

Enhancing Recruitment of Women Veterans into Suicide Prevention Research

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Background

- Surveys provide a common and convenient way to collect self-report data.
- Despite increased accessibility of surveys through online and web-based platforms, acceptable response rates are often difficult to obtain.¹
- Low response rates may negatively impact the generalizability and reliability of survey data through non-response bias.²
- Many factors influence response rates:^{1,3}
 - Characteristics of the recruitment base
 - Recruitment methods and number of contact attempts
 - Survey sponsor (e.g. governmental, academic, or commercial)
 - Completion incentives, survey topic, length, and modality
- Research examining survey response rates among veteran populations is limited.
- Despite being the fastest growing sub-population of veterans,⁴ female veterans are often under-represented in research, particularly in research related to suicide prevention.⁵

Aims

Primary: Assess whether female veterans' participation in survey research is influenced by:

- personalized recruitment materials
- multiple survey modalities

Secondary: Assess whether mode of completion is associated with demographic characteristics and disclosure of sensitive information.

Hypothesis

- Personalized recruitment materials and multiple survey mode options will increase the survey response rate.

Methods

- These recruitment data were collected as part of a larger, three-part study examining female veterans' perceptions of reproductive healthcare (RHC) paid for or provided by the Department of Veterans Affairs (VA).
- Three samples of 750 female veterans were mailed up to three invitations to participate in the survey (Figure 2).
- A personalized study flyer (Figure 1) was included in mailing waves 2a & 2b; wave 2b also included a paper survey option.
- Analyses to compare sociodemographic characteristics of the samples and responders versus non-responders were conducted.
- Response rates were computed and compared by wave.

Figure 1:
Personalized Study Flyer

Meet our Team

About Us
Our team includes researchers & support staff with a wide range of expertise in suicide prevention & women's health. We have over 45 years of combined experience working with & for Veterans.

Identifying Novel Opportunities for Suicide Prevention among Women Veterans Using Reproductive Health Care Services

About the Research
Women Veterans are a growing & historically underserved part of the Veteran population. We want to find ways to better serve women within the VA. Women frequently seek health care for their reproductive needs. We are interested in exploring the role of reproductive health in mental health, as well as exploring women's experiences, preferences, & beliefs about receiving care in reproductive health care settings. We invite you to take part in a survey & potentially a phone interview as part of this research.

Claire Hoffmire, Ph.D.
Principal Investigator

"I am an Epidemiologist & mother of three young girls. I have worked in Veteran suicide prevention for seven years. I am conducting this study because I believe that to better serve women Veterans, it is necessary to understand more about how & where women Veterans want to engage in health care."

Visit our study website to learn more & read about study findings
www.mirecc.va.gov/vian19/research/rhc/

Feel free to call us with any questions you may have!
Laurel Gaeddert
Study Coordinator
720-955-0424

ROCKY MOUNTAIN
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Results

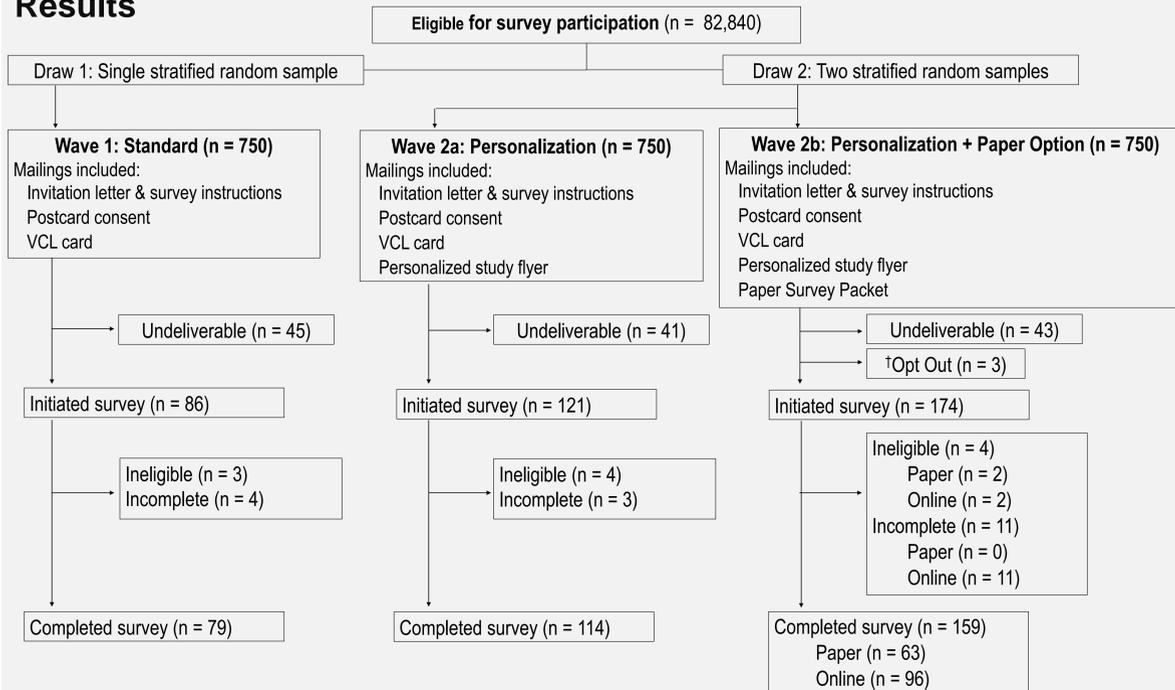


Figure 2: Survey Recruitment and Response Flow Diagram

[†]Although no formal opt-out procedure was implemented, three participants contacted the study team to opt out of the study; this only occurred in Wave 2b.

Table 1: Comparison of Military History and Demographic Characteristics between Responders, Non-Responders & Across Recruitment Waves

	Non-Responders (N = 1,869)		Responders (N = 381)		Wave 1 Responders (n = 86)		Wave 2a Responders (n = 121)		Wave 2b Responders (n = 174)	
	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
RHC Care Used										
VA paid only	0.1	(0.0, 0.4)	0	(0.0, 0.1)	0	(0.0, 4.2)	0	(0.0, 3.1)	0	(0.0, 2.1)
VA provided only	69.5	(67.3, 71.6)	69.3	(64.3, 73.9)	71.0	(60.1, 80.3)	71.9	(63.0, 79.7)	66.7	(59.1, 73.7)
Both	30.4	(28.3, 32.6)	30.7	(26.1, 35.7)	29.1	(19.7, 39.9)	28.1	(20.3, 37.0)	33.3	(26.3, 40.9)
Rurality¹										
Rural or Highly Rural	21.0	(19.1, 22.9)	22.1	(17.9, 26.6)	16.3	(9.1, 25.9)	22.3	(15.2, 30.8)	24.7	(18.4, 31.9)
Urban	78.9	(76.9, 80.7)	77.7	(73.1, 81.8)	83.7	(74.1, 90.9)	77.7	(69.2, 84.8)	74.7	(67.5, 81.1)
Unknown	0.2	(0.0, 0.5)	0.3	(0.0, 1.5)	0	(0.0, 4.2)	0	(0.0, 3.1)	0.6	(0.0, 3.2)
Region^{2*}										
Northeast	8.4	(7.1, 9.8)	10.5	(7.6, 14.1)	12.8	(6.5, 21.8)	10.7	(5.8, 17.7)	9.2	(5.3, 14.6)
Midwest	14.2	(12.6, 15.9)	18.9	(15, 23.2)	16.3	(9.1, 25.9)	18.2	(11.7, 26.3)	20.7	(14.9, 27.5)
South	53.5	(51.2, 55.8)	50.4	(45.2, 55.6)	58.1	(4.7, 68.7)	51.2	(41.9, 60.5)	46.0	(38.4, 53.7)
West	23.6	(21.6, 25.6)	19.7	(15.8, 24.1)	12.8	(6.5, 21.8)	19.8	(13.1, 28.1)	23.0	(16.9, 0.3)
Unknown/Outside US	0.3	(0.1, 0.7)	0.5	(0.0, 1.9)	0	(0.0, 4.2)	0	(0.0, 3.1)	1.2	(0.1, 4.1)
Last Branch of Service[*]										
Army	47.3	(45.0, 49.6)	46.2	(41.1, 51.4)	45.4	(34.5, 56.5)	40.5	(31.6, 49.8)	50.6	(42.9, 58.3)
Coast Guard	0.8	(0.4, 1.3)	1.3	(0.4, 3.1)	1.2	(0.0, 6.4)	1.7	(0.2, 5.9)	1.2	(0.1, 4.1)
Air Force	17.2	(15.5, 19.1)	24.4	(20.1, 29.1)	27.9	(18.7, 38.7)	22.3	(15.2, 30.8)	24.1	(17.9, 31.2)
Marine Corps	10.3	(8.9, 11.8)	9.7	(6.9, 13.2)	11.6	(5.7, 20.4)	10.7	(5.8, 17.7)	8.1	(4.4, 13.2)
Navy	24.1	(22.2, 26.2)	17.9	(14.1, 22.1)	11.6	(5.7, 20.4)	24.8	(17.3, 33.5)	16.1	(10.9, 22.5)
Unknown	0.3	(0.1, 0.7)	0.5	(0.0, 1.9)	2.3	(0.2, 8.2)	0	(0.0, 3.1)	0	(0.0, 2.1)
Race[*]										
Caucasian	53.5	(51.2, 55.9)	66.4	(61.4, 71.2)	72.1	(61.3, 81.3)	66.9	(57.8, 75.3)	63.2	(55.5, 70.4)
African American	30.9	(28.7, 33.1)	20.0	(16.0, 24.4)	17.4	(10.1, 27.2)	18.2	(11.7, 26.3)	22.4	(16.4, 29.4)
Other	15.6	(13.9, 17.3)	13.6	(10.3, 17.6)	10.5	(4.8, 19.0)	14.9	(9, 22.5)	14.4	(9.5, 20.5)
Ethnicity										
Hispanic	15.4	(13.7, 17.1)	11.0	(8.0, 14.7)	8.1	(3.3, 16.1)	12.4	(7.1, 19.7)	11.5	(7.1, 17.2)
Not Hispanic	83.4	(81.6, 85.1)	87.9	(84.2, 91.1)	92.0	(83.9, 96.7)	84.3	(76.5, 90.3)	88.5	(82.8, 92.9)
Unknown/Missing	1.2	(0.7, 1.9)	1.0	(0.2, 2.7)	0	(0.0, 4.2)	3.3	(0.9, 8.3)	0	(0.0, 2.1)
Age at Separation										
	<i>M (SD)</i>	<i>Range</i>	<i>M (SD)</i>	<i>Range</i>	<i>M (SD)</i>	<i>Range</i>	<i>M (SD)</i>	<i>Range</i>	<i>M (SD)</i>	<i>Range</i>
	29.3 (6.2)	18-44	29.3 (6.1)	18-44	30.1 (6.6)	18-44	29.1 (6.1)	19-44	29.1 (5.9)	19-44

Note. No statistically significant differences were observed across waves. CI = Confidence Interval; RHC = Reproductive Healthcare; VA = Department of Veterans Affairs; M = Mean; SD = Standard Deviation.

*Statistically significant differences observed (Chi-square or Fisher's Exact test $p < .05$) between responders and non-responders

¹Rurality was defined using the following categories: 1) Urban: Census tracts with at least 30 percent of the population residing in an urbanized area as defined by the Census Bureau 2) Rural or Highly Rural: Land areas not defined as urban

²Geographic regions were defined as including the following states: Northeast: CT, ME, MA, NH, NJ, NY, PA, RI, VT; Midwest: IL, IN, IA, KS, MI, MN, MO, NE, ND, OH, SD, WI; South: AL, AR, DE, DC, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV; West: AK, AZ, CA, CO, HI, ID, MT, NV, NM, OR, UT, WA, WY

Results Continued

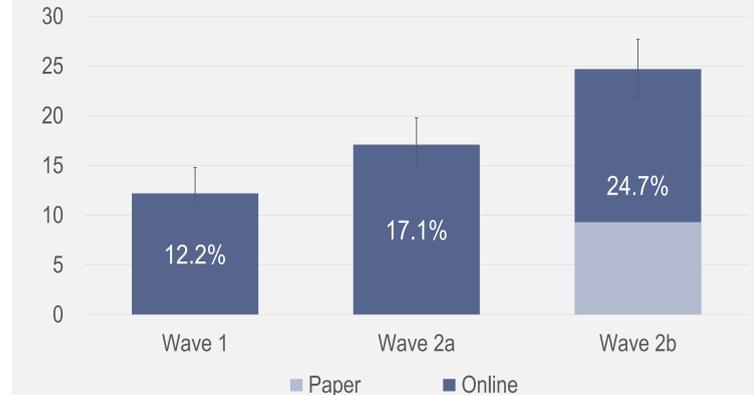


Figure 3. Survey Response Rates^{1,2} by Wave and Participation Mode

¹For each wave, the numeric value and 95% Confidence Interval error bars reflect total response rates, across modes.

²A statistically significant, increasing linear trend was observed for response rates across study waves (Cochran-Armitage $p < .0001$); all post-hoc pairwise chi-square comparisons significant at $p < .01$.

- The overall response rate (survey initiators; $n=381$) was 18.0%, of which 92.4% completed the survey ($n=352$).
- Only 5.7% of mailings were undeliverable.
- Rurality was the only factor significantly associated with mode of survey completion; veterans living in rural areas were more likely to respond via paper than veterans living in urban areas ($p = 0.02$).
- Though not statistically significant, the proportion of veterans reporting past-month suicide ideation among paper responders (19.0%) was nearly twice that of online responders (10.5%).

Conclusions

- Response rates increased significantly with the addition of personalized recruitment materials and the inclusion of an additional, optional survey modality (paper).
- Future research targeting rural female veterans (a group often at elevated suicide risk)⁶ should carefully consider recruitment approaches and potential survey mode effects.
- Future suicide-related research should consider employing enhanced recruitment techniques to improve response rates and reduce the risk of non-response bias among veterans.
- Future research is warranted to assess whether these findings are consistent within the broader (e.g., male and female) veteran population.

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