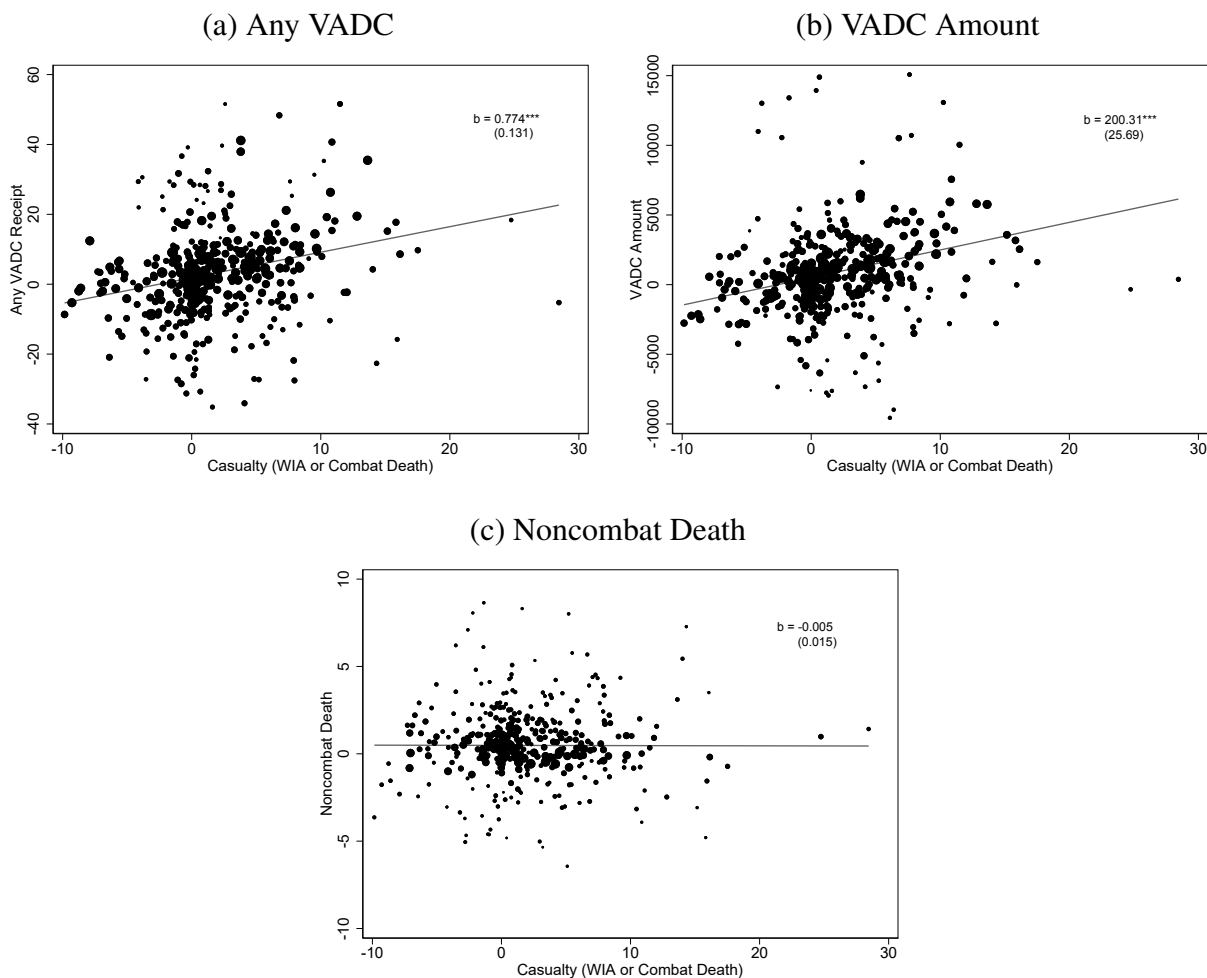


(c) VADC Amount



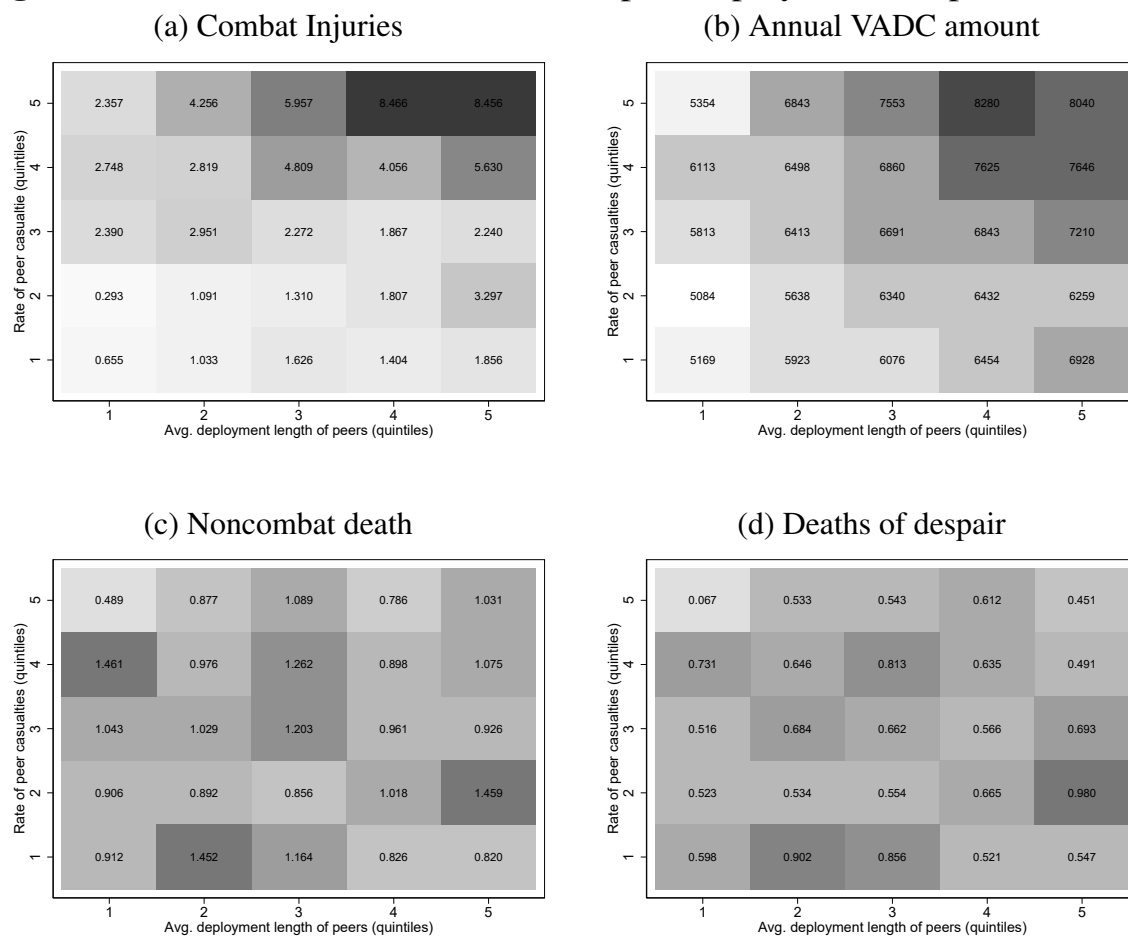
*Notes:* The figure repeats the exercise in Figure 2, replacing the outcome with combat death within 8 years of arrival in panel (a), noncombat death within 8 years of arrival in panel (b), and VADC amount 8 years after arrival in panel (c) for the 2005-2011 cohorts. Coefficients are not scaled by 10, and hence reflect the average effect of being assigned to a unit with one month higher peer deployment rates. See notes to Figure 2 for additional details.

**Figure A.6:** BCT-specific effects of deployment on casualties, VADC, and noncombat deaths



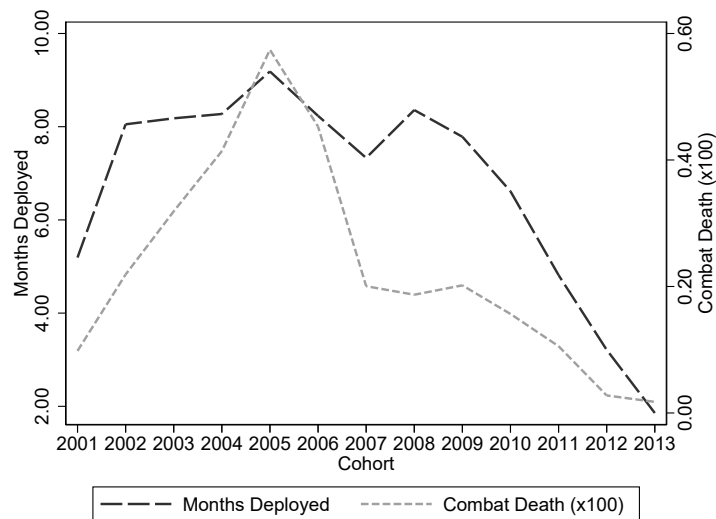
*Notes:* These figures plot the relationship between BCT $\times$ quarter-specific effects of a 10-month deployment on casualty rates and effects on other outcomes: any VADC in panel a), VADC amount in panel b), and noncombat death in panel c). All outcomes are measured as of 8 years after arrival. BCT $\times$ quarter refers to the combination of brigade assigned and quarter of enlistment. We construct these estimates by interacting months deployed with indicators for assigned BCT $\times$ quarter in our main specification, omitting the largest BCT $\times$ quarter (3rd Cavalry Regiment, Fort Hood in 2006Q3) as the reference group. The instrument is a set of dummies for BCT $\times$ quarter assignment, so that the full 2SLS system is just-identified. Each dot corresponds to the coefficient on the BCT $\times$ quarter interaction for two outcomes, with effects on casualties on the x-axis and other outcomes on the y-axis. The positive slope in panels a) and b) shows that for soldiers assigned to BCT $\times$ quarters where deployment led to higher casualty rates, deployment also caused increases in VADC. Panel c) shows that the same is not true of noncombat deaths. We show effects for BCT $\times$ quarter-of-arrival combinations with at least 100 observations, though results change little if we include all estimated effects. For display purposes, we also trim the bottom and top percentile of estimated y-axis outcome coefficients, but these are included in the regression results reported in the top right hand corner. Points are weighted by the inverse of the standard error on the estimated y-axis outcome coefficient.

**Figure A.7:** Joint reduced form effects of peer deployment and peer casualties



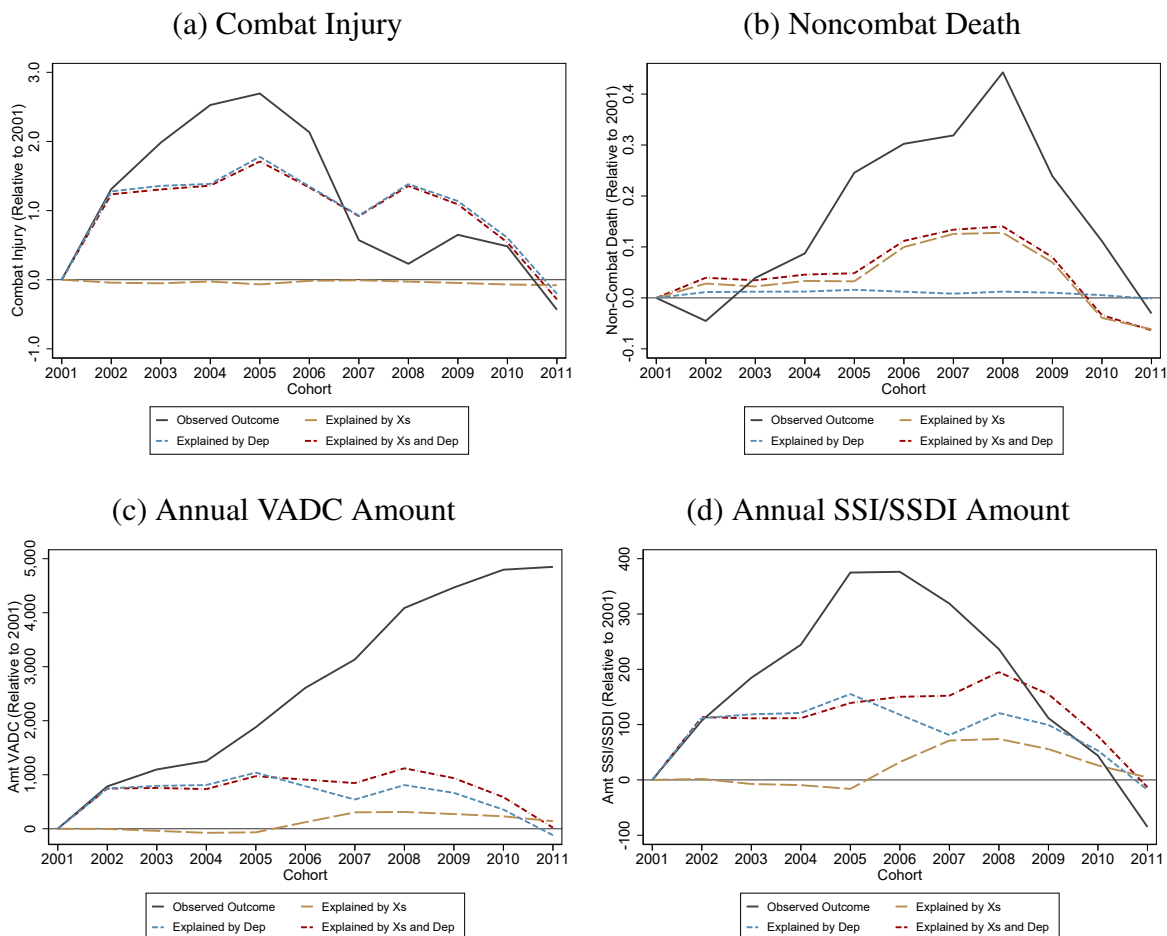
*Notes:* This figure non-parametrically examines the impact of exposure to different combinations of deployment and violence on combat injuries (panel (a)), annual VADC amount (panel (b)), noncombat death (panel (c)), and deaths of despair (panel (d)). We divide the average deployment among peers (our instrument for deployment) and peer casualties into quintiles, yielding 25 combinations of observations. We then estimate the reduced form effect of each cell relative to the lowest level of both peer deployment and peer casualties (i.e., cell 1 – 1). We display the results as heat plots, where the number within each cell is the sum of the reduced form effect for that cell and the mean of the omitted category (i.e. cell 1 – 1). Specifically, panel (a) shows that increases in either instrument increase the likelihood of injury. Similarly, panel (b) shows that higher levels of either instrument increase VADC amounts. However, panels (c) and (d) clearly shows no relationship between either instrument and noncombat death or death of despair more specifically. Moreover, none of the cells in panels (c) and (d) is statistically different than the omitted category of the lowest level of both instruments (cell 1 – 1).

**Figure A.8:** Deployment and combat death trends by cohort



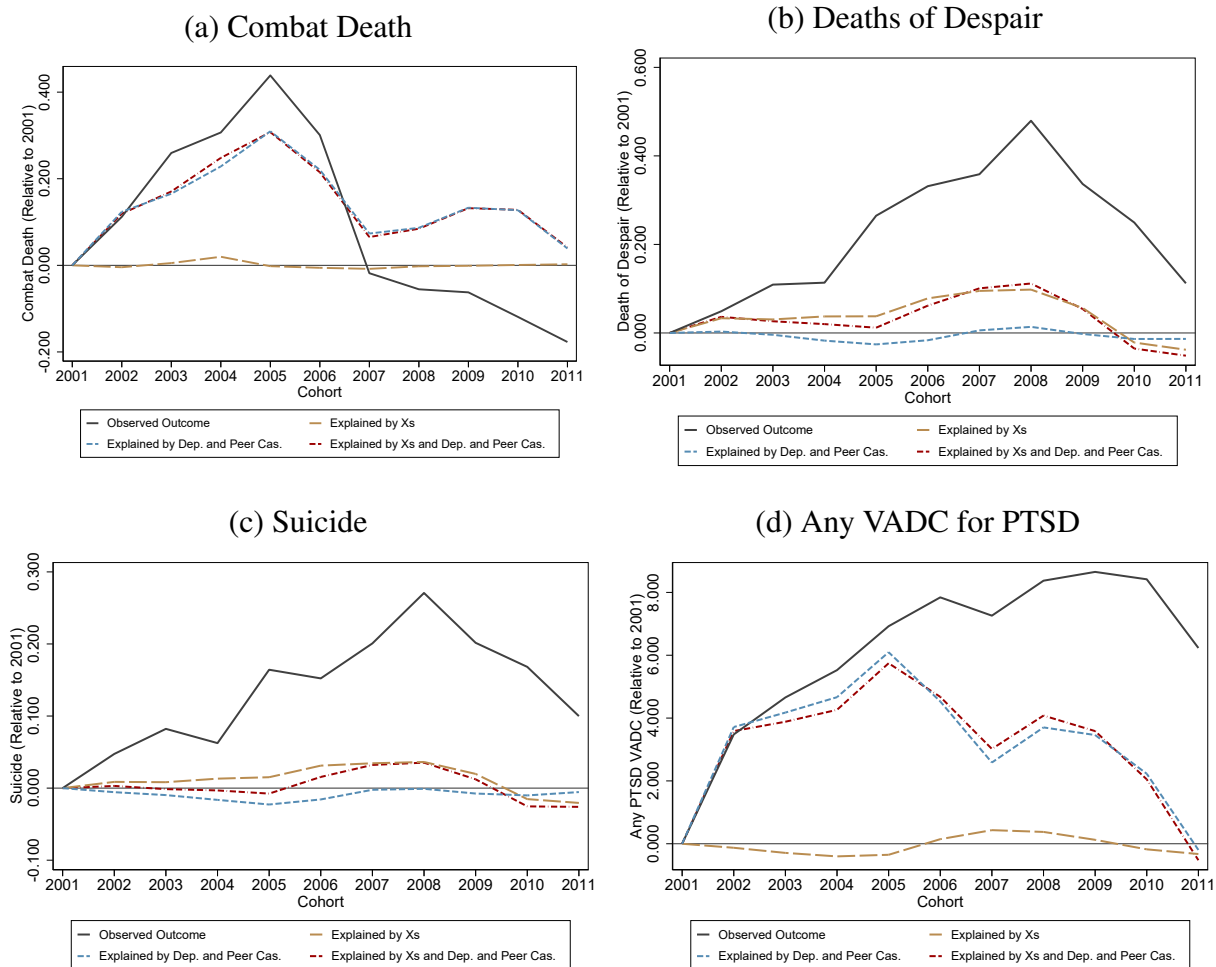
*Notes:* This figure plots average months deployed (within 3 years of arrival) on the left axis (darker, long-dashed line) and average combat death rates (within 3 years of arrival) on the right axis (lighter, short-dashed line) by year-of-arrival cohort.

**Figure A.9:** Cohort decomposition without peer casualty interaction



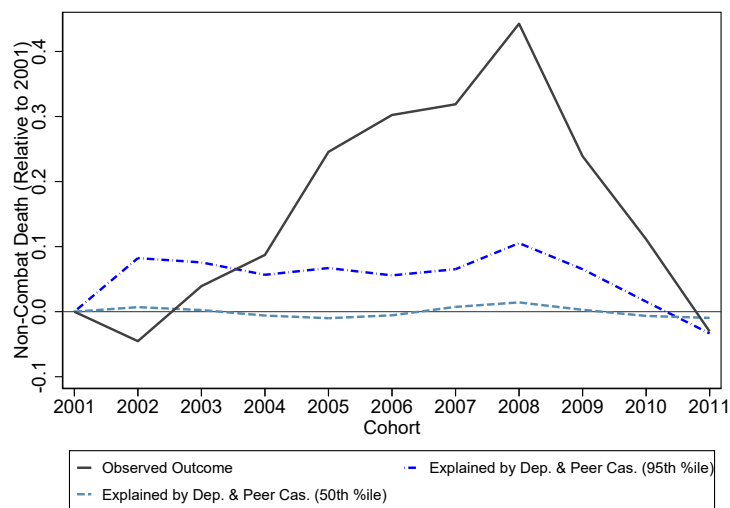
*Notes:* Like Figure 6, this figure plots cohort trends in the stated outcome and decomposes them into parts we can explain using the specification discussed in Section 5. Here, the decomposition is based off of estimates of Equation 9 that omit the peer casualty interaction.

**Figure A.10: Cohort decompositions for additional outcomes**



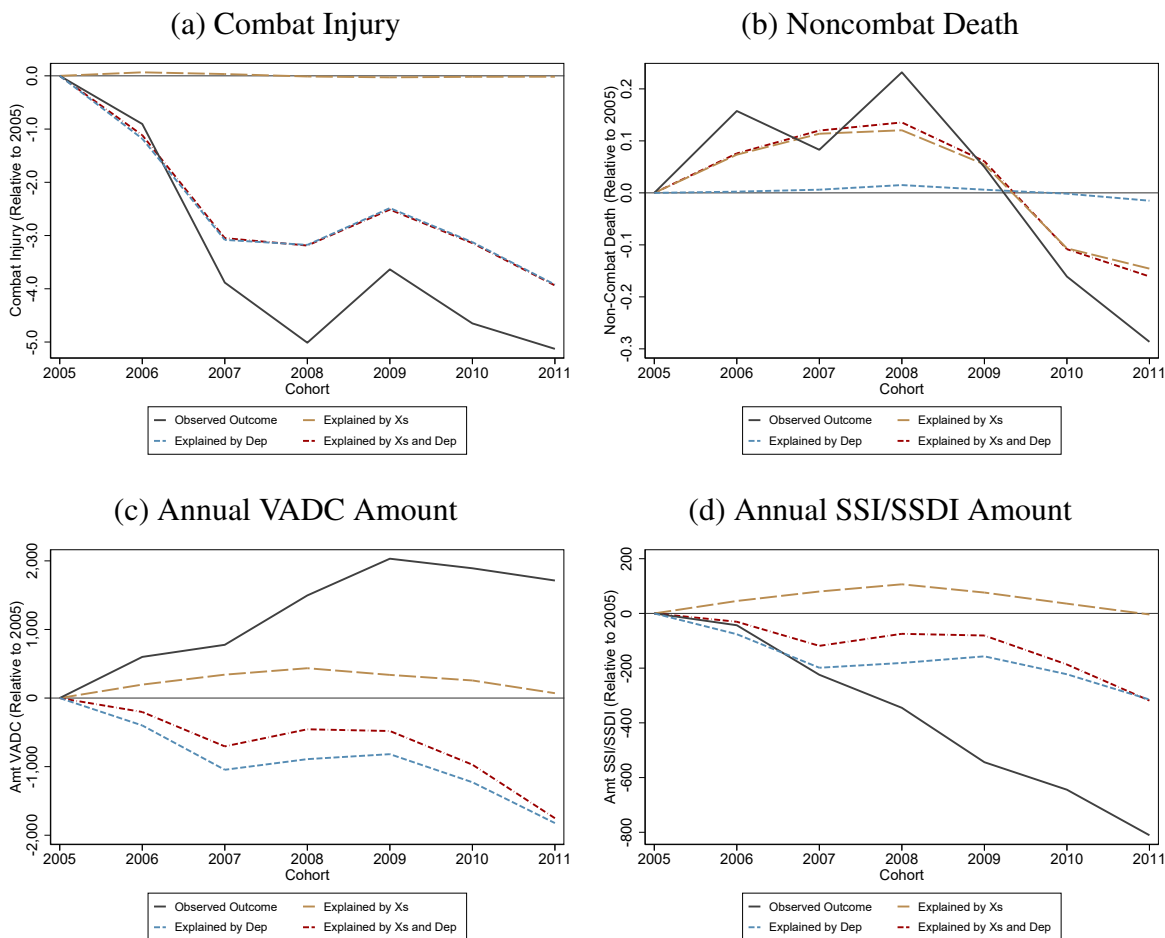
*Notes:* Like Figure 6, this figure plots cohort trends in the stated outcome and decomposes them into parts we can explain using the specification discussed in Section 5. Here, we perform this exercise for four additional outcomes. Panel (a) decomposes cohort trends in combat deaths 8 years after arrival. Panel (b) does so for deaths of despair within 8 years after arrival, panel (c) does so for suicides within 8 years after arrival, and panel (d) does so for any VADC with PTSD receipt.

**Figure A.11:** Accounting for statistical uncertainty in the effect of deployment on noncombat death



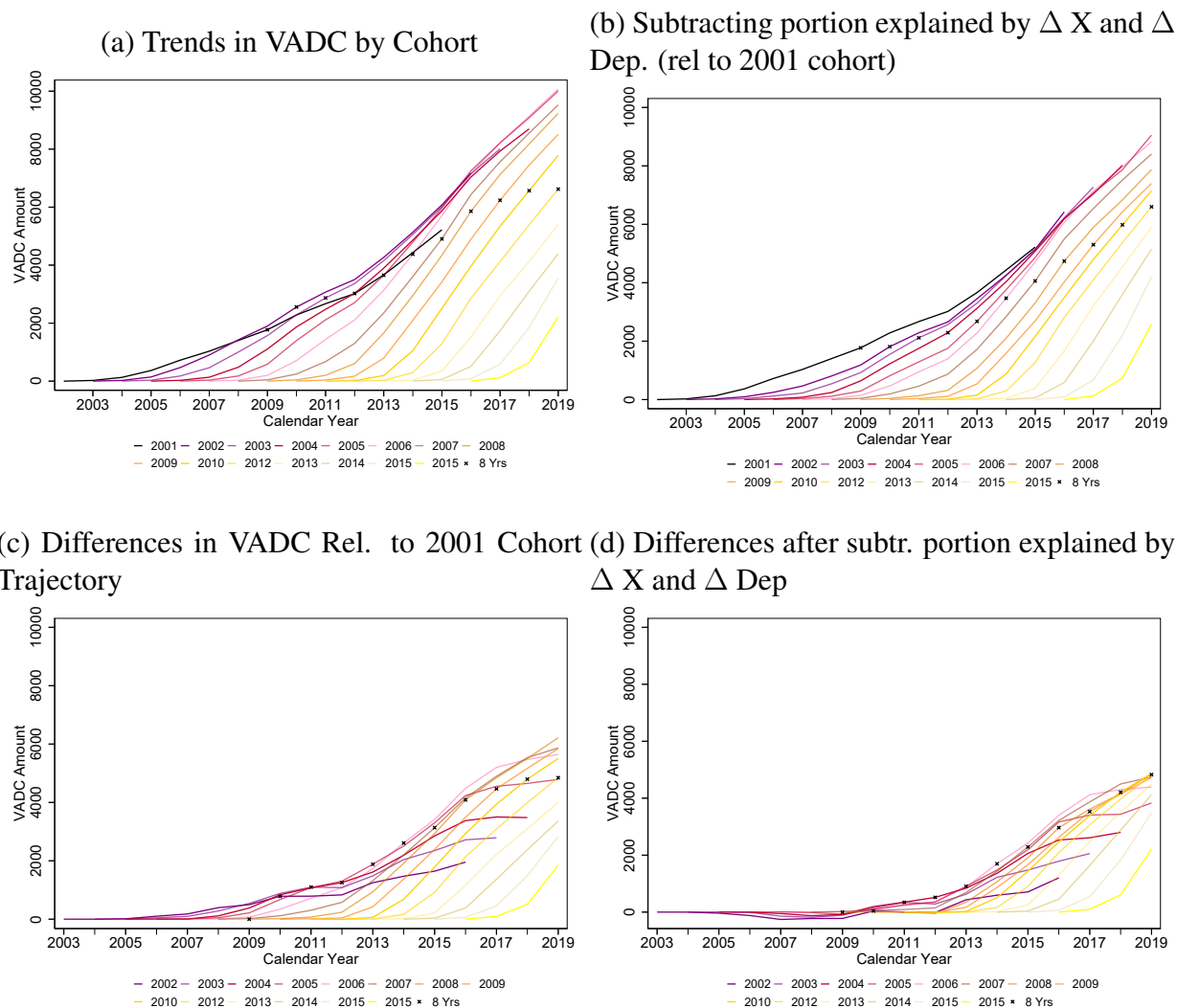
*Notes:* This figure examines how the share of noncombat deaths across cohorts explained by deployment and peer casualties changes when we account for statistical uncertainty in the effect of deployment on noncombat death. Specifically, we bootstrap the entire procedure in Figure 6 1000 times and calculate the year over year variance explained by deployment and peer casualties following each run (as in column (3) of Table A.27). We then re-construct Figure 6 using the model that yielded the 95th percentile of the year over year variance explained by deployment and peer casualties (shown in darker blue). The median from this procedure (which mimics our baseline) is shown in light blue for comparison.

**Figure A.12: Cohort decomposition using analysis sample only**



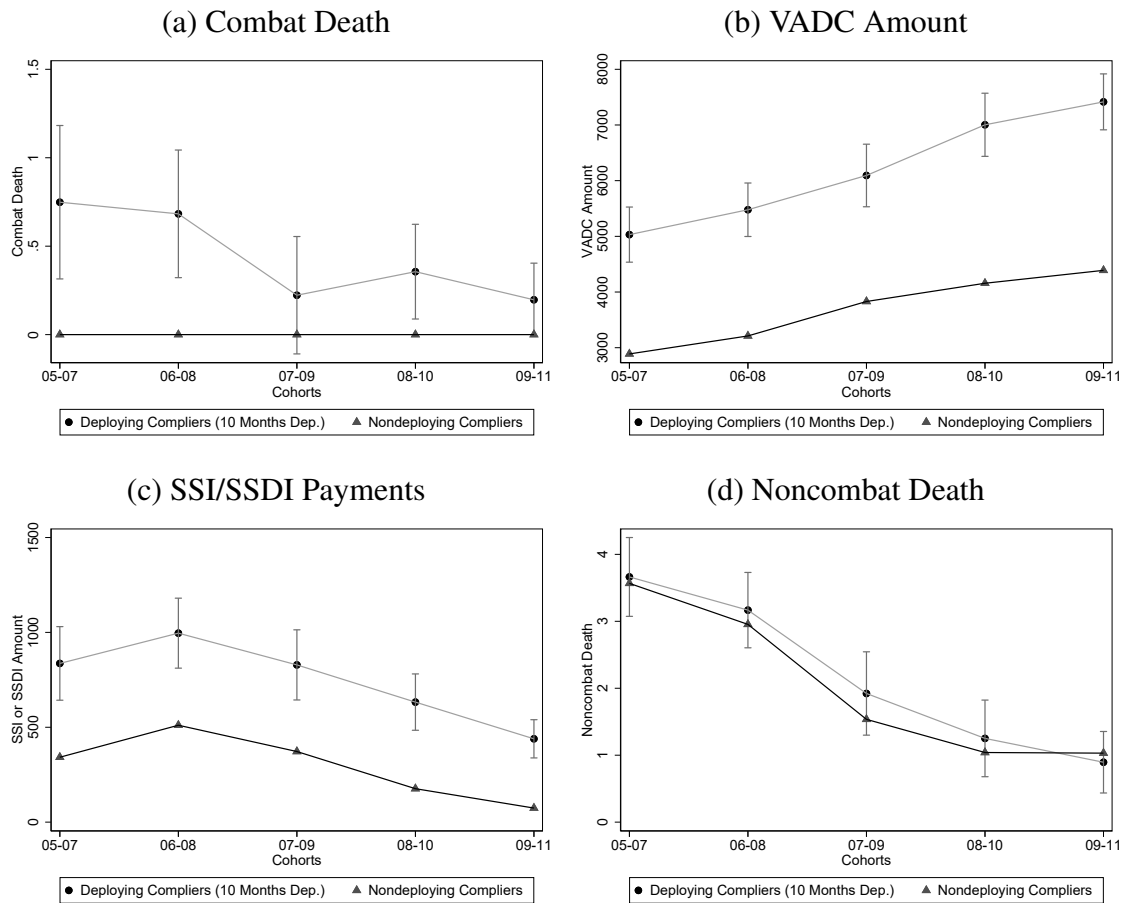
*Notes:* In this figure, we perform the same exercise as we did in Figure 6 but restrict to our primary analysis sample (Table 1 column (3)). Outcome means are plotted relative to the 2005 cohort mean.

**Figure A.13: VADC trends over time by enlistment cohort**



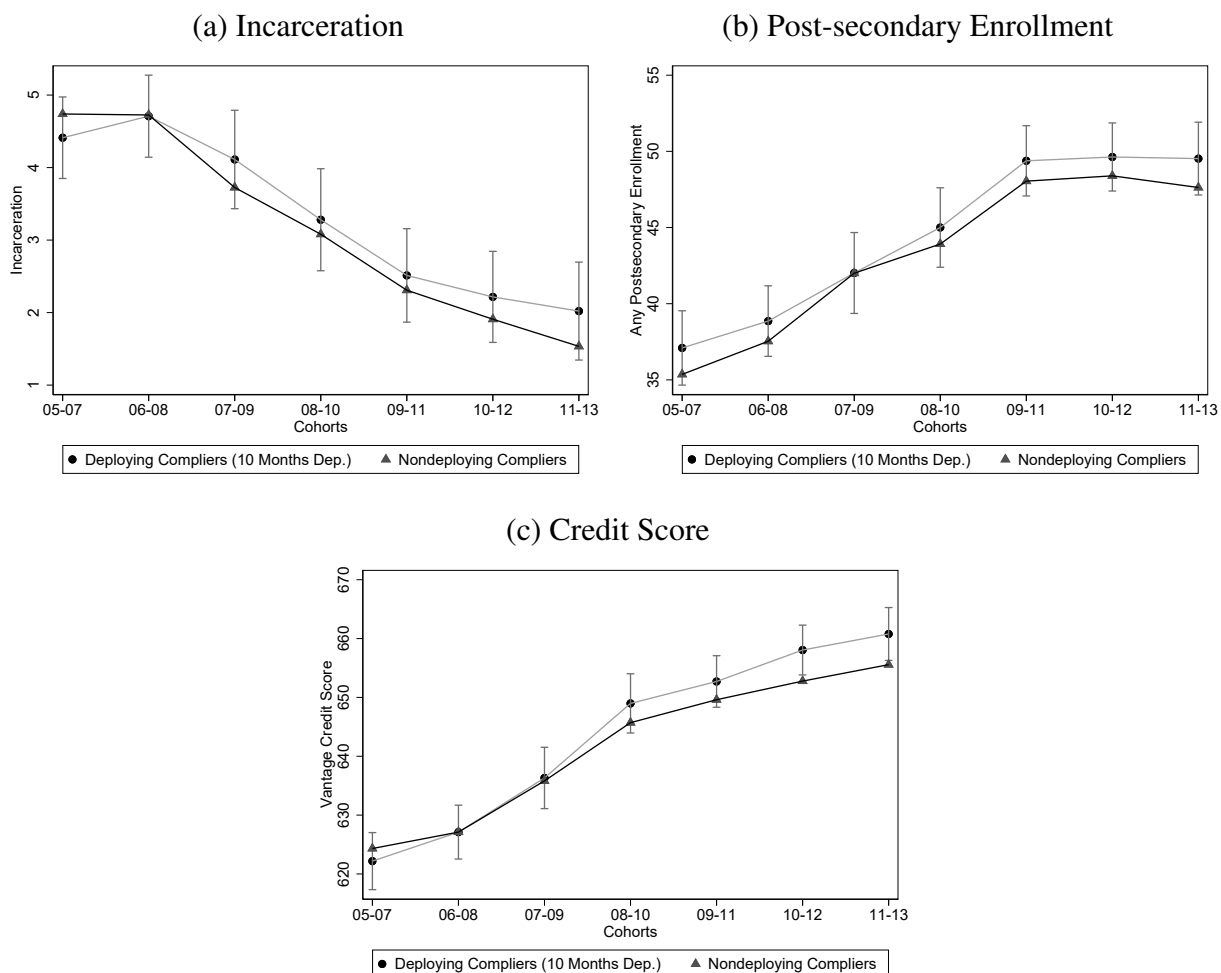
*Notes:* Panel (a) plots average VADC over calendar years for each cohort that arrived at their first operational unit between 2001 and 2015. Each series reflects a different cohort and begins 1 year after the cohort first arrives at their unit and extends to 14 years after assignment. Panel b) plots average VADC by cohort after subtracting off what can be explained by changes in months deployed and Xs (relative to the 2001 cohort). Panel c) plots, for each cohort, the difference in VADC relative to the 2001 cohort in the same year after assignment. Panel d) plots the same difference in VADC relative to the 2001 cohort as panel (c) after accounting for differences explained by changes in Xs or deployment. The “x-marks” on the plots annotate average VADC amounts 8 years after assignment.

**Figure A.14: Treatment effects across 3-year rolling cohorts (8 years out)**



*Notes:* This figure plots expected outcome means among nondeployers (untreated compliers) using triangles and the predicted outcome for deployers (constructed as the untreated complier mean plus the estimated treatment effect of a 10 month deployment) using circles among various rolling cohorts as stated on the x-axis. Untreated complier means are set to 0 for combat death since these only occur on deployment. Treatment effects of being 10 months deployed can be inferred as the gap between the two lines. Panel (a) plots combat death, (b) VADC amount, (c) SSI/SSDI amount, and (d) noncombat death. All outcomes are measured as of 8 years out. 95% confidence intervals on the estimated treatment effect are depicted by the vertical bars.

**Figure A.15: Treatment effects across 3-year rolling cohorts (other outcomes)**



*Notes:* This figure plots expected outcome means among nondeployers (untreated compliers) using triangles and the predicted outcome for deployers (constructed as the untreated complier mean plus the estimated treatment effect of a 10 month deployment) using circles among various rolling cohorts as stated on the x-axis. Treatment effects of being 10 months deployed can be inferred as the gap between the two lines. Panel (a) plots any incarceration within 6 years, (b) any post-secondary enrollment within 6 years, and (c) credit score in 2020. 95% confidence intervals on the estimated treatment effect are depicted by the vertical bars.

**Table A.1:** Number of BCTs and duty-stations (Posts) by year

	Num of BCTs (Posts)
2005	20 (7)
2006	26 (8)
2007	29 (9)
2008	31 (10)
2009	33 (10)
2010	35 (10)
2011	31 (10)
2012	26 (10)
2013	26 (10)
2014	26 (10)
2015	26 (10)

*Notes:* This table reports the number of Army brigade combat teams (BCTs) and duty-stations (or Army “posts”) soldiers in our sample were assigned to in each year indicated in the left column.

**Table A.2: Reduced form effects**

	(1) 2 yrs	(2) 4 yrs	(3) 6 yrs	(4) 8 yrs	(5) 8 yrs mean
<u>Panel (a): VADC and Trauma of War</u>					
Combat Death	0.39*** (0.06)	0.35*** (0.07)	0.40*** (0.09)	0.46*** (0.10)	0.50
Ever Combat Injury	3.29*** (0.18)	3.57*** (0.21)	3.83*** (0.24)	4.22*** (0.29)	4.17
Significant Army Profile	-0.50** (0.23)	2.00*** (0.38)	2.38*** (0.46)	2.50*** (0.56)	15.04
Annual Amt VADC	3.55 (10.34)	721.48*** (64.85)	2040.20*** (114.19)	2478.99*** (163.03)	6,129.44
Any VADC Receipt	-0.06 (0.09)	3.29*** (0.39)	8.94*** (0.61)	8.97*** (0.76)	37.37
<u>Panel (b): Non-combat Mortality Outcomes</u>					
Noncombat Death	0.09 (0.07)	0.14 (0.10)	0.11 (0.13)	0.04 (0.17)	1.25
Death of Despair	-0.01 (0.05)	0.06 (0.07)	0.10 (0.10)	0.00 (0.13)	0.79
Suicide	-0.03 (0.04)	-0.02 (0.06)	0.00 (0.08)	-0.02 (0.10)	0.44
Drug- or Alcohol-Rel. Death	0.01 (0.03)	0.06 (0.05)	0.08 (0.06)	0.04 (0.09)	0.38
Motor Vehicle Death	0.05 (0.04)	0.06 (0.05)	0.02 (0.06)	0.04 (0.08)	0.27
<u>Panel (c): Misconduct, Credit, and Education</u>					
Separated for Misconduct/Barred	-3.76*** (0.37)	-0.61 (0.51)	-0.49 (0.58)	-0.97 (0.67)	25.05
Ever Incarcerated	-0.09 (0.06)	0.05 (0.13)	0.11 (0.18)	0.09 (0.24)	2.41
Credit Score in 2020 (Vantage)	1.85 (1.29)	1.85 (1.29)	2.03 (1.36)	1.27 (1.51)	655.78
Enrolled by 2020 (Post-Arrival)	1.68*** (0.64)	1.68*** (0.64)	1.70** (0.67)	1.35* (0.74)	65.64
Assc Deg+ by 2020 (Post-Arrival)	0.01 (0.50)	0.01 (0.50)	0.06 (0.55)	0.01 (0.63)	19.51
Observations	157,415	157,415	129,176	101,387	101,387

*Notes:* This table reports estimates of the reduced form effects of peer months deployed on our key outcomes of interest (analogous to Equation 2). In addition, the sample sizes are smaller for ever incarcerated (100,381 at 8 years) and for Vantage credit score (93,252 at 8 years). Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

**Table A.3:** Frandsen, Lefgren, and Leslie (2023) tests of monotonicity and exclusion

	(1) Any VADC	(2) Combat Death	(3) Noncombat Death
$N \geq 250$			
Test stat	3.1135	2.6349	2.0268
P-value	0.1936	0.74	0.9991
$N \geq 100$			
Test stat	3.6196	2.8652	2.4778
P-value	0.1261	0.9165	0.9998
$N \geq 50$			
Test stat	3.6196	2.8652	-
P-value	0.185	0.9762	-

*Notes:* This table reports results of the tests proposed in Frandsen et al. (2023). Each pair of rows reports the test statistic and p-value subsetting the sample to BCT-quarter cells with at least  $N$  observations. We restrict cell size because asymptotic approximations required for the test are unlikely to perform well in cells with a small numbers of observations. Column 1 uses an indicator for any VADC receipt within 6 years as the outcome. Column 2 uses an indicator for combat death. Column 3 uses an indicator for noncombat death. Tests for cells with at least 50 observations for noncombat death cannot be computed due to the rarity of the outcome.

**Table A.4:** Association between deployment injuries and VADC receipt

	(1)	(2)	(3)	(4)	(5)
Panel (a): Any VADC Receipt					
10 Months Deployed	-0.35 (0.58)	-1.00* (0.57)	1.07* (0.55)	0.61 (0.55)	3.73*** (0.62)
Combat Injury by 3 Years		24.45*** (0.88)		21.53*** (0.98)	24.95*** (1.01)
Significant Army Profile by 3 Years			42.52*** (0.68)	42.20*** (0.75)	38.32*** (0.73)
Combat Injury by 3 Years X Significant Army Profile by 3 Years				-13.02*** (1.77)	-18.39*** (1.65)
Panel (b): Annual Amt VADC					
10 Months Deployed	60.77 (144.41)	-171.66 (137.94)	419.75*** (137.26)	140.40 (132.43)	656.32*** (154.74)
Combat Injury by 3 Years		8662.65*** (291.28)		6664.35*** (289.14)	7881.95*** (324.50)
Significant Army Profile by 3 Years			10783.13*** (248.82)	9320.88*** (244.28)	8854.73*** (253.32)
Combat Injury by 3 Years X Significant Army Profile by 3 Years				5220.51*** (868.40)	4007.58*** (882.39)
Conditional on Deployment	X	X	X	X	X
Conditional on Separation					X
Observations	83,370	83,370	83,370	83,370	66,943

*Notes:* This table reports associations between being wounded in action or having a significant Army profile within 3 years of arrival on VADC receipt (panel (a)) and VADC amount (panel (b)) as of 8 years after enlistment. All specifications restrict to soldiers who have deployed. Note that because all specifications include months deployed as a regressor, the coefficients on additional terms are properly interpreted as holding constant length of time deployed. The specification in column (5) further restricts to soldiers who have separated within 8 years. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

**Table A.5: Disability diagnoses and additional outcomes**

	(1) 2 yrs	(2) 4 yrs	(3) 6 yrs	(4) 8 yrs	(5) 8 yrs mean
<u>Panel (a): Top 5 Conditions</u>					
Tinnitus	-0.01 (0.06)	2.07*** (0.31)	6.11*** (0.50)	6.39*** (0.65)	20.63
Limitation of flexion, knee	-0.05 (0.04)	0.54** (0.24)	1.96*** (0.38)	1.90*** (0.51)	10.77
PTSD	0.02 (0.03)	3.67*** (0.21)	10.87*** (0.41)	12.82*** (0.59)	16.71
Lumbosacral or cervical strain	0.03 (0.06)	1.04*** (0.28)	3.37*** (0.44)	2.65*** (0.56)	14.07
Limitation of motion of the ankle	0.08** (0.03)	0.41** (0.18)	1.12*** (0.29)	1.05*** (0.38)	5.78
<u>Panel (b): Additional Outcomes</u>					
Serious or Very Serious Combat Injury	0.29*** (0.05)	0.32*** (0.07)	0.32*** (0.07)	0.36*** (0.09)	0.43
Very Serious Combat Injury	0.02 (0.02)	0.05* (0.03)	0.05* (0.03)	0.07* (0.04)	0.10
Any VADC w/ Amputation			0.22*** (0.05)	0.20*** (0.07)	0.24
Any VADC IU or CDR 100	0.01 (0.01)	0.54*** (0.10)	1.79*** (0.20)	2.77*** (0.32)	4.12
Any SSI or SSDI	0.52*** (0.08)	1.30*** (0.16)	1.99*** (0.22)	2.60*** (0.30)	3.39
Amount SSI or SSDI	32.03*** (6.48)	168.69*** (22.97)	325.41*** (36.65)	426.38*** (52.40)	569.37
Observations	157,415	157,415	129,176	101,387	101,387

*Notes:* Panel (a) of this table reports the 2SLS effect (Equation 1) of months deployed on receiving VADC with any of the 5 most common disabilities among GWOT recipients based on [https://www.benefits.va.gov/REPORTS/abr/docs/2021\\_compensation.pdf](https://www.benefits.va.gov/REPORTS/abr/docs/2021_compensation.pdf). Conditions are not mutually exclusive – soldiers can receive VADC for multiple disabilities. We scale coefficients and standard errors by 10 so that estimates can be interpreted as the effects of being deployed for 10 months. Panel (b) examines the effect of deployment on rarer but severe outcomes: serious combat injuries (defined as an injury from adversarial action that a medical authority deems to be life-threatening or life-altering, or where death is possible but not likely within 72 hours), very serious combat injuries (a serious combat injury where a medical authority declares it more likely than not that death will occur within 72 hours), receiving VADC with a documented amputation, receiving VADC with an individual unemployability designation or with a disability rating of 100%, and any and amount SSI or SSDI (which are both work limiting). Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

**Table A.6: Separations**

	(1)	(2)	(3)	(4)	(5)
	2 yrs	4 yrs	6 yrs	8 yrs	8 yrs mean
Ever Separated	-4.96*** (0.46)	2.60*** (0.69)	3.89*** (0.67)	2.57*** (0.64)	82.87
Voluntarily Separated	0.01 (0.04)	1.74*** (0.58)	2.36*** (0.69)	0.85 (0.78)	33.59
Separated for Misconduct/Barred	-3.92*** (0.38)	-0.63 (0.53)	-0.52 (0.60)	-1.02 (0.70)	25.05
Separated for Disability	-0.40** (0.17)	1.69*** (0.35)	2.57*** (0.45)	2.87*** (0.56)	13.03
Observations	157,415	157,415	129,176	101,387	101,387

*Notes:* This table reports the 2SLS effect (Equation 1) of months deployed on separation from the Army and various sub-classifications of separation. We classify a soldier as “Ever Separated” if they stopped serving in the Active Duty Army prior to the year indicated in the column heading. We scale coefficients and standard errors by 10 so that estimates can be interpreted as the effects of being deployed for 10 months. The first row reports the effects of deployment on separation from the Army 2, 4, 6, and 8 years after arrival. The next reports the effects on voluntary separation, which occurs when a soldier completes his initial enlistment contract but decides not to re-enlist. The third row reports the effects on either being involuntarily separated from the Army for misconduct or being barred from reenlisting. The fourth row reports the effects on being separated from the Army due to a medical disability. Column 5 reports the mean of each outcome 8 years after a soldier’s arrival. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

**Table A.7: Effects on mortality**

	(1)	(2)	(3)	(4)	(5)
	2 yrs	4 yrs	6 yrs	8 yrs	8 yrs mean
Death (All Causes)	0.50*** (0.10)	0.51*** (0.13)	0.53*** (0.16)	0.53** (0.21)	1.75
Combat Death	0.41*** (0.07)	0.37*** (0.08)	0.42*** (0.09)	0.48*** (0.11)	0.50
Noncombat Death	0.09 (0.07)	0.14 (0.10)	0.11 (0.14)	0.05 (0.18)	1.25
Death of Despair	-0.02 (0.05)	0.06 (0.07)	0.10 (0.10)	0.002 (0.138)	0.79
Suicide	-0.03 (0.04)	-0.02 (0.06)	0.001 (0.085)	-0.02 (0.11)	0.44
Drug- or Alcohol-Rel. Death	0.01 (0.03)	0.07 (0.05)	0.08 (0.07)	0.04 (0.09)	0.38
Motor Vehicle Death	0.05 (0.04)	0.06 (0.05)	0.03 (0.06)	0.04 (0.09)	0.27
Assault Death	0.03 (0.02)	0.0003 (0.0295)	0.002 (0.037)	0.01 (0.05)	0.08
Other Noncombat Death	0.03 (0.02)	0.01 (0.04)	-0.01 (0.048)	-0.002 (0.07)	0.15
Observations	157,415	157,415	129,176	101,387	101,387

*Notes:* This table reports 2SLS estimates of the effects of months deployed on all cause mortality and various sub-classifications of mortality. We scale coefficients and standard errors by 10 so that estimates can be interpreted as the effects of being deployed for 10 months. The first row reports the effects of deployment on all cause mortality 2, 4, 6, and 8 years after arrival. The next row reports the effects on deaths due to combat. The third row reports the effects on noncombat deaths. The fourth row reports the effects on deaths of despair, which include all suicides (NDI recorded motivation as intentional self-harm or undetermined intent) plus any death caused by drugs, alcohol, or poison, or firearm deaths resulting from undetermined intent. The fifth row reports effects on suicides and the sixth row reports effects on any death determined in the NDI to be caused by drugs or alcohol. The sixth row reports effects on deaths resulting from motor vehicle accidents, the seventh deaths resulting from assaults, and the last noncombat deaths resulting from any other cause not already considered. Column 5 reports the mean of each outcome 8 years after a soldier's arrival. Heteroskedasticity-robust standard errors are reported in parentheses. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

**Table A.8: Misconduct and criminal behavior outcomes**

	(1) 2 yrs	(2) 4 yrs	(3) 6 yrs	(4) 8 yrs	(5) 8 yrs mean
<u>Panel (a): Administrative Sanctions (In Service)</u>					
Ever Demoted	-1.99*** (0.44)	0.14 (0.52)	0.20 (0.58)	-0.04 (0.68)	22.20
Separated for Misconduct/Barred	-3.92*** (0.38)	-0.63 (0.53)	-0.52 (0.60)	-1.02 (0.70)	25.05
Observations	157,415	157,415	129,176	101,387	101,387
<u>Panel (b): Criminal Investigations (In Service)</u>					
Ever Violent Felony	-0.31** (0.13)	-0.14 (0.17)	-0.13 (0.20)	-0.07 (0.23)	2.24
Ever Non-Violent Felony	-2.18*** (0.43)	-0.39 (0.51)	-0.39 (0.57)	-0.56 (0.66)	21.10
Ever Misdemeanor (Non-traffic)	-2.10*** (0.33)	-1.27*** (0.41)	-1.33*** (0.46)	-1.37** (0.54)	13.43
Ever Other Crime	-0.38* (0.23)	0.10 (0.26)	0.09 (0.29)	-0.03 (0.35)	5.33
Observations	157,415	157,415	129,176	101,387	101,387
<u>Panel (c): Incarceration (In and Out of Service)</u>					
Ever Incarcerated	-0.09 (0.07)	0.05 (0.14)	0.12 (0.19)	0.10 (0.25)	2.41
Observations	156,246	156,246	128,120	100,381	100,381

*Notes:* This table reports the 2SLS effect (Equation 1) of months deployed on misconduct, criminal behavior, and incarceration. We scale coefficients and standard errors by 10 so that estimates can be interpreted as the effects of being deployed for 10 months. Panel (a) examines the effects on demotions and separations for misconduct or while barred from re-enlistment for misconduct. Panel (b) examines criminal cases while serving using military criminal records from the Army Law Enforcement Reporting and Tracking System (ALERTS) system, which include final cases from Military Police (MP) or Criminal Investigation Division (CID) records for the stated crimes. Crime types are grouped into non-violent felonies, violent felonies, misdemeanors, and other (e.g. AWOL). Panel (c) examines effects on incarceration by the stated period (either in military incarceration records or national LexisNexis records). Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

**Table A.9: Financial health outcomes**

	(1) Jun 2017	(2) Avg( $Y_{2017}$ )	(3) Dec 2020	(4) Avg( $Y_{2020}$ )
<u>Panel (a): Credit Scores</u>				
Vantage Score	0.52 (1.32)	622.1	1.91 (1.33)	655.2
FICO Score			0.79 (1.49)	652.1
<u>Panel (b): Debt Composition</u>				
Total debt	3529*** (1194)	44,407	4793** (1862)	83,783
Mortgage debt	2759*** (1059)	27,044	3985** (1699)	61,123
Auto debt	489** (221)	11,060	739*** (264)	13,064
Student debt	-139 (106)	1,436	-375** (172)	2,478
<u>Panel (c): Bad Debt</u>				
Derogatory debt	52.48 (90.72)	1,105.6	-95.06 (75.28)	663.1
Debt in colleciton	33.04 (56.33)	983.9	-69.03 (49.81)	1,127.0
Any bankruptcy	0.13 (0.17)	1.4	0.35* (0.19)	1.8
Any Foreclosure Action			0.12 ( 0.45)	12.2
Observations	155,898		157,415	

*Notes:* Panels (a)-(c) report the 2SLS effect (Equation 1) of months deployed on Experian credit outcomes in June 2017 or December 2020. We scale coefficients and standard errors by 10 so that estimates can be interpreted as the effects of being deployed for 10 months. In 2017, we drop 1% of our sample that was not sent to Experian. In addition, the sample size for the Vantage and FICO credit score outcomes is smaller, 142,010 and 144,708 for Vantage score in 2017 and 2020 respectively and 135,797 for FICO score 2020, as some individuals have no credit scores (2SLS regressions on an indicator for having any credit score are insignificantly different from 0). The “Any Foreclosure Action” outcome is from LexisNexis records, as of December 2019, and has 156,247 observations. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

**Table A.10: Education outcomes**

<u>Panel (a): Dynamic Outcomes</u>					
	2 yrs	4 yrs	6 yrs	8 yrs	8 yrs mean
Enroll Post-arrival	-1.48*** (0.40)	0.66 (0.58)	1.59** (0.73)	1.09 (0.81)	55.70
Assc Deg+ Post-arrival	-0.08 (0.07)	-0.16 (0.13)	0.01 (0.27)	0.66 (0.47)	8.69
Bach Deg+ Post-arrival	-0.02 (0.06)	-0.08 (0.09)	-0.12 (0.16)	-0.05 (0.33)	3.99
Observations	157,415	157,415	129,176	101,387	101,387
<u>Panel (b): Outcomes by 2017/2020</u>					
	Jun 2017	Avg( $Y_{2017}$ )	Dec 2020	Avg( $Y_{2020}$ )	
Enrolled (Post-Arrival)	1.59** (0.66)	49.98	1.75*** (0.67)	60.01	
Associates Deg+ (Post-Arrival)	0.21 (0.42)	8.99	0.01 (0.52)	15.62	
Bachelors Deg+ (Post-Arrival)	0.13 (0.31)	4.66	-0.15 (0.42)	9.18	
Any post 9/11 GI bill use	2.36*** (0.67)	37.66	3.12*** (0.70)	48.27	
Observations	157,415		157,415		

*Notes:* Panel (a) reports the 2SLS effect (Equation 1) of months deployed on education enrollment and attainment outcomes that occur after soldiers arrive at their brigade combat team. We scale coefficients and standard errors by 10 so that estimates can be interpreted as the effects of being deployed for 10 months. The first row reports the effects of deployment on any college attendance from the NSC. The second row reports the effects on any degree attainment, while the third reports the effects on any bachelors degree or higher attained post-arrival. Panel (b), instead of looking at outcomes within 2, 4, 6, and 8 years after arrival, looks at any education by 2017 or 2020. In panel (b), we also examine the effect of months deployed on use of the Post-9/11 GI Bill. Post-9/11 GI Bill usage is defined as of September 2017/2020 since we only observe annual snapshots in September each year. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

**Table A.11: Effects of deployment on in-service outcomes**

	(1)	(2)	(3)
	2 yr	3 yrs	4 yrs
Promotion to Sergeant	0.05	2.22***	1.98***
	(0.234)	(0.493)	(0.595)
Mean	2.744	14.765	24.855
Cumulative Army Pay	2880***	3913***	5143***
	(302)	(470)	(685)
Mean	71,561	108,973	139,187
Changed Army Occupation	-0.49***	0.08	-0.67***
	(0.186)	(0.210)	(0.258)
Mean	4.606	5.498	6.960
Ever Separated	-4.96***	-1.87***	2.60***
	(0.465)	(0.646)	(0.685)
Mean	13.475	40.996	56.979
Observations	157,415	157,415	157,415

*Notes:* This table reports the 2SLS effect (Equation 1) of months deployed on promotion to Sergeant (E5), cumulative military pay, and an indicator for changing army occupations. All outcomes are as of the years since arrival to first duty-station identified in the column headings. Cumulative military pay is through 2, 3, or 4 years, is zero in months when soldiers are no longer in the army, and includes base pay, Basic Allowance for Housing (BAH), Basic Allowance for Subsistence (BAS), hostile fire pay, hardship duty pay, and family separation pay. We scale coefficients and standard errors by 10 so that estimates can be interpreted as the effects of being deployed for 10 months. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

**Table A.12: Heterogeneity by AFQT, waivers, and race**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Full Sample	Low AFQT	High AFQT	Any Moral Waiver	No Moral Waiver	Black	Hispanic	White
Combat Death	0.48*** (0.11)	0.47*** (0.18)	0.51*** (0.15)	0.60 (0.37)	0.48*** (0.12)	0.05 (0.21)	0.76* (0.43)	0.50*** (0.14)
Combat Death Mean	0.50	0.49	0.51	0.51	0.50	0.26	0.61	0.53
Ever Combat Injury	4.43*** (0.31)	4.62*** (0.53)	4.38*** (0.39)	4.01*** (1.01)	4.61*** (0.33)	1.92** (0.76)	3.88*** (0.98)	5.09*** (0.39)
Ever Combat Injury Mean	4.17	4.25	4.17	4.43	4.17	2.30	4.38	4.55
Significant Army Profile	2.62*** (0.59)	2.47** (1.00)	2.78*** (0.75)	5.30*** (1.87)	2.32*** (0.62)	1.53 (1.81)	4.66** (1.81)	2.93*** (0.72)
Significant Army Profile Mean	15.04	15.23	14.95	16.79	14.78	13.30	12.63	15.89
Annual Amt VADC	2602.30*** (171.73)	3337.68*** (308.46)	2242.16*** (212.51)	2743.50*** (558.69)	2586.83*** (182.24)	3213.15*** (617.13)	2649.04*** (584.36)	2578.21*** (202.37)
Annual Amt VADC Mean	6,129.44	6,515.79	5,910.34	6,953.52	6,012.65	6,497.45	6,331.53	6,096.78
Any VADC Receipt	9.42*** (0.80)	11.80*** (1.37)	8.07*** (1.01)	9.34*** (2.42)	9.35*** (0.85)	8.91*** (2.60)	11.95*** (2.56)	9.52*** (0.96)
Any VADC Receipt Mean	37.37	38.08	36.99	39.98	37.02	35.59	36.63	38.11
Noncombat Death	0.05 (0.18)	-0.34 (0.30)	0.25 (0.24)	0.70 (0.71)	-0.08 (0.18)	-0.94* (0.56)	0.14 (0.47)	0.12 (0.22)
Noncombat Death Mean	1.25	1.15	1.31	2.11	1.12	1.06	0.86	1.36
Death of Despair	0.00 (0.14)	-0.27 (0.23)	0.16 (0.18)	0.39 (0.58)	-0.07 (0.14)	-0.35 (0.33)	-0.15 (0.37)	0.09 (0.18)
Death of Despair Mean	0.79	0.71	0.83	1.41	0.69	0.45	0.53	0.89
Observations	101,387	62,968	37,209	12,584	87,653	10,951	10,465	72,111

Notes: This table presents results for the specification in Table 3 for different sample splits: above and below 50 AQFT, any vs. no moral waiver, and for Black, Hispanic, and white enlistees. We use the term “moral waiver” as shorthand for having a waiver for a prior felony conviction or other disqualifying conduct. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

**Table A.13: Measuring Deployment over different time horizons**

	3 year	4 year	5 year	6 year	7 year	8 year
	<u>VADC &amp; Trauma of War</u>					
Combat Death	0.48*** (0.11)	0.53*** (0.11)	0.55*** (0.11)	0.56*** (0.11)	0.57*** (0.11)	0.57*** (0.11)
Combat Injury	4.43*** (0.31)	4.40*** (0.29)	4.67*** (0.30)	4.57*** (0.31)	4.56*** (0.31)	4.56*** (0.31)
Significant Army Profile	2.62*** (0.59)	2.68*** (0.52)	2.89*** (0.55)	2.88*** (0.55)	2.91*** (0.55)	2.89*** (0.55)
Annual Amt VADC	2602*** (172)	2311*** (153)	2450*** (162)	2435*** (163)	2409*** (165)	2420*** (166)
Any VADC Receipt	9.42*** (0.80)	8.55*** (0.70)	8.89*** (0.75)	8.94*** (0.75)	8.85*** (0.76)	8.91*** (0.76)
	<u>Noncombat Mortality</u>					
Noncombat Death	0.05 (0.18)	-0.03 (0.16)	-0.02 (0.17)	-0.03 (0.17)	-0.03 (0.17)	-0.03 (0.17)
Death of Despair	0.00 (0.14)	-0.02 (0.13)	-0.02 (0.13)	-0.02 (0.13)	-0.02 (0.13)	-0.02 (0.13)
Suicide	-0.02 (0.11)	-0.06 (0.09)	-0.07 (0.10)	-0.07 (0.10)	-0.07 (0.10)	-0.07 (0.10)
Drug- or Alcohol-Rel. Death	0.04 (0.09)	0.04 (0.09)	0.05 (0.09)	0.06 (0.09)	0.06 (0.09)	0.06 (0.09)
Motor Vehicle Death	0.04 (0.09)	0.02 (0.08)	0.02 (0.08)	0.01 (0.08)	0.01 (0.08)	0.01 (0.08)
	<u>Misconduct &amp; Education</u>					
Separated for Misconduct	-1.02 (0.70)	-0.01 (0.62)	-0.09 (0.66)	-0.22 (0.65)	-0.36 (0.66)	-0.41 (0.66)
Ever Incarcerated	0.10 (0.25)	0.11 (0.22)	0.13 (0.23)	0.09 (0.23)	0.07 (0.23)	0.06 (0.23)
Credit Score in 2020 (Vantage)	1.32 (1.58)	2.08 (1.38)	1.83 (1.47)	2.09 (1.46)	2.23 (1.47)	2.33 (1.47)
College Enrollment	1.09 (0.81)	0.97 (0.71)	1.08 (0.76)	1.17 (0.76)	1.14 (0.76)	1.20 (0.76)
Associate's Deg+	0.66 (0.47)	0.59 (0.40)	0.61 (0.43)	0.59 (0.43)	0.62 (0.43)	0.64 (0.43)
Observations	101,387	101,387	101,387	101,387	101,387	101,387

*Notes:* This table changes both the endogenous variable and the instrument to be months deployed (or peer months deployed) within 3 years, 4 years, ..., up to 8 years after arrival. All outcomes remain measured as of 8 years after arrival. Observations for incarceration are 100,381 and for credit 93,252. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

**Table A.14:** Effects on disability, mortality, and education (including women and men)

	(1) 2 yrs	(2) 4 yrs	(3) 6 yrs	(4) 8 yrs	(5) 8 yrs mean
<u>Panel (a): VADC and Trauma of War</u>					
Combat Death	0.37*** (0.06)	0.35*** (0.07)	0.39*** (0.08)	0.45*** (0.10)	0.45
Ever Combat Injury	3.29*** (0.18)	3.62*** (0.21)	3.88*** (0.24)	4.28*** (0.29)	3.81
Significant Army Profile	-0.58** (0.24)	2.01*** (0.39)	2.36*** (0.48)	2.26*** (0.57)	15.40
Annual Amt VADC	0.07 (10.65)	723.07*** (67.34)	2069.91*** (117.99)	2493.12*** (167.06)	6,195.35
Any VADC Receipt	-0.07 (0.09)	3.24*** (0.41)	9.14*** (0.63)	9.11*** (0.77)	37.73
<u>Panel (b): Noncombat Mortality Outcomes</u>					
Noncombat Death	0.08 (0.07)	0.11 (0.10)	0.07 (0.13)	0.01 (0.17)	1.19
Death of Despair	-0.02 (0.05)	0.05 (0.07)	0.07 (0.10)	0.01 (0.13)	0.74
Suicide	-0.03 (0.03)	-0.02 (0.06)	-0.02 (0.08)	-0.04 (0.10)	0.41
Drug- or Alcohol-Rel. Death	0.01 (0.03)	0.06 (0.04)	0.07 (0.06)	0.06 (0.09)	0.36
Motor Vehicle Death	0.04 (0.03)	0.04 (0.05)	0.01 (0.06)	0.02 (0.08)	0.26
<u>Panel (c): Misconduct, Credit, and Education</u>					
Separated for Misconduct/Barred	-3.71*** (0.36)	-0.52 (0.51)	-0.36 (0.58)	-0.80 (0.67)	24.04
Ever Incarcerated	-0.11* (0.06)	0.01 (0.13)	0.05 (0.18)	0.04 (0.24)	2.27
Credit Score in 2020 (Vantage)	1.83 (1.30)	1.83 (1.30)	2.08 (1.38)	1.32 (1.53)	655.12
Enrolled by 2020 (Post-Arrival)	1.67*** (0.64)	1.67*** (0.64)	1.67** (0.67)	1.32* (0.74)	67.26
Assc Deg+ by 2020 (Post-Arrival)	-0.13 (0.52)	-0.13 (0.52)	-0.13 (0.57)	-0.24 (0.65)	21.04
Observations	172,479	172,479	141,599	111,413	111,413

*Notes:* This table reports the 2SLS effect (Equation 1) of months deployed on our primary outcomes in a sample that includes women and men assigned to BCTs between 2005 and 2015. See the notes for Table 3 for additional details. The sample sizes are smaller for incarceration (110,304 at 8 years) and for Vantage credit score 2020 (100,483 at 8 years). Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

**Table A.15: Effects of deployment using quarter of arrival FE**

	(1) 2 yrs	(2) 4 yrs	(3) 6 yrs	(4) 8 yrs	(5) 8 yrs mean
<u>Panel (a): VADC and Trauma of War</u>					
Combat Death	0.44*** (0.09)	0.40*** (0.10)	0.49*** (0.12)	0.56*** (0.16)	0.51
Ever Combat Injury	3.58*** (0.23)	3.99*** (0.28)	4.40*** (0.33)	5.11*** (0.42)	4.25
Significant Army Profile	-0.57* (0.31)	1.77*** (0.51)	2.66*** (0.63)	2.78*** (0.79)	14.95
Annual Amt VADC	0.96 (14.95)	691.20*** (89.95)	2212.45*** (158.80)	2753.69*** (230.75)	6,127.57
Any VADC Receipt	-0.15 (0.12)	3.31*** (0.54)	9.84*** (0.85)	9.22*** (1.08)	37.42
<u>Panel (b): Noncombat Mortality Outcomes</u>					
Noncombat Death	0.11 (0.10)	0.16 (0.13)	0.15 (0.18)	0.01 (0.25)	1.25
Death of Despair	0.05 (0.07)	0.14 (0.10)	0.22 (0.14)	0.19 (0.20)	0.79
Suicide	-0.01 (0.06)	0.02 (0.08)	0.07 (0.12)	0.03 (0.16)	0.44
Drug- or Alcohol-Rel. Death	0.06 (0.05)	0.11* (0.06)	0.11 (0.09)	0.15 (0.13)	0.37
Motor Vehicle Death	-0.00 (0.05)	-0.04 (0.07)	-0.10 (0.08)	-0.12 (0.12)	0.27
<u>Panel (c): Misconduct and Education</u>					
Separated for Misconduct/Barred	-3.37*** (0.49)	-0.44 (0.69)	0.07 (0.79)	-0.28 (0.95)	25.07
Ever Incarcerated	-0.08 (0.09)	0.06 (0.18)	0.36 (0.26)	0.25 (0.35)	2.41
Enroll Post-arrival	-1.36*** (0.51)	0.83 (0.74)	2.23** (0.96)	0.79 (1.10)	55.49
Assc Deg+ Post-arrival	-0.03 (0.10)	-0.21 (0.17)	-0.27 (0.36)	0.44 (0.64)	8.64
Observations	157,415	157,415	129,176	101,387	101,387

*Notes:* This table reports the 2SLS effect (Equation 1) of months deployed on our primary outcomes in different years after arrival. Unlike our main specification, the results in this table are from a regression that replaces year of arrival by term, by occupation, by duty-station with quarter of arrival by term, by occupation, by duty-station fixed effects. In addition, the sample sizes are smaller for incarceration (100,381 at 8 years) and for Vantage credit score in 2020 (93,252 at 8years). Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

**Table A.16: Nonlinear effects**

	(1)	(2)	(3)	(4)	(5)	(6)
<b>Panel (a): Any VADC Receipt</b>						
Months Deployed	0.942*** (0.080)	1.205*** (0.271)	0.567 (0.671)	0.804*** (0.112)	0.588 (0.617)	-5.929* (3.368)
Months Dep. Sq.		-0.014 (0.014)	0.072 (0.083)		0.009 (0.026)	0.618** (0.300)
Months Dep. Cu.			-0.003 (0.003)			-0.017** (0.008)
Deployed				3.391* (1.991)	4.506 (3.752)	25.095** (11.578)
<b>Effect of 0 to 10 Month Dep</b>	9.417*** (0.796)	10.606*** (1.408)	9.909*** (1.578)	11.435*** (1.442)	11.326*** (1.462)	10.567*** (1.510)
<b>Panel (b): VADC Amount</b>						
Months Deployed	260.230*** (17.173)	341.235*** (57.099)	271.285* (141.405)	220.170*** (24.040)	171.340 (132.458)	-1043.736 (734.571)
Months Dep. Sq.		-4.440 (3.052)	5.011 (17.880)		2.117 (5.722)	115.581* (65.686)
Months Dep. Cu.			-0.322 (0.603)			-3.176* (1.781)
Deployed				989.393** (417.094)	1241.337 (800.357)	5079.978** (2528.460)
<b>Effect of 0 to 10 Month Dep</b>	2602*** (172)	2968*** (294)	2892*** (324)	3191*** (302)	3166*** (305)	3025*** (311)
<b>Panel (c): Noncombat Deaths</b>						
Months Deployed	0.005 (0.018)	-0.052 (0.061)	0.138 (0.151)	0.020 (0.027)	-0.046 (0.150)	1.022 (0.759)
Months Dep. Sq.		0.003 (0.004)	-0.023 (0.020)		0.003 (0.007)	-0.097 (0.068)
Months Dep. Cu.			0.0009 (0.0007)			0.003 (0.002)
Deployed				-0.384 (0.440)	-0.042 (0.886)	-3.417 (2.607)
<b>Effect of 0 to 10 Month Dep.</b>	0.045 (0.180)	-0.210 (0.295)	-0.003 (0.315)	-0.183 (0.296)	-0.217 (0.298)	-0.093 (0.302)
Observations	101,387	101,387	101,387	101,387	101,387	101,387

*Notes:* This table presents estimates of deployment on VADC receipt and noncombat deaths allowing for nonlinear effects of months deployed and peer casualties. In each case, equations are just identified and use the peer analogue (e.g. peer months deployed squared) as the corresponding instrument. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

**Table A.17: The effects of any deployment**

	(1) Any Dep.	(2) Baseline (10 Months Dep.)
<u>Panel (a): Trauma and Disability</u>		
Combat Death	0.36*** (0.13)	0.48*** (0.11)
Combat Injury	4.01*** (0.39)	4.43*** (0.31)
Sig. Army Profile	2.81*** (1.01)	2.62*** (0.59)
Amt VADC	3739*** (299)	2602*** (172)
Any VADC	13.44*** (1.42)	9.42*** (0.80)
<u>Panel (b): Noncombat Mortality</u>		
Noncombat Death	-0.13 (0.29)	0.05 (0.18)
Death of Despair	0.01 (0.21)	0.00 (0.14)
Suicide	-0.15 (0.18)	-0.02 (0.11)
Drug or Alcohol-Rel Death	0.10 (0.12)	0.04 (0.09)
Motor Vehicle Death	-0.02 (0.15)	0.04 (0.09)
<u>Panel (c): Misconduct, Credit, and Education</u>		
Separated for Misconduct	0.17 (1.24)	-1.02 (0.70)
Ever Incarcerated	0.33 (0.46)	0.10 (0.25)
Credit Score	3.65 (2.81)	1.32 (1.58)
College Enrollment	1.66 (1.44)	1.09 (0.81)
Associates Deg+	0.93 (0.91)	0.66 (0.47)
Observations	101,387	101,387

*Notes:* This table reports estimates that change the endogenous variable to be “any deployment” within 3 years of arrival and the instrument to be average peer rates of “any deployment” within 3 years of arrival. Our baseline specification where the endogenous variable is months deployed and the instrument is peers months deployed is reported in column (2) for ease of comparison. The sample size for incarceration and credit outcomes are smaller: 100,380 for incarceration and 93,252 for Vantage credit score in 2020. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

**Table A.18: Alternative estimators: Covariate Balance**

	(1) Baseline	(2) UJIVE (using BCT×quarter dummies)	(3) LIML	(4) 2SLS
Black	0.57 (0.45)	0.64 (0.45)	0.58 (0.44)	0.50 (0.44)
Hispanic	-0.40 (0.47)	-0.50 (0.47)	-0.47 (0.46)	-0.39 (0.46)
Other Race	0.02 (0.31)	-0.01 (0.31)	0.00 (0.30)	0.03 (0.30)
Married	0.13 (0.49)	0.13 (0.50)	0.20 (0.48)	0.11 (0.48)
Num. Dependents	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)
HS Graduate +	0.50 (0.44)	0.52 (0.44)	0.42 (0.42)	0.66 (0.42)
Age	0.09* (0.05)	0.08 (0.05)	0.10** (0.05)	0.08 (0.05)
AFQT	-0.29 (0.23)	-0.29 (0.23)	-0.27 (0.22)	-0.22 (0.22)
Obs.	157,415	157,415	157,415	157,415

*Notes:* This table presents balance tests using alternative estimators. The first column is similar to Table 2, but reports the effect of own months deployed on the outcome using peer months deployed as the instrument (instead of simply reporting the reduced form effect of the instrument as in Table 2). This is done for comparability with subsequent columns. The second column uses a UJIVE estimator, the third column uses LIML, and the fourth column uses 2SLS. In each of columns 2-4, we use BCT-by-quarter of enlistment dummies as instruments. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

**Table A.19: Alternative estimators: Effects on Health, Education, & Crime**

	8 Years Out			
	Baseline	UJIVE	LIML	2SLS
(using BCT×quarter dummies)				
<u>VADC &amp; Trauma of War</u>				
Combat Death	0.48*** (0.11)	0.50*** (0.11)	0.51*** (0.11)	0.44*** (0.11)
Ever Combat Injury	4.43*** (0.31)	4.30*** (0.30)	4.38*** (0.30)	4.35*** (0.30)
Significant Army Profile	2.62*** (0.59)	2.47*** (0.59)	2.52*** (0.57)	2.31*** (0.57)
Annual Amt VADC	2602*** (172)	2537*** (172)	2565*** (166)	2512*** (166)
Any VADC Receipt	9.42*** (0.80)	9.36*** (0.80)	9.36*** (0.77)	9.23*** (0.77)
<u>Noncombat Mortality</u>				
Noncombat Death	0.05 (0.18)	0.002 (0.179)	0.003 (0.173)	-0.04 (0.17)
Death of Despair	0.002 (0.138)	-0.04 (0.14)	-0.03 (0.13)	-0.05 (0.13)
Suicide	-0.02 (0.11)	-0.03 (0.10)	-0.03 (0.10)	-0.05 (0.10)
Drug- or Alcohol-Rel. Death	0.04 (0.09)	0.01 (0.09)	0.03 (0.09)	0.01 (0.09)
Motor Vehicle Death	0.04 (0.09)	0.05 (0.09)	0.03 (0.08)	0.02 (0.08)
<u>Misconduct &amp; Education</u>				
Separated for Misconduct	-1.02 (0.70)	-1.19* (0.71)	-0.82 (0.69)	-2.05*** (0.68)
Ever Incarcerated	0.10 (0.25)	0.16 (0.25)	0.11 (0.24)	0.01 (0.24)
Credit Score in 2020 (Vantage)	1.32 (1.58)	0.96 (1.56)	1.22 (1.51)	2.50* (1.51)
Enroll in College	1.09 (0.81)	1.17 (0.82)	1.11 (0.79)	1.42* (0.79)
Assc Deg+	0.66 (0.47)	0.75 (0.47)	0.70 (0.46)	0.73 (0.46)
Obs.	101,387	101,387	101,387	101,387

*Notes:* This table presents estimated effects on outcomes using alternative estimators. The first column repeats our baseline specification and results. The second column uses a UJIVE estimator, the third column uses LIML, and the fourth column uses 2SLS. In each of columns 2-4, we use BCT-by-quarter of enlistment dummies as instruments. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

**Table A.20: Covariate balance for peer casualties**

	(1) Dep. Instrument × 10	(2) (Dep. Inst. × 10) × (1σ Peer Cas)
Black	0.47 (0.47)	0.05 (0.11)
Hispanic	-0.64 (0.49)	0.17 (0.12)
Other Race	0.13 (0.32)	-0.08 (0.08)
Married	-0.01 (0.51)	0.10 (0.13)
Num. Dependents	0.01 (0.01)	0.002 (0.003)
HS Graduate +	0.55 (0.45)	-0.05 (0.15)
Age	0.07 (0.05)	0.01 (0.01)
AFQT	-0.28 (0.24)	-0.003 (0.064)
Observations		157,415
P-value on (Dep Inst) = 0		0.362
P-value on (Dep Inst x Peer Cas) = 0		0.847
P-value on (Dep Inst) = (Dep Inst x Peer Cas) = 0		0.590

*Notes:* This table reports covariate balance regressions relating to the peer casualty specification discussed in Section 4. Each row reports the coefficients from a separate regression of the stated covariate on peer months deployed within 3 years (our “Dep. Instrument”) and the interaction of peer months deployed with peer casualty rates. Peer casualties are the share of peer soldiers (those who arrive in the same BCT within the same quarter) who suffer non-fatal casualties (i.e. combat injuries, or being “Wounded In Action”) or fatal casualties (i.e. combat deaths) within three years. All regressions include duty-station by job by initial assignment year by term-length fixed effects. For ease of interpretation, coefficients and standard errors in column (1) are scaled by 10. Coefficients and standard errors in column (2) are scaled by  $10\sigma$ , where  $\sigma$  is the sample standard deviation of peer casualties. We fail to reject the null hypothesis that all coefficients for both the instrument and the interaction of the instrument and peer casualties are jointly zero. Heteroskedasticity-robust standard errors are reported in parentheses. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

**Table A.21: Effects of violent deployments on disability diagnoses**

	(1) 10 Months Deployed	(2) (10 Mths Dep) × (1 $\sigma$ Peer Cas)	(3) Mean
<b>Panel (a): Top 5 Conditions</b>			
Tinnitus	3.93*** (0.71)	1.40*** (0.18)	20.63
Limitation of flexion, knee	1.35** (0.56)	0.31** (0.13)	10.77
PTSD	9.87*** (0.65)	1.69*** (0.18)	16.71
Lumbosacral or cervical strain	1.54** (0.62)	0.63*** (0.15)	14.07
Limitation of motion of the ankle	0.84** (0.42)	0.12 (0.10)	5.78
<b>Panel (b): Additional Outcomes</b>			
Serious or Very Serious Combat Injury	0.03 (0.10)	0.19*** (0.03)	0.43
Very Serious Combat Injury	0.01 (0.05)	0.04** (0.01)	0.10
Any VADC w/ Amputation	0.01 (0.08)	0.11*** (0.03)	0.24
Any VADC IU or CDR 100	1.99*** (0.36)	0.45*** (0.09)	4.12
Any SSDI or SSI	1.69*** (0.33)	0.52*** (0.09)	3.39
Annual Amt SSI/SSDI	262.56*** (56.93)	93.44*** (16.83)	569.37
Observations	101,387		

*Notes:* This table reports 2SLS estimates of Equation 6 (with corresponding first stage equations 7 and 8) on the outcomes in Table A.5. As described in Section 4, we augment our baseline model to include an interaction between months deployed and peer casualty rates, which proxy for more dangerous deployments. Peer casualties are the share of peer soldiers (those who arrive in the same BCT within the same quarter) who suffer non-fatal combat injuries or fatal combat deaths within three years. Column (1) reports  $\hat{\beta}$  while Column (2) reports  $\hat{\gamma}$ . Each row represents a separate regression on a separate outcome. Coefficients and standard errors in column (1) are scaled by 10. Coefficients and standard errors in column (2) are scaled by  $10\sigma$ , where  $\sigma$  is the sample standard deviation of peer casualties. Estimates in column (1) can therefore be interpreted as the effect of a ten month deployment with zero peer casualties while estimates in column (2) can be interpreted as the additional effect of a standard deviation increase in peer casualties during a ten month deployment. Heteroskedasticity-robust standard errors are reported in parentheses. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

**Table A.22: Effects of deployment by occupation type as of 8 years**

	(1)	(2)	(3)	(4)	(5)
	Combat Occupations	Noncombat Occupations			
	Mean	10 Months Deployed	Mean	10 Months Deployed	P-value of difference
<b>Panel (a): Trauma of War and Disability</b>					
Combat Death	0.68	0.65*** (0.15)	0.18	0.17 (0.15)	0.0214
Ever Combat Injury	5.62	6.05*** (0.44)	1.64	1.50*** (0.31)	0.0000
Significant Army Profile	15.46	3.27*** (0.73)	14.32	1.46 (0.97)	0.1336
Annual Amt VADC	6,202.92	3033.76*** (210.51)	6,001.09	1821.98*** (295.91)	0.0007
Any VADC Receipt	38.24	11.16*** (0.99)	35.85	6.26*** (1.34)	0.0029
<b>Panel (b): Noncombat Mortality Outcomes</b>					
Noncombat Death	1.41	0.02 (0.23)	0.97	0.09 (0.30)	0.8380
Death of Despair	0.92	-0.05 (0.18)	0.56	0.10 (0.20)	0.5607
Suicide	0.51	-0.04 (0.14)	0.31	0.00 (0.16)	0.8561
Drug- or Alcohol-Rel. Death	0.44	-0.03 (0.12)	0.27	0.17 (0.14)	0.2914
Motor Vehicle Death	0.29	0.04 (0.10)	0.23	0.03 (0.16)	0.9346
<b>Panel (c): Misconduct, Credit, and Education</b>					
Separated for Misconduct/Barred	24.93	-1.58* (0.87)	25.27	-0.02 (1.19)	0.2858
Ever Incarcerated	2.45	0.18 (0.30)	2.36	-0.06 (0.44)	0.6445
Credit Score in 2020 (Vantage)	657.49	0.40 (1.95)	652.78	3.00 (2.67)	0.4264
College Enrollment	53.44	1.87* (1.02)	59.64	-0.32 (1.34)	0.1898
Assc Deg+	7.80	0.90 (0.56)	10.25	0.23 (0.86)	0.5112
Observations		64,473		36,914	

*Notes:* This table reports estimates of Equation 1 on our primary outcomes for samples split by combat and noncombat occupation. All outcomes are as of 8 years after a soldier arrives at his initial operational assignment except credit, which is as of 2020. Each row represents a separate regression on a separate outcome. Columns (1) and (3) report the mean outcome for combat and noncombat occupations. Columns (2) and (4) report the estimates from  $\beta$  on the regressions restricted to either combat or noncombat occupations. Column (5) reports the p-value on combat occupation interacted with 10 months deployed from a fully interacted model. All coefficients and standard errors are scaled by 10 so that estimates of  $\beta$  can be interpreted as the effect of a ten-month deployment. Heteroskedasticity-robust standard errors are reported in parentheses. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

**Table A.23:** Estimated variance of direct BCT effects on outcomes

	All BCT $\times$ quarter		BCT $\times$ quarter with $n > 100$	
	Variance (1)	S.D. (2)	Variance (3)	S.D. (4)
Months deployed	12.39 (0.22)	3.52 (0.03)	12.68 (0.23)	3.56 (0.03)
Any VADC	33.91 (7.23)	5.82 (0.62)	26.96 (7.15)	5.19 (0.69)
VADC Amt.	3,111,615 (636,957)	1,764 (181)	2,778,300 (533,535)	1,667 (160)
Noncombat death	-0.02 (0.35)	-	0.21 (0.30)	0.46 (0.33)

*Notes:* This table presents estimates of the variance and standard deviation of direct effects of BCT assignments on the stated outcome. Each estimate is constructed by regressing outcomes on indicators for assignment to each BCT by quarter of arrival controlling for duty-station by job by year of arrival by term-length fixed effects, which are the same controls used in the baseline analysis. Letting  $\hat{\beta}_b$  denote the coefficient on BCT-by-qtr indicator and  $s_b$  its associated standard error, the variance estimated as  $\frac{1}{B} \sum_{b=1}^B (\beta_b - \bar{\beta})^2 - s_b^2$ , where  $B$  is the total number of indicators and  $\bar{\beta}$  is their average. The standard errors shown in parentheses for each estimate are computed as  $\frac{1}{B^2} \sum_{b=1}^B 2s_b^4 + 4s_b^2 \left( (\beta_b - \bar{\beta})^2 - s_b^2 \right)$ . Standard errors for the standard deviation estimates are computed by delta method. Outcomes are measured 8 years after arrival, with the exception of months deployed which is measured within 3 years of arrival for consistency with our main specifications.

**Table A.24:** Effects of deployment and peer casualties using alternative specifications

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
Panel (a) - VADC and Trauma of War									
	$Y_i = \delta_{k(i)} + \beta D_i + \gamma(D_i \times W_i) + \epsilon_i$		$Y_i = \delta_{k(i)} + \beta D_i + \lambda W_i + \epsilon_i$		$Y_i = \delta_{k(i)} + \beta D_i + \lambda W_i + \gamma(D_i \times W_i) + \epsilon_i$				
Mean	10 Months Deployed	(10 Mths Dep) x (1 $\sigma$ Peer Cas)	10 Months Deployed	1 $\sigma$ Peer Casualties	10 Months Deployed	1 $\sigma$ Peer Casualties	(10 Mths Dep) x (1 $\sigma$ Peer Cas)	$\frac{\partial Y_i}{\partial W_i}   (D_i = 10)$	
Combat Death	0.50	0.01 (0.12)	0.27*** (0.04)	0.17 (0.12)	0.28*** (0.04)	-0.01 (0.12)	-0.04 (0.14)	0.30** (0.14)	0.27*** (0.04)
Ever Combat Injury	4.17	1.16*** (0.33)	1.86*** (0.11)	2.15*** (0.32)	2.09*** (0.12)	1.87*** (0.34)	1.60*** (0.40)	0.47 (0.38)	2.06*** (0.12)
Significant Army Profile	15.04	0.84 (0.64)	1.02*** (0.16)	1.35** (0.61)	1.17*** (0.18)	1.38** (0.69)	1.24* (0.64)	-0.06 (0.59)	1.17*** (0.18)
Annual Amt VADC	6,129	1876*** (190)	414*** (48)	2056*** (181)	500*** (53)	2245*** (204)	835*** (189)	-316* (170)	519*** (54)
Any VADC Receipt	37.37	7.16*** (0.88)	1.29*** (0.21)	7.67*** (0.84)	1.60*** (0.23)	8.56*** (0.95)	3.17*** (0.86)	-1.49* (0.78)	1.69*** (0.24)
Panel (b) - Noncombat Mortality Outcomes									
	$Y_i = \delta_{k(i)} + \beta D_i + \gamma(D_i \times W_i) + \epsilon_i$		$Y_i = \delta_{k(i)} + \beta D_i + \lambda W_i + \epsilon_i$		$Y_i = \delta_{k(i)} + \beta D_i + \lambda W_i + \gamma(D_i \times W_i) + \epsilon_i$				
Mean	10 Months Deployed	(10 Mths Dep) x (1 $\sigma$ Peer Cas)	10 Months Deployed	1 $\sigma$ Peer Casualties	10 Months Deployed	1 $\sigma$ Peer Casualties	(10 Mths Dep) x (1 $\sigma$ Peer Cas)	$\frac{\partial Y_i}{\partial W_i}   (D_i = 10)$	
Noncombat Death	1.25	0.07 (0.20)	-0.01 (0.05)	0.05 (0.19)	-0.01 (0.06)	0.13 (0.22)	0.13 (0.20)	-0.12 (0.19)	0.00 (0.06)
Death of Despair	0.79	0.10 (0.16)	-0.06 (0.04)	0.06 (0.15)	-0.06 (0.05)	0.14 (0.17)	0.08 (0.16)	-0.13 (0.15)	-0.05 (0.05)
Suicide	0.44	0.02 (0.12)	-0.02 (0.03)	0.01 (0.11)	-0.03 (0.03)	-0.02 (0.13)	-0.10 (0.11)	0.06 (0.10)	-0.04 (0.03)
Drug- or Alcohol-Rel. Death	0.38	0.14 (0.11)	-0.06* (0.03)	0.10 (0.10)	-0.05 (0.03)	0.19* (0.11)	0.11 (0.12)	-0.15 (0.11)	-0.04 (0.03)
Motor Vehicle Death	0.27	0.04 (0.09)	-0.00 (0.02)	0.04 (0.09)	0.00 (0.02)	0.07 (0.10)	0.05 (0.10)	-0.04 (0.09)	0.00 (0.02)
Panel (c) - Misconduct, Credit, and Education									
	$Y_i = \delta_{k(i)} + \beta D_i + \gamma(D_i \times W_i) + \epsilon_i$		$Y_i = \delta_{k(i)} + \beta D_i + \lambda W_i + \epsilon_i$		$Y_i = \delta_{k(i)} + \beta D_i + \lambda W_i + \gamma(D_i \times W_i) + \epsilon_i$				
Mean	10 Months Deployed	(10 Mths Dep) x (1 $\sigma$ Peer Cas)	10 Months Deployed	1 $\sigma$ Peer Casualties	10 Months Deployed	1 $\sigma$ Peer Casualties	(10 Mths Dep) x (1 $\sigma$ Peer Cas)	$\frac{\partial Y_i}{\partial W_i}   (D_i = 10)$	
Separated for Misconduct	25.05	-0.90 (0.77)	-0.07 (0.18)	-1.02 (0.74)	-0.00 (0.20)	-0.49 (0.83)	0.93 (0.74)	-0.88 (0.66)	0.05 (0.21)
Ever Incarcerated	2.41	-0.07 (0.28)	0.10 (0.07)	-0.06 (0.26)	0.14* (0.07)	0.14 (0.30)	0.48* (0.28)	-0.32 (0.25)	0.16** (0.07)
Enroll in College	55.70	1.13 (0.89)	-0.03 (0.21)	1.18 (0.85)	-0.08 (0.23)	0.82 (0.97)	-0.72 (0.87)	0.60 (0.79)	-0.12 (0.24)
Assc Deg+	8.69	0.41 (0.52)	0.14 (0.12)	0.50 (0.49)	0.15 (0.13)	0.38 (0.58)	-0.06 (0.51)	0.20 (0.46)	0.14 (0.14)
Credit Score in 2020 (Vantage)	655.78	1.34 (1.74)	-0.01 (0.41)	1.29 (1.66)	0.03 (0.46)	1.56 (1.88)	0.51 (1.69)	-0.45 (1.51)	0.06 (0.47)
Observations	101,387		101,387		101,387				

Notes: Columns (1) and (2) of this table report 2SLS estimates of Equation 6 (with corresponding first stage Equations 7 and 8) on our primary outcomes as of 8 years after a soldier arrives at his initial operational assignment, except credit outcomes which are as of 2020. These are our baseline estimates reported in Table 5. Columns (3) and (4) report corresponding estimates that replace  $D_i$  and  $(D_i \times W_i)$  with separate terms for  $D_i$  and  $W_i$ , as indicated by the equation below the panel headings. Columns (5)-(7) report estimates with  $D_i$ ,  $W_i$ , and  $(D_i \times W_i)$  (also indicated by the equation below the panel headings). Column (8) reports the marginal effect of  $W_i$  when  $D_i = 10$  from the model with  $D_i$ ,  $W_i$ , and  $(D_i \times W_i)$  to have an estimate that is comparable to that of the other models. The samples sizes for credit and incarceration include 93,252 and 100,381 individuals, respectively. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

**Table A.25:** The effects of more violent deployments using a less parametric specification

	Panel (a) - VADC and Trauma of War				
	(1) $D_i \times 1\{W_i = 0\}$	(2) $D_i \times 1\{0 < W_i \leq 4\}$	(3) $D_i \times 1\{4 < W_i \leq 8\}$	(4) $D_i \times 1\{W_i > 8\}$	(5) Mean
Combat Death	-0.04 (0.12)	0.16 (0.12)	0.41*** (0.12)	0.87*** (0.15)	0.50
Ever Combat Injury	0.59* (0.33)	2.07*** (0.32)	4.42*** (0.35)	6.72*** (0.38)	4.17
Significant Army Profile	1.08 (0.71)	1.45** (0.63)	2.43*** (0.62)	3.87*** (0.65)	15.04
Annual Amt VADC	1833.86*** (213.05)	2089.29*** (187.45)	2677.34*** (182.51)	3003.32*** (187.79)	6,129.44
Any VADC Receipt	6.59*** (0.97)	7.66*** (0.87)	9.78*** (0.84)	10.73*** (0.87)	37.37

	Panel (b) - Noncombat Mortality Outcomes				
	(1) $D_i \times 1\{W_i = 0\}$	(2) $D_i \times 1\{0 < W_i \leq 4\}$	(3) $D_i \times 1\{4 < W_i \leq 8\}$	(4) $D_i \times 1\{W_i > 8\}$	(5) Mean
Noncombat Death	0.08 (0.22)	0.05 (0.19)	0.04 (0.20)	0.04 (0.20)	1.25
Death of Despair	0.12 (0.18)	0.07 (0.15)	0.01 (0.15)	-0.07 (0.15)	0.79
Suicide	0.07 (0.14)	0.03 (0.12)	-0.07 (0.11)	-0.03 (0.11)	0.44
Drug- or Alcohol-Rel. Death	0.10 (0.12)	0.09 (0.10)	0.09 (0.10)	-0.05 (0.10)	0.38
Motor Vehicle Death	-0.02 (0.10)	0.03 (0.09)	0.04 (0.09)	0.06 (0.10)	0.27

	Panel (c) - Misconduct, Credit, and Education				
	(1) $D_i \times 1\{W_i = 0\}$	(2) $D_i \times 1\{0 < W_i \leq 4\}$	(3) $D_i \times 1\{4 < W_i \leq 8\}$	(4) $D_i \times 1\{W_i > 8\}$	(5) Mean
Separated for Misconduct	-1.31 (0.87)	-0.81 (0.77)	-1.01 (0.74)	-1.09 (0.76)	25.05
Enroll in College	1.65* (0.99)	0.89 (0.88)	1.34 (0.86)	0.80 (0.89)	55.70
Assc Deg+	-0.11 (0.58)	0.62 (0.52)	0.83* (0.50)	0.69 (0.51)	8.69
Ever Incarcerated	-0.12 (0.31)	0.00 (0.27)	0.17 (0.27)	0.13 (0.27)	2.41
Credit Score in 2020 (Vantage)	1.11 (1.92)	0.66 (1.72)	2.62 (1.67)	0.39 (1.71)	655.78

*Notes:* This table reports 2SLS estimates of  $Y_i = \delta_{k(i)} + \gamma_1(D_i \times 1(W_i = 0)) + \gamma_2(D_i \times 1(0 < W_i \leq 4)) + \gamma_3(D_i \times 1(4 < W_i \leq 8)) + \gamma_4(D_i \times 1(W_i > 8)) + \epsilon_i$ . Each row reports estimates of this regression equation on the outcome identified in the left-most column. Subsequent columns report the estimate corresponding to the term identified in the column heading. Column (5) reports the outcome mean, which is measured 8 years after soldiers arrive at their first operational unit. All regressions are restricted to the sample of soldiers assigned to their first unit between 2005 and 2011 (soldiers who have outcomes we can measure 8 years after arrival). The number of observations is 101,387, except for ever incarcerated (100,381 observations) and credit (93,252 observations). Standard errors are reported in parentheses. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

**Table A.26: Effects of deployments with 0 peer casualties**

	(1)	(2)	(3)	(4)
	Baseline	Sample/Spec	$W_i = 0$ Sample	
	10 Months Deployed	(10 Mths Dep) $\times (1\sigma$ Peer Cas)	10 Months Deployed No Peer Cas.	P-Value of $H_0$ : Col (1) = Col (3)
<b>Panel (a): Trauma and Disability</b>				
Combat Death	0.01 (0.12)	0.27*** (0.04)	-0.13 (0.15)	0.461
Ever Combat Injury	1.16*** (0.33)	1.86*** (0.11)	0.98** (0.47)	0.740
Significant Army Profile	0.84 (0.64)	1.02*** (0.16)	0.64 (1.59)	0.908
Annual Amt VADC	1876.16*** (190.42)	414.18*** (47.93)	1140.47** (482.20)	0.146
Any VADC Receipt	7.16*** (0.88)	1.29*** (0.21)	2.83 (2.29)	0.071
<b>Panel (b): Noncombat Mortality Outcomes</b>				
Noncombat Death	0.07 (0.20)	-0.01 (0.05)	-0.43 (0.51)	0.342
Death of Despair	0.10 (0.16)	-0.06 (0.04)	-0.50 (0.42)	0.166
Suicide	0.02 (0.12)	-0.02 (0.03)	-0.26 (0.36)	0.455
Drug- or Alcohol-Rel. Death	0.14 (0.11)	-0.06* (0.03)	-0.36 (0.28)	0.084
Motor Vehicle Death	0.04 (0.09)	-0.00 (0.02)	0.12 (0.21)	0.732
<b>Panel (c): Misconduct, Credit, and Education</b>				
Separated for Misconduct	-0.90 (0.77)	-0.07 (0.18)	3.26 (2.03)	0.050
Ever Incarcerated	-0.06 (0.28)	0.10 (0.07)	-0.07 (0.74)	0.993
Credit Score in 2020 (Vantage)	1.26 (1.62)	-0.01 (0.38)	5.92 (4.22)	0.291
Enroll in College	1.13 (0.89)	-0.03 (0.21)	0.91 (2.35)	0.926
Assc Deg+	0.41 (0.52)	0.14 (0.12)	-1.16 (1.50)	0.312
P-val, joint test that all est. in col (1) and (3) are equal:				0.312
Observations	101,387		15,687	

*Notes:* Columns (1) and (2) report 2SLS estimates of Equation 6 (with first stage Equations 7 and 8) on our primary outcomes as of 8 years after a soldier arrives at his initial operational assignment, except credit outcomes which are as of 2020. As described in Section 4, we augment our baseline model to include an interaction between months deployed and peer casualty rates, which proxy for more dangerous deployments. Peer casualties are the share of peer soldiers (those who arrive in the same BCT within the same quarter) who suffer non-fatal combat injuries or fatal combat deaths within three years. Column (1) reports  $\hat{\beta}$  while Column (2) reports  $\hat{\gamma}$ . Each row represents a separate regression on a separate outcome. Coefficients and standard errors in column (1) are scaled by 10. Coefficients and standard errors in column (2) are scaled by  $10\sigma$ , where  $\sigma$  is the sample standard deviation of peer casualties. In addition, the sample sizes for incarceration and credit are smaller: 100,381 for Ever Incarcerated and 93,252 for Vantage Credit Score 2020. Column (3) reports  $\hat{\beta}$  estimates from Equation 1 when restricting the sample to soldiers assigned to BCTs with a peer casualty rate of zero. Column (4) reports the p-value from a test of whether the estimate in columns (1) and (3) are equal. The p-value at the bottom row of the table reports the p-value from a joint test of whether all the estimates in column (1) and (3) are equal. Heteroskedasticity-robust standard errors are reported in parentheses. Significance levels: \* : 10% \*\* : 5% \*\*\* : 1%.

**Table A.27: Cohort decomposition**

	(1)	(2)	(3)
	$\Delta$ 01-peak	$\Delta$ peak-11	YoY Var. Expl.
<u>Panel (a): Combat Injury</u>			
Dep. Variable	2.694	-3.127	
Xs	-0.043	-0.003	0.000
Frac. Explained by Xs	-0.02	0.001	
Dep. and Cas.	2.624	-2.387	0.602
Frac. Explained by Dep. and Cas.	0.97	0.76	
<u>Panel (b): Noncombat Death</u>			
Dep. Variable	0.443	-0.473	
Xs	0.128	-0.190	0.315
Frac. Explained by Xs	0.29	0.40	
Dep. and Cas.	0.018	-0.025	0.021
Frac. Explained by Dep. and Cas.	0.04	0.05	
<u>Panel (c): Annual VADC Amt</u>			
Dep. Variable	2608.58	2240.28	
Xs	123.55	24.23	0.085
Frac. Explained by Xs	0.05	0.01	
Dep. and Cas.	909.70	-930.00	-0.140
Frac. Explained by Dep. and Cas.	0.35	-0.42	
<u>Panel (d): Annual SSI/SSDI Amt</u>			
Dep. Variable	376.329	-461.298	
Xs	32.777	-26.683	0.040
Frac. Explained by Xs	0.09	0.06	
Dep. and Cas.	142.436	-140.181	0.269
Frac. Explained by Dep. and Cas.	0.38	0.30	

*Notes:* This Table accompanies Figure 6 and reports measures of how well Xs and Deployment (Dep.) plus Deployment  $\times$  peer casualties (Cas.) can explain differences across cohorts. In panel (a), “peak” corresponds to 2005 (the cohort with the highest combat injury rate), in panel (b) to 2008 (the cohort with the highest noncombat death rate), in panel (c) to 2006 (the middle cohort as there is no peak), and in panel (d) to 2006. In Column (1), “Dep. Variable” reports the change in Combat Death between the 2001 and the peak cohort, while “Xs” reports the predicted change in Combat Death between the 2001 and the peak cohort using only the Xs as predictors. The Fraction Explained by Xs is simply the ratio of the predicted change explained by the Xs over the actual change. “Dep. and Cas.” reports the predicted change in Combat Death between the 2001 and the peak cohort using only months deployed and months deployed  $\times$  peer casualties as predictors. Column (2) repeats this exercise for the change from peak to 2011. Column (3) reports a measure of how well the year-on-year cohort outcome levels ( $Y$ ) (rel. to 2001) are explained by predicted changes based on Xs or Deployment ( $\hat{Y}$ ), calculated as  $\frac{cov(Y, \hat{Y})}{var(\hat{Y})}$ .

**Table A.28: Cohort decomposition for additional outcomes**

	(1)	(2)	(3)
	$\Delta$ 01-peak	$\Delta$ peak-11	YoY Var. Expl.
<u>Panel (a): Combat Death</u>			
Dep. Variable	0.439	-0.616	
Xs	-0.002	0.004	0.008
Frac. Explained by Xs	-0.004	-0.007	
Dep. and Cas.	0.310	-0.271	0.349
Frac. Explained by Dep. and Cas.	0.71	0.44	
<u>Panel (b): Deaths of Despair</u>			
Dep. Variable	0.479	-0.367	
Xs	0.098	-0.136	0.238
Frac. Explained by Xs	0.20	0.37	
Dep. and Cas.	0.014	-0.027	0.030
Frac. Explained by Dep. and Cas.	0.03	0.07	
<u>Panel (c): Suicide</u>			
Dep. Variable	0.271	-0.171	
Xs	0.036	-0.057	0.158
Frac. Explained by Xs	0.13	0.33	
Dep. and Cas.	-0.001	-0.004	0.028
Frac. Explained by Dep. and Cas.	-0.004	0.03	
<u>Panel (d): Any VADC for PTSD</u>			
Dep. Variable	7.843	-1.611	
Xs	0.146	-0.472	0.072
Frac. Explained by Xs	0.02	0.29	
Dep. and Cas.	4.530	-4.727	-0.087
Frac. Explained by Dep. and Cas.	0.58	2.93	

*Notes:* As in Table A.27, this table reports measures of how well Xs and Deployment (Dep.) plus Deployment  $\times$  peer casualties (Cas.) can explain differences across cohorts. "Peak" corresponds to 2005 for Combat Death, 2008 for Deaths of Despair and Suicide, and 2006 (midpoint) for any VADC for PTSD. See notes to Table A.27 for additional details.

**Table A.29: Law, VA Regulation, and Policy/Practice Changes 2000-2015**

Year	Policy Change	Type	Description	Citation
2000	Veteran Claims Assistance Act	Law	There is a 'duty to assist claimants' in obtaining evidence to substantiate their claims	Public Law 106-475
2001	Veterans Education and Benefits Expansion	Law	Repeals the 30-year manifestation period limitation, following service in Vietnam, required for veterans' disability benefits coverage for certain respiratory cancers. extends the period for the presumption of a service connection between certain herbicide-related disabilities and service in Vietnam to 20 years (previously ten); Extends the presumptive period for disabilities associated with Persian Gulf War service until December 31, 2011, or such later date as prescribed by the Secretary. Includes within such disabilities any poorly defined chronic multi-symptom illness of unknown etiology characterized by two or more of the currently listed symptoms. Includes additional signs or symptoms that may be considered a manifestation of an undiagnosed illness.	Public Law 107-103
2001	Type 2 Diabetes added as presumptive condition	VA Rule	Established a presumptive service connection for Type 2 Diabetes for those who served in Vietnam	66 FR 23166
2002	Veterans Benefits Improvement Act	Law	Considers the hearing loss and/or tinnitus of a veteran whose active military occupational specialty likely exposed such veteran to a high level of acoustic trauma to have been incurred in or aggravated by military service (and therefore to be compensable under veterans' disability compensation), notwithstanding that there is no record of evidence of such hearing loss or tinnitus during such service. Requires the payment of veterans' disability compensation to a woman veteran for the anatomical loss of half or more of the tissue of (previously, all of the tissue of) one or more breasts.	Public Law 107-330
2002	PTSD based on personal assault	VA Rule	Evidence other than the veteran's service records may corroborate the occurrence of the stressor for PTSD based on personal assault	67 FR 10330
2003	National Defense Authorization Act FY 2004	Law	Granted concurrent receipt of retirement pay and VADC for those rated with 50% or greater disability	Public Law 108-136
2004	Veterans Benefits Improvement Act	Law	Codifies increases in the rates of veterans' disability compensation; presumes various cancers to be service-connected in the case of veterans exposed to ionizing radiation; treats a disability incurred through Department treatment or vocational rehabilitation as a service-connected disability for purposes of eligibility for veterans' benefits.	Public Law 108-454
2005	Presumption of Sound Condition	VA Rule	The intended effect of this amendment is to require that VA, not the claimant, prove that the disability preexisted entrance into military service and that the disability was not aggravated by such service before the presumption of soundness on entrance onto active duty is overcome.	70 FR 23027
2006	Military Quality of Life and Veterans Affairs Appropriations Act	Law	Prohibits the use of funds: (1) to retroactively or prospectively revoke or reduce an award of veteran's disability compensation for post-traumatic stress disorder (PTSD) with respect to 2,100 compensation cases identified and reviewed by the Department's Inspector General; requires the Department to conduct an information campaign, in states with an average annual disability compensation payment of less than \$7,300, to inform all veterans receiving disability compensation of the history of below average payments to veterans in such states, including instructions for submitting new claims and requesting review of past disability claims and ratings.	Public Law 109-105
2006	Veterans Housing Opportunity and Benefits Improvement Act	Law	Adds atherosclerotic heart disease or hypertensive vascular disease, stroke, and their complications to the list of diseases or conditions presumed to be associated with prisoner-of-war status, and therefore compensable under veterans' disability compensation.	Public Law 109-139
2006	Aggravation of Non-service connected disability	VA Rule	Any increase in severity of a nonservice-connected disease or injury that is proximately due to or the result of a service-connected disease or injury, and not due to the natural progress of the nonservice-connected disease, will be service connected.	71 FR 52744
2006	Phase-In of Full Concurrent Receipt of Military Retired Pay and Veterans Disability Compensation	VA Rule	This final rule implements section 641 of the National Defense Authorization Act for Fiscal Year 2004 (Pub. L. 108-136)	71 FR 67059
2007	Extension of the Presumptive Period for Compensation for Gulf War Veterans	VA Rule	Extends presumptive period for disabilities resulting from undiagnosed illnesses suffered by veterans who served in the Persian Gulf War	72 FR 68507
2007	Veteran Vision Equity Act	Law	Modifies the standard for awarding disability compensation to veterans for loss of vision	Public Law 110-157

*Notes:* This table reports various congressional laws directly related to VADC, VA rules, and policy changes. Congressional laws were found by searching [congress.gov](https://www.congress.gov) for laws containing 'disability' and 'veteran'. We omit appropriations and authorizations for pay schedule adjustments. VA rules are taken from here [https://www.va.gov/ORPM/VA\\_Regulations\\_Published\\_From\\_Fiscal\\_Year\\_FY\\_2004.asp](https://www.va.gov/ORPM/VA_Regulations_Published_From_Fiscal_Year_FY_2004.asp), we focus only on final rules and omit rules relating to standard updates to diagnostic schedules. Policy changes are those we are aware of from our literature review.

**Table A.30: Law, VA Regulation, and Policy/Practice Changes 2000-2015 (Continued)**

Year	Policy Change	Type	Description	Citation
2008	Veterans Benefits Improvement Act	Law	Directs Secretary to pilot programs to speed up claims processing and to provide information and support submitting claims requiring reports to Congress; extends authority of non-VA contract physicians to carry out reviews; directs the Secretary to report to Congress on progress in addressing variances in compensation payments for veterans; adds osteoporosis to the list of disabilities presumed to be service-connected for POWs; establishes committee to advise the Secretary with respect to the maintenance and periodic readjustment of the VA schedule for rating veteran disabilities.	Public Law 110-389
2008-2011	Policy Responses to 2008 Act	Policy	2 pilot programs to improve claims process and information dissemination (McMahon et al., 2009). Quick Start program helping soldiers submit claims prior to leaving started in July 2008. Centralization and paperless processing of BDD claims (04-09) and Quick-start claims (09). Since 2009, all service members have been eligible to submit claims for VA disability compensation before leaving military service (Congressional Budget Office, 2014). Opening of online applications. Multiple outreach initiatives about these programs, including integration in TAP and DTAP briefings.	United States Congress (May 6, 2010); Broten (2021)
2008	National Defense Authorization Act FY 2009	Law	Requires, with respect to eligibility for retirement due to disability, a presumption that a disability was incurred on active duty unless there is clear and unmistakable evidence that the disability existed before entering into active duty and was not aggravated by active service. (Sec. 727)	Public Law 110-181
2009	Termination of Phase-In Period for Full Concurrent Receipt of Military Retired Pay and Veterans Disability Compensation	VA Rule	Veterans who are entitled to receive veterans disability compensation based on a VA determination of individual unemployability are no longer subject to a phase-in period	74 FR 14491
2009	Posttraumatic Stress Disorder	VA Rule	Eliminates the requirement of evidence corroborating occurrence of the claimed in-service stressor in claims in which PTSD is diagnosed in service	73 FR 64208
2009	Presumption of Service Connection for Osteoporosis for Former Prisoners of War	VA Rule	Establish a presumption of service connection for osteoporosis for former Prisoners of War (POWs). This amendment reflects statutory provisions of the Veterans Benefits Improvement Act of 2008.	74 FR 44288
2010	Veterans' Benefits Act	Law	Authorizes higher levels of veterans' disability compensation for veterans who experience difficulty using prostheses and those in need of regular aid from residuals of traumatic brain injury; amends the Veterans Benefits Act of 2003 to extend through 2012 VA authority for the performance of medical disability evaluations by contract physicians.	Public Law 111-275
2010	Stressor Determinations for Posttraumatic Stress Disorder	VA Rule	Liberalizes the evidentiary standard for establishing the required in-service stressor for PTSD. Eliminates the requirement for corroborating that the claimed in-service stressor occurred if related to fear of hostile military activity and stressor is consistent with the places, types, and circumstances of the veteran's service.	75 FR 39843
2010	Diseases Associated With Exposure to Certain Herbicide Agents	VA Rule	Expands the list of presumed conditions related to Agent Orange and other herbicide exposures	75 FR 53202
2011	VOW to Hire Heroes Act	Law	Mandatory participation of members of the Armed Forces in the Transition Assistance Program (in which disability compensation benefit info and support filing is offered)	Public Law 112-56
2011	Integrated Disability Evaluation System	Policy	Proposed in 2007 and fully implemented in 2011, the Integrated Disability Evaluation System (IDES) streamlined VA and DOD systems for evaluating disabilities of active duty soldiers with limiting health conditions.	
2011	Guidance Letter re: MST claims	Policy	Accept markers in lieu of stressors for PTSD claims linked to MST	United States Government Accountability Office (2014)
2013	Secondary Service Connection for Diagnosable Illnesses Associated With Traumatic Brain Injury	VA Rule	Rule regarding the association between traumatic brain injury (TBI) and five diagnosable illnesses. This amendment establishes that if a veteran who has a service-connected TBI also has one of these diagnosable illnesses, then that illness will be considered service connected as secondary to the TBI.	78 FR 76196
2015	Schedule for Rating Disabilities-Mental Disorders	VA Rule	Update Schedule for Rating Disabilities (VASRD) given changes to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)	80 FR 14308

*Notes:* This table reports various congressional laws directly related to VADC, VA rules, and policy changes. Congressional laws were found by searching [congress.gov](https://www.congress.gov) for laws containing ‘disability’ and ‘veteran’. We omit appropriations and authorizations for pay schedule adjustments. VA rules are taken from here [https://www.va.gov/ORPM/VA\\_Regulations\\_Published\\_From\\_Fiscal\\_Year\\_FY\\_2004.asp](https://www.va.gov/ORPM/VA_Regulations_Published_From_Fiscal_Year_FY_2004.asp), we focus only on final rules and omit rules relating to standard updates to diagnostic schedules. Policy changes are those we are aware of from our literature review.

## B Additional Details on Data and Sample Construction

### B.1 Description of Data

**Army Personnel Records.** Our baseline administrative data on soldiers comes from the Total Army Personnel Database (TAPDB). These data contain demographic characteristics, education levels, Armed Forces Qualification Test (AFQT) scores, military occupation, length of enlistment contract (e.g., 3, 4, 5, or 6 years), and home of record information determined at the time of enlistment. The Army data also include a monthly panel of Army assignment data (i.e., assignment location, brigade of assignment) and medical injury data from the month of their initial enlistment through their last month in the Army or December 2019. We link this data to Army administrative pay records that permit us to identify when soldiers are deployed to a combat zone. Soldiers who serve in a country designated by the Department of Defense as a combat zone receive Imminent Danger Pay (IDP), which is often referred to as Hostile Fire Pay. Our pay records reveal the amount of IDP a soldier receives each month. For most of the years in our study, the DoD did not pro-rate IDP and paid soldiers \$225 if the soldier served in a combat zone at any point within the calendar month. However, the DoD began pro-rating IDP in 2012. As a result, we classify a soldier as having been deployed in a specific month if he receives any IDP for that month. We also link to official casualty records from the Defense Casualty Analysis System (DCAS), which indicate if and when a soldier was wounded or killed in a combat zone as a result of hostile action.

**Disability Records.** Our data on disability receipt combine Veterans Affairs Disability Compensation (VADC) with the two main federally funded disability programs administered by the Social Security Administration (SSA)—Social Security Disability Insurance (SSDI) and Supplemental Security Income (SSI). These data allow us to observe disability records for each individual in our sample in the month of September for each year from 2001 through 2019. Records from VADC include a soldier's monthly benefit payment (which we multiply by 12 to reflect an annual payment) and the specific conditions for which the soldier qualifies for VADC. We adjust for inflation by converting all values to 2020 USD using the CPI-U.

**National Death Index (NDI) Mortality Data.** We linked the soldiers in our sample to mortality data from the Center for Disease Control and Prevention's National Death Index (NDI) obtained through the Mortality Data Repository operated jointly by the VA and the U.S. Department of Defense. The National Death Index is widely considered the gold standard for mortality data due to its comprehensiveness, accuracy, and ability to identify specific causes of death through ICD-10 codes (Cowper et al., 2002). Data from the NDI are valid through 2019 and indicate the month of death. We record individuals in our sample as deceased if they died in a current or prior month.

**Army Misconduct Records.** The Uniform Code of Military Justice allows commanders to handle low level misbehavior via a formal process known as an Article 15, which gives the commander the authority to formally punish misbehaving soldiers by demoting them and reducing their pay. When soldiers exhibit misconduct for reasons related to misbehavior (e.g. drinking while on duty),

Commanders have the authority to refer them for separation from the Army or to bar them from reenlisting. We combine formal misconduct separations and separations with a bar to re-enlistment into one outcome for simplicity and power; however, we find similar results when considering these outcomes in isolation. We define demotion as any reduction in rank from one month relative to the previous month.

**Incarceration and Army Criminal Records.** We acquired our national data on incarceration from LexisNexis through two data purchases in 2019 and 2020. Our data purchases cover all newly enlisted soldiers between 2002 and 2015.<sup>39</sup> The data covers all criminal histories on file at LexisNexis that would consequently show up in a background check when using their services.

The exact procedures LexisNexis follows to assemble its sample is a trade secret. In practice, LexisNexis' actual coverage can vary by state or even county and time. Incarceration records, which typically come from state department of corrections, exist for almost all states (48 plus Washington D.C.) with coverage generally beginning prior to our analysis sample. Additionally, we obtained Army incarceration records covering all incarceration spells in military prison. Our incarceration outcome combines any incarceration in LexisNexis or in military records.

We supplement LexisNexis and military incarceration outcomes with Army military justice records from the Army Law Enforcement Reporting and Tracking System (ALERTS) database. We observe all final Military Police (MP) and U.S. Army Criminal Investigative Division (CID) cases available in the ALERTS database from FY2005 through FY2021. Some CID criminal investigations are escalated from MP investigations when CID has jurisdictions, other CID investigations are triggered by reports from another agency (e.g. positive drug tests). Cases are final when investigations are marked as complete. The data include offense dates, descriptions, and codes. Offenses are grouped into four meta-categories: Violent Felonies (e.g. sex crimes, assault), Non-Violent Felonies (e.g. drug crimes), Misdemeanors (e.g. drunk and disorderly), and Other (predominantly AWOL or Desertion).

**LexisNexis Foreclosure Data and Experian Credit Data on Financial Health and Well-Being.** We acquired our national data on foreclosure actions from LexisNexis through the same two data purchases mentioned above. The LexisNexis foreclosure data contains variables related to all phases of the foreclosure process: defaults, notice of default, legal actions (e.g. notice of lis pendens and final judgment of foreclosure), auction, and final sale. However, these variables are inconsistently recorded across different states. For that reason, we take a conservative approach, and construct our variable as an indicator that takes a value of 1 if the soldier has any foreclosure action occurring after they arrive at their first unit.

We acquired servicemember credit data through two separate purchases from the Experian credit bureau. The first data purchase included a snapshot of soldier credit scores, debt holdings, and bankruptcy information from June 2017. The second data purchase included similar information from December 2020.

Our primary credit outcome is the Vantage credit score, which is based on a model developed by

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<sup>39</sup>In practice, we purchased data for 99.3% of the soldiers in our analysis sample due to minor discrepancies in the entry date variable used for sample selection.

the three major credit bureaus and is meant to predict how likely a consumer is to repay borrowed money. For that reason, we take it as an omnibus measure of financial health. More practically, the vantage score ranges from 300 to 850 and is most heavily influenced by payment history, credit age / mix, credit utilization, and total balances with a smaller role for recent credit applications and available credit. We also observe FICO credit scores, but only in the 2020 credit data. Our credit data include information on total debt, the composition of debt (allowing us to distinguish between mortgage debt, auto debt, debt from student loans, and other debt), debt flagged as derogatory and in collection, and filings for bankruptcy.

**National Student Clearinghouse (NSC) Education Data.** Outcomes for post-secondary attendance and degree completion come from the National Student Clearinghouse (NSC). NSC records cover the years 2001 through 2020. In these records we can observe post-secondary enrollment and degree completion while soldiers are in the Army and after soldiers leave the Army. We complement NSC education records with Department of Veterans Affairs administrative records that indicate if a soldier ever used the Post-9/11 GI Bill. Post-9/11 GI Bill benefit levels increase with active duty service time, ranging from 40% of education benefits for soldiers who served for 90 days to 100% of benefits for soldiers who served for 36 months or longer (Barr, 2015; Barr et al., 2021). Also, soldiers who suffer combat injuries are eligible for 100% of Post-9/11 GI Bill benefits regardless of their length of service. Two potential explanations for the positive effect of deployment on Post-9/11 GI Bill usage that we observe in Table A.10, and the corresponding negative effect of deployment on student debt in Table A.9, are that deployment increases the likelihood that soldiers serve for at least 2 years (see Table A.6) and deployment increases combat injuries (see Table 3).

## B.2 Details on Sample Construction

Our full sample consists of 782,232 first-term soldiers under standard enlistment contracts who arrived at their first unit between 2001 and 2015. This naturally excludes soldiers who did not complete basic training and follow-on schools. This also excludes a handful of other soldiers who enlist with initial occupations that are missing, incorrectly coded, or that the Army eliminated (therefore requiring the soldier to change occupations); who enlist with initial contracts of fewer than three years or longer than six years; or who first appear in our data at the rank of Sergeant or higher. This corresponds to column (1) of Table 1 and Table B.1 below.

Subsequent columns of Table B.1 report summary statistics for successive subsamples as we make additional restrictions to the sample. In column (2) of Table B.1, we restrict to first-term soldiers who enlisted between 2005 and 2015 ( $N = 565,7561$ ). Restricting to first-term soldiers who were initially assigned to a brigade combat team (i.e. excluding soldiers assigned to training brigades or support brigades) yields a sample of 268,801 (column 3). We then exclude 10,012 soldiers with special assignment considerations or physical limitations that either prevent them from deploying or that could influence the brigade combat team the Army's Human Resources Command assigns them to (column 4). We also exclude 34,197 more soldiers assigned to brigade combat teams in Germany, Italy, and Korea (column 5). Soldiers who serve overseas have different assignment considerations and rules regarding how long they must remain in their assignment, and nearly all are assigned to brigade combat teams that are the only BCT at the specific Army duty-station

where they serve and thus would be dropped from our sample regardless. We then exclude 4,624 more soldiers who are assigned to BCTs before the BCT physically moves Army duty-stations, since moving duty-stations is a treatment that is separate from deployment and because some of these soldiers had the option to transfer to another unit at their original duty-station (column 6). For related reasons, we exclude 15,141 soldiers assigned to a unit that is deactivated within 36 months of the soldier arriving because some soldiers in these units had some ability to influence their follow-on assignment (column 7).

We next drop 27,325 soldiers assigned to Army duty-stations during a quarter where there is only one BCT at the Army duty-station during that quarter as our identification strategy compares soldiers within the same occupation who are assigned to different BCTs at the same duty-station in the same time-period. We exclude another 487 soldiers assigned to BCTs during a year where there are fewer than 100 soldiers among the remaining sample who are assigned to the BCT in the same year. BCTs typically have 3000 - 4000 enlisted soldiers assigned to them, and these small BCTs were most likely units that had factors that restricted the type of soldier HRC could assign to the unit (e.g., the unit was in the process of standing up or closing down). We also exclude 513 soldiers identified as being in military occupational specialty 09B ("Trainee Unassigned") (column 10). Finally, we exclude 15,374 women, who were precluded from serving in most combat occupations, were only permitted to be assigned to brigade headquarters and support battalions prior to 2012, and who are not permitted to deploy during pregnancy, which we cannot observe (column 11). Our remaining sample consists of 160,528 soldiers, but 3,113 are excluded from our analysis because they are singletons within a duty-station by job by initial assignment year by term-length fixed effect, resulting in an effective final sample of 157,415 soldiers (column 12).

**Table B.1: Soldier Characteristics Across Sample Restrictions**

	Full Sample											
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<u>Panel (a): Demographics</u>												
Age	21.86	22.01	21.77	21.86	21.87	21.87	21.87	21.88	21.88	21.88	21.82	21.80
Married	15.39	15.97	14.26	14.56	15.21	15.23	15.05	15.38	15.38	15.34	14.75	14.62
Black	18.95	18.78	15.51	15.61	15.58	15.65	15.54	15.73	15.74	15.77	14.12	14.04
Hispanic	12.93	13.04	13.21	13.20	13.25	13.26	13.19	13.34	13.34	13.19	13.03	13.05
Other Race	5.64	5.75	5.42	5.41	5.36	5.36	5.34	5.37	5.37	5.34	5.16	5.15
Female	15.18	14.56	8.65	8.57	8.63	8.58	8.64	8.74	8.74	8.74	0.00	0.00
Number of Dependents	0.33	0.34	0.31	0.31	0.32	0.32	0.32	0.33	0.33	0.33	0.31	0.31
HS Dropout or GED	11.89	11.50	12.77	12.09	11.97	11.81	12.31	12.29	12.30	12.32	12.85	12.91
HS Graduate	76.37	75.79	76.37	76.81	76.89	77.02	76.56	76.60	76.60	76.60	76.64	76.67
Some College+	11.64	12.65	10.81	11.05	11.09	11.13	11.07	11.05	11.05	11.02	10.46	10.37
AFQT Score	58.86	58.74	57.87	57.90	57.89	57.90	57.88	57.72	57.71	57.78	58.15	58.01
<u>Panel (b): Service Experience</u>												
Combat Occupation	36.62	36.72	57.91	57.86	57.86	57.84	57.85	57.65	57.68	57.85	63.37	64.30
Mths Deployed w/in 3 yrs	5.98	5.44	6.40	6.36	6.48	6.44	6.55	6.38	6.37	6.37	6.53	6.52
Combat Injury w/in 3 yrs	1.57	1.44	2.27	2.25	2.27	2.23	2.29	2.04	2.04	2.04	2.21	2.24
Combat Death w/in 3 yrs	0.20	0.17	0.27	0.27	0.27	0.26	0.27	0.26	0.26	0.26	0.28	0.29
Observations	782,232	565,761	268,801	258,789	223,992	219,368	204,227	176,902	176,415	175,902	160,528	157,415

This table reports summary statistics for successive subsamples as we make the restrictions described in Appendix Section B.2. Column (1) is identical to column (1) of Table 1. Column (12) is identical to column (5) of Table 1. Column (2) reports summary statistics when we restrict to soldiers who enlisted between 2005 and 2015. Column (3) further restricts to soldiers initially assigned to brigade combat teams (BCTs). Column (4) excludes soldiers with special assignment considerations or physical limitations. Column (5) excludes soldiers assigned to BCTs in Germany, Italy, and Korea. Column (6) excludes soldiers assigned to BCTs that change Army duty-stations and column (7) drops soldiers assigned to BCTs that deactivate within 3 years of a soldier's arrival. Column (8) excludes soldiers assigned to Army duty-stations where there is only one BCT. Column (9) excludes soldiers assigned to BCTs that receive fewer than 100 soldiers in the same year (among the remaining sample). Column (10) excludes soldiers with the 09B military occupational speciality ("Trainee Unassigned"). Column (11) excludes women. Column (12) excludes singletons within a duty-station by job by initial assignment year by term-length fixed effect. See Appendix Section B.2 for additional details. All demographic variables and occupations are measured prior to arrival at one's unit. Months deployed, combat injuries, and combat deaths are calculated over the 3 years after arrival.

## Appendix References

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