

## Murder-Suicide Among Vets: Is There Evidence of Elevated Risk?

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## Characteristics of Murder-Suicide

- Majority of perpetrators are men (Salari, et. al., 2007)
- More likely to involve husbands (Koziol-McLain, et. al., 2006)
- Abusive dynamics in the relationship (Koziol-McLain, et. al., 2006)
- The most dangerous setting is in the home (Salari, et. al., 2007)
- More likely to involve firearms (Koziol-McLain, et. al., 2006)
- Drug/alcohol use (Bossarte, et. al., 2006)
- Mental illness (Bossarte, et. al., 2006)

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## Increase Risk for Murder-Suicide:

- More like to follow a period of estrangement (Koziol-McLain, et. al., 2006)
- Access to firearms (Koziol-McLain, et. al., 2006)
- Men who have threatened suicide themselves are a potential threat to others (Salari, et. al., 2007)
- Increase in frequency & severity of the abuse (Koziol-McLain, et. al., 2006)
- Legal problems (Bossarte, et. al., 2006)
- Job/financial problems (Bossarte, et. al., 2006)
- Pregnancy

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## + DV & Murder-Suicide

- The most common form of homicide-suicide is the killing of women by men who go on to kill themselves. (Koziol-McLain, et. al., 2006)
- DV is the most important risk factor for IPV femicide-suicide. (Koziol-McClain, et. al., 2006)
- 1,000-1,500 reported homicide-suicide deaths per year. (Koziol-McLain, et. al., 2006)
- Significant impact on the children, families, and communities of the victim and perpetrator. (Bossarte, et. al., 2006)

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## + Veteran Status and Violent Death

- Overall, Veterans accounted for ~17% of all violent deaths in NVDRS participating states between 2003-2007.
- It has been estimated that approximately 20% of all suicides are Veterans.
- Some evidence of increased risk of suicide – highest risk during first five years following discharge.
- Data obtained from NVDRS (2003-2007) suggest that ~7% of all victims of homicide in participating states are Veterans.
- Differences in DV victimization and perpetration among Veterans, especially related to risk for murder-suicide, are less clear.

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## + Current Study

- We hypothesized that given the constellation of risk factors for Veterans (separation, access to firearms, alcohol/drug use, interpersonal problems, economic strain), they would be at increased risk for murder-suicide.
- Using data from National Violent Death Reporting System, we explored whether veteran status increases risk for
  - Perpetration of murder-suicide
  - Murder-suicide victimization

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## + Methods

- Murder-suicides were identified using data from the National Violent Death Reporting System restricted access data files (2003-2007).
- To be identified as a murder-suicide, the death of the perpetrator must occur within 72 hours of the death(s) of the victim.
- Veteran status is based largely on information abstracted from death certificates and has not been validated using data from other sources.
- Mortality rates were calculated using data from VetPop 2007 (Veterans) and U.S. Census projections for all residents in participating states.
- Direct methods of standardization were used to calculate mortality ratios.
- Chi-square and Mantel-Haenszel tests of difference were used to determine differences in proportions.

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## + Prevalence and Characteristics of Murder-Suicide, 2003-2007

- Between 2003 – 2007 there were a total of 829 incidents of murder-suicide reported in states participating in the NVDRS program.
- There were a total of 1,016 victims (average of 1.23 per incident).
- Veteran status was reported for 1,652 (89.5%) of all perpetrators and victims in these incidents.
- Veterans were significantly more likely to be perpetrators (when compared to victims) of murder-suicide ( $\chi^2 = 85.67, p < .0001$ ).
- Approximately 25% of all Veterans were victims of murder-suicide compared to 59% of all non-Veterans.
- Approximately 5.4% of all victims were identified as Veterans.
- Approximately 20% of all perpetrators of MS were identified as Veterans.
- Veterans were more than four times more likely to be perpetrators of MS when compared to non-Veterans (OR = 4.48,  $p = < .001$ )

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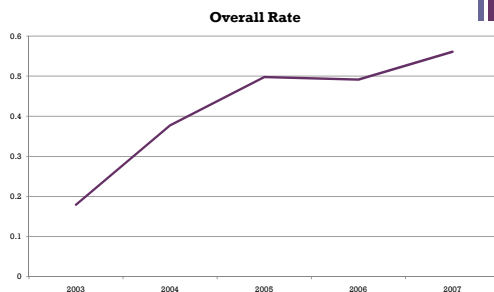
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## + Overall Rate per 100,000 Residents in NVDRS States, 2003-2007




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### + Victim Characteristics

	Total N=909	Veteran N=49	Non-Veteran N=860	Chi-Square (p)
Age > 25	273 (30.0)	2 (4.1)	271 (31.5)	16.6 (<.0001)
Age 25-30	87 (9.6)	5 (10.2)	82 (9.5)	.02 (ns)
Age 31-40	182 (20.0)	8 (16.3)	174 (20.2)	.44 (ns)
Age 41+	367 (40.4)	34 (69.4)	333 (38.7)	18.1 (<.0001)
Male	240 (26.4)	33 (67.4)	207 (24.1)	44.7 (<.0001)
Female	669 (73.6)	16 (32.6)	653 (75.9)	
White	687 (76.1)	41 (83.7)	646 (75.6)	1.64 (ns)
Non-White	216 (23.9)	8 (16.3)	208 (24.4)	
High School	287 (71.9)	14 (60.9)	273 (72.6)	1.48 (ns)
College	112 (28.1)	9 (39.1)	103 (27.4)	
Married	324 (35.7)	25 (51.0)	299 (34.8)	5.3 (.02)
Single	584 (64.3)	24 (49.0)	560 (65.2)	

### + Situational Characteristic (Victim)

	Total N=909	Veteran N=49	Non-Veteran N=860	Chi-Square (p)
Drugs/ETOH Detected	224 (24.6)	8 (16.3)	216 (25.1)	1.83 (ns)
No Drugs	685 (75.4)	41 (83.7)	644 (74.9)	
Spouse/Partner	707 (81.9)	38 (79.2)	669 (82.1)	.149 (ns)
Parent	104 (12.1)	7 (14.6)	97 (11.9)	
Other	52 (6.0)	3 (6.3)	49 (6.0)	
Caretaker	105 (11.2)	5 (10.2)	100 (11.6)	.092 (ns)

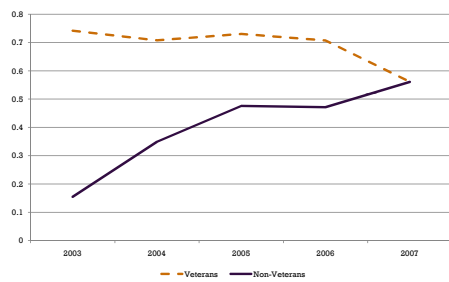
### + Perpetrator Characteristics

	Total N=743	Veteran N=151	Non-Veteran N=592	Chi-Square (p)
Age > 25	86 (11.6)	4 (2.7)	82 (13.6)	14.7 (<.0001)
Age 25-30	63 (8.5)	6 (4.0)	57 (9.6)	5.0 (.03)
Age 31-40	181 (24.4)	18 (11.9)	163 (27.5)	15.9 (<.0001)
Age 41+	413 (55.6)	123 (81.5)	390 (49.0)	51.3 (<.0001)
Male	692 (93.1)	148 (98.0)	544 (91.9)	7.04 (.008)
Female	51 (6.9)	3 (2.0)	48 (8.1)	
White	543 (73.5)	119 (7.8)	424 (72.1)	2.77 (ns)
Non-White	196 (26.5)	32 (21.2)	119 (27.9)	
High School	287 (71.9)	14 (60.9)	273 (72.6)	1.48 (ns)
College	112 (28.1)	9 (39.1)	103 (27.4)	
Married	503 (68.3)	55 (36.7)	498 (83.5)	2.10 (ns)
Single	234 (31.7)	95 (66.3)	208 (35.5)	
Drugs/ETOH	284 (38.2)	54 (35.8)	230 (38.9)	.66 (ns)

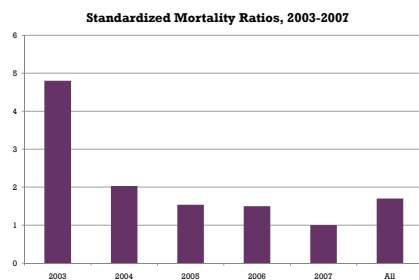
### + Incident Characteristics

	Total N=743	Veteran N=151	Non-Veteran N=592	Chi-Square (p)
Home	428 (57.6)	99 (65.6)	329 (55.6)	7.69 (.02)
Other	304 (40.9)	48 (31.8)	256 (43.2)	
Gun	641 (86.5)	128 (84.8)	513 (87.0)	.55 (ns)
Sharp Object	37 (5.0)	9 (6.0)	28 (4.8)	
Other	51 (8.5)	14 (9.3)	49 (8.2)	
Suicide Note	129 (17.4)	35 (23.2)	94 (15.9)	4.5 (.04)
Health Problem	52 (7.0)	26 (17.2)	26 (4.4)	3.04 (<.0001)
Job Problem	40 (5.4)	10 (6.6)	30 (5.1)	.57 (ns)
Financial	56 (7.5)	19 (12.6)	37 (6.2)	6.9 (.008)
Legal	171 (23.0)	31 (20.5)	140 (23.7)	.66 (ns)
IPV Perp.	582 (78.3)	115 (76.2)	467 (78.9)	.53 (ns)
Attempts	23 (3.1)	6 (4.0)	17 (2.9)	.48 (ns)
Intent	84 (11.3)	16 (10.6)	68 (11.5)	.10 (ns)

### + Rate of Murder Suicide Incidents by Veteran Status of Perpetrator NVDRS States, 2003-2007



### + Standardized Mortality Ratios



## + Summary & Conclusions

- Higher than expected percentage of Veterans among perpetrators of MS between 2003-2007. However, gap between Veteran and non-Veteran rates appears to be closing.
- Veterans who perpetrate MS were significantly more likely to be older males with a history of health and financial problems problems.
- Majority of perpetrators had a reported history of interpersonal violence perpetration.
- Majority of all incidents involved firearms.
- Majority of all victims were current or former spouses or dating partners.

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## + Contact Information

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