

Veteran Status and Paid Sex Among American Men: Results from Three National Surveys

Andrew S. London · Janet M. Wilmoth

Received: 31 October 2013 / Revised: 6 February 2014 / Accepted: 14 June 2014 / Published online: 25 December 2014
© Springer Science+Business Media New York 2014

Abstract Surprisingly little population-based, social scientific research directly examines the association between veteran status and ever paying for sex although there are theoretical reasons to expect that such an association might emerge across the life course. In this article, we examined the relationship between veteran status and ever paying for sex among American men who turned 18 years old between 1922 and 2010 using data from three independent national samples: Wave 1 of the 2005–2006 National Social Life, Health, and Aging Project (NSHAP); the 1992 National Health and Social Life Survey (NHSL); and pooled data from the 1991, 1993, 1994, and 2010 General Social Survey (GSS). In all three datasets, we found that veterans were significantly more likely than non-veterans to report ever having paid for sex: rates across the three sub-studies ranged from 10.86 to 14.57 % among non-veterans and from 25.27 to 33.92 % among veterans. In multivariate models that controlled for demographic and early-life factors to the extent possible with available data, the odds of ever paying for sex were estimated to be 2.25–3.10 times higher among veterans than among non-veterans. In a supplemental analysis using data from the GSS, we found that longer duration of service was associated with an increased odds of ever paying for sex. While these results do not demonstrate a causal relationship between serving in the military and ever paying for sex, the strength and consistency of the findings provide compelling evidence of an association that is worthy of further theorizing and empirical investigation. There is considerable room for advancing knowledge related to the influence of military service on the initiation, maintenance, frequency, and timing of paid sexual relationships in relation to other life events.

Keywords Veterans · Military · Paid sex · Prostitution · Life course

Introduction

With reference to the U.S. military presence in the Philippines during the 1980s, Belkin (2012) wrote: “During liberty leave at Subic Bay, many U.S. service members left the base’s main gate and crossed the small bridge spanning Shit River. The city of Olongapo, home to several thousand Filipino sex workers, awaited them on the other side” (p. 151). Such imagery suggests a potential association between serving in the military and one aspect of sexual behavior—paying for sex; however, surprisingly little population-based, social scientific research directly examines whether current military service or veteran status is associated with ever paying for sex or, for that matter, any other aspect of sexual behavior (Laumann, Gagnon, Michael, & Michaels, 1994; London, Allen, & Wilmoth, 2013; Mulligan, 1991). Some of what we can glean about specific aspects of sexual behavior among current military personnel is found in the literature on sexually transmitted infection prevalence and prevention (Boyer et al., 2001; Brandt, 1987; Malone et al., 1993; Shafer et al., 2002). In that literature, there is relatively frequent mention of contact with commercial sex workers as a risk factor for sexually-transmitted infections among men in the armed forces; less often, direct estimates of the prevalence of sexual behavior with commercial sex workers or analyses of the contexts in which those occur are presented.

In their classic study, Kinsey, Pomeroy, and Martin (1948) stated that their data “indicate that few of the men in the armed forces are as active sexually as they would have been at home in times of peace” (p. 388). Nevertheless, the available evidence suggests that the prevalence of paid sex is relatively high among active-duty men, at least in some eras. For example, Boyer et al.

A. S. London (✉) · J. M. Wilmoth
Department of Sociology, Maxwell School of Citizenship and Public Affairs, Syracuse University, 302 Maxwell Hall,
Syracuse, NY 13244-1020, USA
e-mail: anlondon@maxwell.syr.edu

(2001) conducted an experimental evaluation of an intervention aimed at lowering the risk of sexually transmitted disease and HIV infection among Navy personnel deployed from January to June 1994. At baseline, they reported that 28.6 % of the intervention group and 30.4 % of the control group had engaged in sex in exchange for money. Malone et al. (1993) studied Navy and Marine Corps personnel deployed aboard ship for 6 months to South America, West Africa, and the Mediterranean during 1989–1991 and found that 49 % had contact with a prostitute prior to the current deployment and 42 % had contact with a prostitute during the 6-month deployment. The odds of having contact with a commercial sex worker during the 6-month deployment was associated with younger age, non-white race/ethnicity, being unmarried or divorced, being deployed to South America or West Africa, and being a member of the Navy. Shafer et al. (2002) examined the correlates of sexually transmitted diseases among male Marines deployed from January to August 1994 who were 22 years old, on average, and found that 10 % reported having had sex with a commercial sex worker.

Virtually no well-controlled, population-representative research specifically compares veterans to non-veterans with respect to ever engaging in commercial sex despite the fact that there are numerous mechanisms by which an association between veteran status and ever paying for sex could emerge. In theorizing about the association between veteran status and ever paying for sex, it is important to draw on the life course perspective and consider how the mechanisms linking a history of military service to paid sex might differ across the military and civilian life course. Veteran status differences in ever paying for sex could be due to early-life factors, which pre-date military service for those who eventually serve. For example, persons who are prone to taking risks may be more likely to engage in commercial sexual relations as youth and subsequently enter into military service, at which point they may or may not continue to pay for sex (Cooper et al., 2008; Hutchinson, Greene, & Hansen, 2008). Alternatively, those who engage in commercial sex early in life may have characteristics that make them less likely to volunteer for or be accepted into one of the armed services. Regardless of the direction of the association, such considerations suggest that it is important to take early-life factors and selection into account as much as possible in empirical analyses of the relationship between veteran status and commercial sex and to be cautious about making causal claims.

Commercial sex might also be initiated during the period of active-duty service, especially during periods of deployment-related separation from partners and spouses. Distance from familial, peer-group, and community constraints on illicit behavior, such as paying for sex, might also be a factor (Kinsey et al., 1948). Deployment-related separations may represent significant opportunity, as well as motivation, for engaging in commercial sexual relations. Such a possibility is supported by evidence of high rates of contact with prostitutes among deployed service members and programmatic efforts by the Department of Defense

to document the incidence of and prevent sexually-transmitted infections (Boyer et al., 2001; Brandt, 1987; Malone et al., 1993; Shafer et al., 2002). Young, unmarried, active-duty men may seek out experiences with commercial sex workers while they are deployed (Malone et al., 1993). There is also evidence of an association between veteran status and extramarital sex (Gimbel & Booth, 1994; Karney & Crown, 2007; London et al., 2013), some of which may have occurred during a deployment-related separation from a spouse.

Consistent with Belkin's (2012) conceptualization of military masculinity, there may be implicit or explicit cultural sanctioning of paying for sex in some all-male, military peer groups. During wartime, men may engage in commercial relations for pleasure or companionship or to cope with strain. The resonance of depictions in film and fiction of groups of drunken soldiers or sailors heading to a brothel while they are on leave signals this possibility. Additionally, there may be increased opportunity to pay for sex because commercial sex industries are often located near overseas bases or in places where service members go for rest and relaxation (Belkin, 2012; Brandt, 1987). There is a substantial literature that focuses on the vulnerability of women and girls who are engaged, sometimes by force, in the sex industries that are supported by military personnel (Allred, 2006; Brandt, 1987; Hughes, Chon, & Ellerman, 2007; Moon, 1997; Sturdevant & Stoltzfus, 1992; Sun, 2004). While this literature does not specifically address the prevalence of commercial sexual relations among active-duty military personnel, it documents the accessibility of commercial sex workers to active-duty men, regardless of marital status, and suggests that there is substantial demand for paid sex among them. Writing about venereal disease control during World War II, Brandt (1987) noted: "Within the military, it was recognized that most men would seek and find sex during their military tenures and that officials responded in an efficient and practical fashion. By the end of the war, the military reported difficulty procuring sufficient quantities of condoms to meet the troops' demands" (p. 165). In that era and context, as well as in others (Belkin, 2012; Kinsey et al., 1948; Moon, 1997), much of the sex that military men sought and found was paid sex and evolving military policies sometimes explicitly aimed to increase access to, while also mitigating the risks entailed by, the commercial sexual relations in which a large number of active-duty service men were known to be engaging.

Post-service experiences may also contribute to an association between veteran status and ever paying for sex although we know of no studies that have examined this possibility. For example, if military service leads men into careers that involve extensive business travel, then this could increase opportunities for commercial encounters. Additionally, the risk of divorce has generally been high for many decades and evidence suggests that veteran status is associated with an increased risk of divorce in some eras (Burland & Lundquist, 2013; Karney & Crown, 2007; London et al., 2013). Post-divorce, veterans may be more likely than non-veterans to initiate commercial sexual relations

because they are more risk-prone, otherwise disposed to be in circumstances in which there is opportunity for such encounters, or are more familiar with paid sexual encounters because they witnessed or heard about them during their time in the military. Overall, across the life course and periods characterized as pre-service, active-duty, and veteran, several factors may combine to increase the likelihood of ever engaging in commercial sexual encounters among men who have a history of military service relative to men who do not.

In this article, we drew on three national surveys to examine the association between veteran status and ever paying for sex. We focused our analyses on men, because, until relatively recently, rates of serving in the military were low among women and preliminary analyses indicated that very few women reported ever paying for sex. In all three sub-studies, we included demographic and early-life characteristics in multivariate models to control for selection as much as possible. Taken together, the samples included men who turned 18 years old between 1922 and 2010 and thus served in the military from the early part of the twentieth century through the early part of the twenty-first century.

Method

Data for this study were obtained from three independent national samples: (1) Wave 1 of the 2005–2006 National Social Life, Health, and Aging Project (NSHAP) (O’Muircheartaigh, Eckman, & Smith, 2009; Smith et al., 2009); (2) the 1992 National Health and Social Life Survey (NHSLs) (Laumann et al., 1994); and (3) pooled data from the 1991, 1993, 1994, and 2010 General Social Survey (GSS) (Smith, Marsden, Hout, & Kim, 2013). We present the results in historical progression, starting with the sample that included the earliest birth cohorts and ending with the sample that included the most recent birth cohorts. Below, we describe each data set and the measures we used in our analysis of the data.

Sub-Study 1: The National Social Life, Health, and Aging Project (NSHAP)

Participants

The NSHAP is a national probability sample of 3,005 adults who were 57–85 years old in 2005–2006. The sample was drawn from the national household screening carried out by the Health and Retirement Study (HRS) in 2004. For Wave 1, the HRS identified households that included at least one NSHAP-eligible person and a sample of 4,400 households was selected from that population. The NSHAP selected one participant per household. Overall, 92 % of persons selected for the NSHAP interview were eligible. The NSHAP included an over-sample of African Americans and Hispanics. The overall weighted

response rate for Wave 1 was 75.5 %. Once we constrained the sample to men only, dropped those missing on the dependent variable, and dropped a small number of men who were missing on veteran status and control variables, the analytic sample included 1,100 men.

Measures

The dichotomous dependent variable was derived from a question that was included in the self-administered questionnaire and asked participants: “Have you ever paid anyone for sex?” Participants who reported that they had ever paid for sex were coded 1. The primary, dichotomous independent variable was derived from a question that asked participants: “Have you ever served in the active military of the United States?” Participants who reported that they had ever served were coded 1. The NSHAP contained a limited number of demographic variables that we included in multivariate analyses as controls. These were: age, coded categorically as 57–64, 65–74, and 75–85 years; race, coded categorically as White, Black, and other races; and Hispanic ethnicity, coded dichotomously (yes = 1). Many veterans of the generations represented in the NSHAP used GI Bill benefits to attend college (Bennett & McDonald, 2013; Mettler, 2005). Thus, educational attainment may be an outcome of veteran status, at least for some men. We included education in this analysis for theoretical and pragmatic reasons. Theoretically, we wanted to include some measure of early-life socioeconomic status and this was our best option; pragmatically, our results were the same regardless of whether we included educational attainment in the multivariate model. Education was coded categorically as less than high school, high school graduate, some college, and college graduate or more.

Sub-Study 2: The National Health and Social Life Survey (NHSLs)

Participants

The NHSLs is a cross-sectional probability sample of 3,432 non-institutionalized adults aged 18–59 years in 1992, who were residing in the United States and able to complete an English-language interview. The main multi-stage area probability sample ($N = 3,159$) was designed to give each household in the United States an equal probability of being included in the study. An age-eligible adult within each household participated in the study; the participant was selected randomly if there was more than one age-eligible person in the household. In addition, a supplementary oversample of Blacks and Hispanics ($N = 273$) was drawn. The overall response rate was 78.6 %. Once we constrained the sample to men only, dropped those missing on the dependent variable, and dropped a small number of men who were missing on veteran status and control variables, the analytic sample included 1,430 men.

Measures

The dichotomous dependent variable was derived from responses to questions that were asked in the self-administered questionnaire. The public use sample of the NHSLs included two derived variables that measure: (1) whether the participant ever paid a man for sex; and (2) whether the participant ever paid a woman for sex. We combined affirmative responses to either one of these questions as an indication of ever paying for sex. Six men reported paying another man for sex; thus, the dependent variable used in our analyses primarily references men's commercial relations with women.

The dichotomous independent variable was derived from a question that read: "Not counting the reserves, are you currently serving full time in any branch of the armed services, have you served in the past, or have you never served?" Persons who indicated that they had served in the past, as well as the small number of participants who indicated that they were serving on active duty at the time of the survey, were coded 1. Although it included a few men who were on active duty at the time of the survey, we refer to this variable as veteran status for ease of presentation.

The NHSLs included several demographic and various early-life variables that we included as controls in multivariate analyses. The demographic variables included: age, coded categorically as 18–29, 30–39, 40–49, and 50–59 years; race/ethnicity, coded categorically as White, Black, Hispanic, and other races; foreign-born, coded dichotomously (yes = 1); and paternal and maternal education, respectively, coded as less than high school, high school graduate, more than high school, and missing. Additionally, participants retrospectively reported on a range of life circumstances at age 14 years. These "age-14" control variables included: whether the participant's mother worked, coded categorically as yes, no, and missing; with whom the participant lived, coded categorically as with both parents, only one parent, a parent and step-parent, and neither parent; and religious affiliation, coded categorically as Protestant, Catholic, some other religious affiliation, and no religious affiliation. Additionally, participants reported where they lived at age 14 years. They reported the type of place where they lived, coded categorically as on a farm, in a small town, in a medium-sized place (50,000–250,000 people), in a suburb of a large city, or in a large city (250,000 or more), as well as the region in which they lived, coded categorically as Northeast, Midwest, South, West, and missing. Approximately 8 % were coded as missing on region of residence, but 88.95 % (weighted) of those participants were foreign-born. It is plausible that these foreign-born persons who were missing on this variable were living abroad at age 14, which is why they were coded as missing with respect to place of residence in the United States; however, we have no way to verify this and thus label this category "missing."

Sub-Study 3: The General Social Survey (GSS)

Participants

The GSS has been conducted by the National Opinion Research Center every year since 1972, with the exception of 1979, 1981, 1992, and 2009. Data were collected from a randomly selected sample of the non-institutionalized adult population using computer-assisted face-to-face and telephone interviews. The analysis for this article was based on data from 1991, 1993, 1994, and 2010, which were years in which ever paid for sex and veteran status were asked. Once we constrained the pooled sample to men only, dropped those missing on the dependent variable, and dropped a small number of men who were missing on veteran status and control variables, the analytic sample included 1,707 men.

Measures

The dichotomous dependent variable was derived from a question that asked: "Thinking about the time since your 18th birthday, have you ever had sex with a person you paid or who paid you for sex?" Affirmative responses were coded 1; we assumed that a relatively small number of men have been paid to have sex. The primary, dichotomous independent variable was derived from a question that read: "Have you ever been on active duty for military training or service for two consecutive months or more? IF YES: What was your total time on active duty?" Participants who indicated that they had served on active duty, regardless of length of service, were coded 1.

Similar to the NHSLs, the GSS included several demographic and various early-life variables that we included as controls in multivariate analyses. The demographic variables included: age, coded categorically as 18–29, 30–39, 40–49, 50–59, and 60 or more years; race, coded categorically as White, Black, and other race; foreign-born, coded dichotomously (yes = 1); and paternal and maternal education, respectively, coded as less than high school, high school graduate, more than high school, and missing. Additionally, participants retrospectively reported on a range of life circumstances at age 16 years. These "age-16" variables included: family income, coded categorically as below average, average, and above average; with whom the participant lived, coded categorically as with both parents, only one parent, a parent and step-parent, other relative, and other; and religious affiliation, coded categorically as Protestant, Catholic, Jewish, some other religious affiliation, and no religious affiliation. Additionally, participants reported the type of place where they lived, coded categorically as in open country but not on a farm, on a farm, in a small city or town (under 50,000), in a medium-sized city (50,000–250,000 people), in a suburb near a large city, or in a large city (over 250,000).

Because we pooled data from 4 years of the GSS, we also included a control for survey year, coded categorically as 1991, 1993, 1994, and 2010.

Analysis Plan

For each sub-study, we begin by describing the sample. Then, we describe the bivariate association between veteran status and ever paying for sex, and each of the control variables and every paying for sex. Finally, we present the results from a multivariate logistic regression analysis of ever paying for sex. We conducted all analyses using the SVY commands in STATA 12.1 (StataCorp, 2012). All analyses were weighted and the SEs were corrected to take each study's complex sampling design into account.

Results

Sub-Study 1: The National Social Life, Health, and Aging Project (NSHAP)

Table 1 shows the sample description, bivariate, and multivariate logistic regression results based on data from the

National Social Life, Health, and Aging Project (NSHAP). The first two columns show the weighted percent and unweighted number of persons in the sample, overall and for the veteran status and demographic variables included in the analysis. The third column shows information on the percentage reporting that they ever paid for sex, overall and by each of the other variables. The fourth and fifth columns show the results of a multivariate logistic regression model in which veteran status and the demographic variables are included.

Sample Description

Because the NSHAP included older men who come from birth cohorts with high proportions serving in the military, 58.64 % had ever served in the military. Most of the men were aged 65 years or older: 43.62 % were 57–64 years old, 36.31 % were 65–74 years, and 20.07 % were 75–85 years old. Approximately 88 % were White, 6.55 % reported themselves to be of Hispanic ethnicity, and more than half had at least some college: 13.98 % had less than high school educational attainment, 23.57 % had graduated high school, 28.97 % had completed some college, and 33.48 % had a bachelor's degree or more.

The period in which these men served in the military was not measured in the NSHAP. Using 2005 as the year of data

Table 1 Sample description and rates of commercial sex among men, 2005–2006 National Social, Health, and Aging Project (NSHAP)

	Weighted %	Unweighted <i>N</i>	Weighted % ever had commercial sex	<i>p</i>	Model 1		
					<i>b</i> (SE)	OR	<i>p</i>
Total sample	100	1,100	25.68				
Variable							
Veteran							
Yes	58.64	618	33.52	***	1.13 (0.24)	3.10	***
No	41.36	482	14.57		–	–	
Age							
57–64 years	43.62	402	24.20		–	–	
65–74 years	36.31	429	26.98		0.07 (0.23)	1.08	
75–85 years	20.07	269	26.56		–0.05 (0.25)	0.95	
Race							
White	87.61	903	24.86		–	–	
African American	7.76	133	37.97		0.87 (0.46)	2.39	
Other race	4.63	64	20.70		0.24 (0.28)	1.27	
Hispanic							
Yes	6.55	112	17.28	*	0.00 (0.28)	1.00	
No	93.45	988	26.27		–	–	
Education							
<High school	13.98	199	19.21		–	–	
High school graduate	23.57	262	25.58		0.12 (0.31)	1.13	
Some college	28.97	314	29.58		0.28 (0.29)	1.32	
Bachelors or more	33.48	325	25.09		0.11 (0.33)	1.11	
Intercept	–	–	–		–2.05 (0.29)	–	***

* $p < .05$, ** $p < .01$, *** $p < .001$

collection and their year of birth, we were able to estimate the year they turned 18, which is a proxy for eligibility to serve in the military. By this method, we estimated that men in the sample turned 18 between 1938 and 1966 and thus some may have served during periods characterized as World War II, the Korean War, the Cold War era, and the Vietnam War.

Descriptive Information

Overall, 25.68 % reported paying for sex. Only two variables had a statistically significant bivariate association with ever having paid for sex: veteran status and Hispanic ethnicity. Veterans were more than twice as likely as non-veterans to report ever having paid for sex (33.52 % vs. 14.57 %, $p < .001$). Hispanics were more likely than non-Hispanics to report ever having paid for sex (26.27 % vs. 17.28 %, $p < .05$).

Multivariate Results

Only one variable was significantly associated with ever having paid for sex in the multivariate logistic regression analysis: veteran status. The odds of ever having paid for sex were 3.10 times higher for veterans than for non-veterans net of other variables.

Supplemental Analysis

The NSHAP included a measure of ever paying for sex after age 50 years. In a set of supplemental analyses (not shown), we used this variable as the dependent variable. Those who reported never paying for sex after age 50 were coded zero; due to missing data on this variable, the analytic sample was reduced to 1,095 men. Overall, 3.17 % reported ever paying for sex after age 50. Veterans (2.70 %) and non-veterans (3.83 %) did not differ significantly in bivariate or multivariate analyses. Even if we assume that all of the paid sex after age 50 represents initiation, rather than the maintenance of behavior that was started earlier in life, the observed, non-significant difference would account for very little of the overall veteran status difference reported above. Thus, it is likely that the veteran status difference in ever paying for sex that we document in our main analysis represents differences in behavior that occurred at ages younger than 50. In the supplemental multivariate analysis, the only variable that was associated significantly with paying for sex at ages older than 50 was race. The odds of paying for sex after age 50 were 4.65 times higher among Blacks than Whites ($p < .001$) net of other variables in the model.

Sub-Study 2: The National Health and Social Life Survey (NHSLs)

Table 2 shows the sample description, bivariate, and multivariate logistic regression results based on data from the

National Health and Social Life Survey (NHSLs) using the same format as Table 1.

Sample Description

As seen in Table 2, 26.83 % of the men were veterans. Approximately 34 % were aged 18–29 years, 28.16 % were aged 30–39 years, 22.87 % were aged 40–49 years, and 14.58 % were 50–59 years old. More than three-quarters of the sample were White, 10.09 % were Black, 8.94 % were Hispanic, and less than 4 % were other races/ethnicities. Slightly more than 9 % were foreign-born. Approximately one-third of participants' fathers and mothers, respectively, had less than high school education; approximately one-quarter of participants' fathers and mothers had more than high school educational attainment.

At age 14 years, approximately half of the participants reported that their mothers worked. About three-quarters lived with both parents, while 14.13 % lived with only one parent, 8.97 % lived with a parent and step-parent, and 3.42 % lived with neither parent. More than half reported that their religious affiliation at age 14 was Protestant (55.24 %), while 32.45 % reported themselves to be Catholic, 6.78 % reported another religious affiliation, and 5.53 % reported no religious affiliation. When they were 14, more than half of participants lived on farms (21.49 %) or in small towns (31.20 %); smaller percentages (14.30–17.52 %) lived in medium sized places (50,000–250,000), suburbs of large cities, or large cities (250,000 or more). At age 14, more men lived in the South (30.61 %) and Midwest (24.92 %) than in the Northeast (20.18 %) or West (16.51 %).

The NHSLs did not include specific data on time period of military service. The age distribution in the NHSLs suggests that participants were born between 1932 and 1974 and, therefore, turned 18 between 1950 and 1992. Thus, male veterans in the NHSLs were eligible to serve during periods that can be characterized as the Korean War, the Cold War era, the Vietnam War, the era of the All-Volunteer Force, and the first Gulf War.

Descriptive Information

Overall, 18.79 % reported ever paying for sex. Veteran status and four demographic and background variables had statistically significant bivariate associations with ever having paid for sex. As was the case in the NSHAP, veterans were more than twice as likely as non-veterans to report ever having paid for sex (33.92 % vs. 13.24 %). Interestingly, although the overall percentage ever paying for sex was lower in the NHSLs than in the NSHAP (18.79 % vs. 25.68 %), the percentage of veterans who had ever paid for sex was virtually identical in the NSHAP and NHSLs (33.52 % vs. 33.92 %). The observed overall difference is explained in part by the veteran status composition of the birth cohorts represented in the samples. The NHSLs included more recent birth cohorts that had a much higher percentage of non-

Table 2 Sample description and rates of commercial sex among men, 1992 National Health and Social Life Survey (NHLS)

	Weighted %	Unweighted <i>N</i>	Weighted % ever had commercial sex	<i>p</i>	Model 1		
					<i>b</i> (SE)	OR	<i>p</i>
Total sample	100	1,430	18.79				
Variable							
Veteran							
Yes	26.83	378	33.92	***	0.86 (0.17)	2.37	***
No	73.17	1,052	13.24		–	–	
Age							
18–29 years	34.39	481	7.80	***	–	–	
30–39 years	28.16	438	16.79		0.75 (0.26)	2.13	**
40–49 years	22.87	315	29.37		1.29 (0.27)	3.63	***
50–59 years	14.58	196	31.96		1.39 (0.29)	4.02	***
Race/ethnicity							
White	77.19	1,063	16.92	*	–	–	
African American	10.09	191	27.44		0.75 (0.25)	2.12	**
Hispanic	8.94	131	24.07		0.27 (0.32)	1.31	
Other races/ethnicities	3.78	45	21.32		0.23 (0.47)	1.26	
Foreign-born							
Yes	9.18	123	21.51		–0.31 (0.62)	0.74	
No	90.82	1,307	18.51		–	–	
Paternal education							
<High school	34.06	485	23.80	*	–0.24 (0.25)	0.79	
High school graduate	24.19	339	16.39		–0.30 (0.26)	0.74	
>High school	26.48	385	16.19		–	–	
Missing	15.27	221	15.90		–0.47 (0.39)	0.63	
Maternal education							
<High school	32.24	452	24.64	***	0.61 (0.29)	1.84	*
High school graduate	38.83	560	19.04		0.57 (0.25)	1.76	*
>High school	24.20	343	9.86		–	–	
Missing	4.73	75	22.49		0.18 (0.48)	1.19	
Mother worked at age 14 years							
Yes	49.63	694	16.44		0.02 (0.18)	1.02	
No	46.19	673	20.42		–	–	
Missing	4.18	63	28.62		0.64 (0.42)	1.89	
Living arrangements at age 14 years							
With both parents	73.48	1,047	18.63		–	–	
One parent only	14.13	199	14.98		0.01 (0.37)	1.01	
Parent and step-parent	8.97	122	22.37		0.36 (0.27)	1.43	
With neither parent	3.42	62	28.41		0.42 (0.40)	1.53	
Religion at age 14 years							
No religion	5.53	76	14.52		–	–	
Protestant	55.24	812	18.22		0.01 (0.44)	1.01	
Catholic	32.45	445	21.47		0.36 (0.47)	1.43	
Other Religion	6.78	97	14.04		–0.02 (0.55)	0.98	
Location of residence at age 14 years							
Farm	21.49	314	20.68		0.21 (0.24)	1.24	
Small	31.20	441	15.74		–	–	
Medium	15.48	224	16.87		0.08 (0.27)	1.08	
Large suburb	14.30	202	17.90		0.49 (0.28)	1.63	
Large	17.52	249	24.31		0.39 (0.24)	1.48	

Table 2 continued

	Weighted %	Unweighted <i>N</i>	Weighted % ever had commercial sex	<i>p</i>	Model 1		
					<i>b</i> (SE)	OR	<i>p</i>
Region of residence at age 14 years							
Northeast	20.18	269	19.11	–	–		
Midwest	24.92	372	16.71	–0.05 (0.26)	0.95		
South	30.61	454	18.90	0.10 (0.26)	1.10		
West	16.51	232	18.55	0.21 (0.29)	1.24		
Missing	7.79	103	24.63	0.46 (0.65)	1.58		
Intercept	–	–	–	–3.43 (0.64)	–		***

* $p < .05$, ** $p < .01$, *** $p < .001$

veterans than the NSHAP (73.17 % vs. 41.36 %) and the percentage who had ever paid for sex was slightly lower among non-veterans in the NHSLS than in the NSHAP (13.24 % vs. 14.57 %).

In addition to veteran status, age, race, and paternal and maternal education were associated significantly with ever paying for sex. Older men were significantly more likely than younger men to report that they paid for sex, ranging from 7.80 % among 18–29 year olds to 31.96 % among 50–60 year olds ($p < .001$). The percentage ever paying for sex was highest among African Americans (27.44 %) and lowest among Whites (16.92 %) ($p < .05$). The percentage reporting ever paying for sex was higher among those whose fathers had less than high school education (23.80 %) than among those who fathers had graduated high school (16.39 %) or had more than high school education (16.19 %) ($p < .05$). The association with maternal education was even stronger than it was for paternal education; 24.64 % of those whose mothers had less than high school education had ever paid for sex compared to 9.86 % of those whose mothers had more than high school education ($p < .001$).

Multivariate Results

In the multivariate logistic regression analysis, each of these variables continued to be associated with ever paying for sex, except father's education. Net of other variables, the odds of ever paying for sex were 2.37 times higher among veterans than among non-veterans. Relative to those aged 18–29 years, the odds of ever paying for sex were 2.13 times higher among those aged 30–39 years, 3.63 times higher among those aged 40–49 years, and 4.02 times higher among those aged 50–59 years. The odds of ever paying for sex were 2.12 times higher among African Americans than among Whites. Compared to those whose mothers had more than high school education, the odds of ever paying for sex were 1.84 times higher among those whose mothers had less than high school education and 1.76 times higher among those whose mothers were high school graduates.

Sub-Study 3: The General Social Survey (GSS)

Table 3 shows the sample description, bivariate, and multivariate logistic regression results based on pooled data from the 1991, 1993, 1994, and 2010 General Social Survey (GSS) using the same format as above.

Sample Description

As seen in Table 3, 27.89 % of the men were veterans. The percentage in each of the five age categories was relatively evenly distributed, ranging from a low of 14.42 % for those aged 50–59 years to a high of 21.93 % for those aged 18–29 years. Approximately 83 % were White and 89.67 % were native-born. Approximately 18 % had fathers with more than high school education; 13.91 % had mothers with more than high school education.

In addition to these demographic variables, participants retrospectively reported on a range of life circumstances at age 16 years. At age 16 years, approximately 35 % reported that their family income was below average, 42.69 % reported it was average, and 21.27 % reported it was above average. The majority (72.52 %) lived with both parents; 15.03 % lived with a single parent, 7.73 % lived with a parent and step-parent, and about 5 % lived in other arrangements. More than half (56.03 %) reported their religion to be Protestant and 31.81 % reported themselves to be Catholic; approximately 5 % reported no religious affiliation. About twice as many men lived in small towns (30.35 %) than in any other type of place, with the percentage in each other type of place ranging from 11.07 to 14.91 %.

The final variable indicates the proportion of the sample contributed from each of the four GSS years. The 2010 GSS contributed 45.96 % of the observations. Thus, the sample included a substantial number of persons from more recent birth cohorts even though three of the four surveys were from the early- to mid-1990s.

Table 3 Sample description and rates of commercial sex among men, GSS sample

	Weighted %	Unweighted <i>N</i>	Weighted % ever had commercial sex	<i>p</i>	Model 1		
					<i>b</i> (SE)	OR	<i>p</i>
Total sample	100	1,707	14.88				
Variable							
Veteran							
Yes	27.89	501	25.27	***	0.81 (0.17)	2.25	***
No	72.11	1,206	10.86		–	–	
Age							
18–29 years	21.93	327	7.92	***	–	–	
30–39 years	21.44	373	12.62		0.57 (0.30)	1.78	
40–49 years	20.64	353	17.23		0.88 (0.29)	2.41	**
50–59 years	14.42	250	17.20		0.93 (0.32)	2.52	**
60+ years	21.58	404	20.40		0.97 (0.30)	2.63	**
Race							
White	82.74	1,424	13.65	***	–	–	
African American	10.46	176	25.52		0.92 (0.23)	2.52	***
Other	6.80	107	13.43		0.14 (0.33)	1.15	
Foreign-born							
Yes	10.33	158	13.20		–0.09 (0.28)	0.91	
No	89.67	1,549	15.07		–	–	
Paternal education							
<High school	31.61	550	18.43	*	0.30 (0.30)	1.35	
High school graduate	31.23	534	13.61		0.20 (0.27)	1.22	
>High school	18.35	300	10.27		–	–	
Missing	18.81	323	15.52		–0.10 (0.39)	0.91	
Maternal education							
<High school	30.50	517	19.40	**	0.33 (0.34)	1.39	
High school graduate	46.64	792	13.81		0.14 (0.29)	1.15	
>High school	13.91	237	9.83		–	–	
Missing	8.96	161	12.92		–0.22 (0.43)	0.81	
Family income at age 16 years							
Below average	34.96	576	15.56		–	–	
Average	42.69	750	15.06		0.13 (0.19)	1.14	
Above average	21.27	361	13.64		0.24 (0.24)	1.27	
Missing	1.08	20	10.07		–0.76 (0.78)	0.47	
Living arrangements at age 16 years							
With both parents	72.52	1,224	13.72		–	–	
One parent only	15.03	264	16.88		0.55 (0.33)	1.73	
Parent and step-parent	7.73	130	22.77		0.73 (0.30)	2.07	*
Other relative	2.80	52	13.28		–0.05 (0.44)	0.95	
Other	1.92	37	13.69		0.39 (0.61)	1.47	
Religion at age 16 years							
No religion	5.40	93	15.94		0.73 (0.33)	2.08	*
Protestant	56.03	976	14.89		–	–	
Catholic	31.81	526	13.66		0.11 (0.18)	1.12	
Jewish	2.17	39	16.18		0.16 (0.42)	1.18	
Other religion	4.59	73	21.39		0.94 (0.34)	2.56	**

Table 3 continued

	Weighted %	Unweighted <i>N</i>	Weighted % ever had commercial sex	<i>p</i>	Model 1		
					<i>b</i> (SE)	OR	<i>p</i>
Location of residence at age 16 years							
Country	11.07	185	13.73	*	0.07 (0.27)	1.07	
Farm	14.54	257	11.94		−0.38 (0.26)	0.69	
Small	30.35	530	13.45		–	–	
Medium	14.91	253	16.58		0.31 (0.23)	1.37	
Suburb of large city	14.89	233	12.71		0.20 (0.26)	1.22	
Large	14.23	249	22.31		0.50 (0.23)	1.64	*
Survey year							
1991	19.51	330	17.79	*	–	–	
1993	24.01	408	17.99		0.05 (0.22)	1.06	
1994	10.52	181	15.07		−0.27 (0.29)	0.76	
2010	45.96	788	11.97		−0.54 (0.21)	0.58	*
Intercept	–	–	–		−3.42 (0.45)	–	***

* $p < .05$, ** $p < .01$, *** $p < .001$

The GSS did not include period of service. For each survey year, we used the age distribution to estimate the year sample members turned 18. For the pooled sample, veterans turned 18 between 1922 and 2010, which represents periods characterized by the post-World War I era, World War II, the Korean War, the Cold War era, the Vietnam War, the era of the All-Volunteer Force, the first Gulf War, and the Wars in Iraq and Afghanistan.

Descriptive Information

Overall, 14.88 % reported ever paying for sex. Veteran status and six control variables had statistically significant bivariate associations with ever having paid for sex. As was the case in the other two studies, veterans were more than twice as likely as non-veterans to report ever having paid for sex (25.27 % vs. 10.86 %) ($p < .001$). As was the case in the NHLS, age, race, paternal education, and maternal education were also associated significantly with ever having paid for sex and the patterns were the same. The percentage reporting that they paid for sex was lowest among the youngest men (7.92 %) and highest among the oldest men (20.40 %) ($p < .001$). Approximately 26 % of African Americans reported that they had paid for sex compared to 13.65 % of Whites and 13.43 % of persons of other races ($p < .001$). Rates of ever having paid for sex declined with higher paternal and maternal education, respectively. Among those whose fathers had less than high school education, the rate was 18.43 % while it was 10.27 % among those whose fathers had more than high school education ($p < .05$). Among those whose mothers had less than high school education, the rate was 19.40 %, while it was 9.83 % among those whose mothers had more than high school education ($p < .01$). The other two

variables that were significantly associated with ever having paid for sex were location of residence at age 16 years and survey year. Those who were living in large cities and, to a lesser extent medium-sized cities, were most likely to report having paid for sex (22.31 % and 16.58 %, respectively) while those living in small cities, suburbs of large cities, or in more rural areas had lower rates, ranging from 11.94 to 13.73 % ($p < .05$). Rates of ever paying for sex were higher among those surveyed in 1991 and 1993 (17.79 % and 17.99 %, respectively), than among those surveyed in 1994 (15.07 %) and, especially, 2010 (11.97 %) ($p < .05$).

Multivariate Results

Each of these variables continued to be associated with ever paying for sex except paternal and maternal education in the multivariate logistic regression analysis. Additionally, associations between paying for sex and living arrangements and religion, respectively, at age 16 years emerged. Net of other variables, the odds of ever paying for sex were 2.25 times higher among veterans than among non-veterans. Relative to those aged 18–29 years, the odds of ever paying for sex were 2.41 times higher among those aged 40–49 years, 2.52 times higher among those aged 50–59 years, and 2.63 times higher among those aged 60 years or more. The odds of ever paying for sex were 2.52 times higher among African Americans than among Whites. The odds of ever paying for sex were 2.07 times higher among those who lived with a parent and step-parent at age 16 years than among those who lived with both parents. Compared to those who reported their religion at age 16 to be Protestant, the odds of ever paying for sex were 2.08 times higher among those who reported no religious affiliation at age

16 years and 2.56 times higher among those reporting a religion other than Protestant, Catholic or Jewish. Compared to those living in small cities at age 16 years, the odds of ever having paid for sex were 64 % higher among those who were living in large cities at age 16 years. Finally, the odds of ever paying for sex were significantly lower among those who responded to the 2010 GSS than among those who responded to the 1991 GSS.

Supplemental Analysis

The GSS included a measure of the number of years of military service, categorized as 0, less than 2, 2–4, and more than 4 years. We conducted a supplemental analysis focusing on duration of service (not shown). Overall, 72.11 % had never served, 7.01 % had served for less than 2 years, 13.96 % had served for 2–4 years, and 6.92 % had served for 4 or more years. There was a strong relationship between duration of service and ever having paid for sex. The rate of ever having paid of sex was 10.86 % among those who never served, 16.98 % among those who served less than 2 years, 25.80 % among those who served 2–4 years, and 32.61 % among those who served 4 or more years ($p < .001$). In a multivariate logistic regression analysis that included all of control variables discussed above, only men who had served for 2–4 or 4 or more years, respectively, differed significantly from those who never served. Compared to men who never served in the military, the odds of ever paying for sex were 2.14 times higher among men who served in the military for 2–4 years ($p < .001$) and 3.50 times higher among men who served for 4 or more years ($p < .001$). Wald tests were used to determine whether there were significant differences between duration of service groups. The two groups with the shorter durations of service did not differ significantly. The coefficient for those with more than 4 years of service differed significantly from the coefficient for those who served less than 2 years ($p < .01$); the difference between those who served 4 or more years and those who served 2–4 years was marginally significant ($p = .07$).

Discussion

No well-controlled, population-representative studies have examined veteran status differences in ever paying for sex, although there are theoretical reasons to hypothesize that such an association might exist. We analyzed three nationally representative data sets, which represent American men born as early as 1904 and as late as 1992, who turned 18 and became eligible for military service between 1922 and 2010. We found in all three that veterans were significantly more likely than non-veterans to report ever having paid for sex, even though the majority of men in all of the samples reported never having paid for sex. Overall, across the three sub-studies, rates of ever paying for sex ranged from 14.88 to 25.68 %. Among non-

veterans, rates ranged from 10.86 to 14.57 % while, among veterans, rates ranged from 25.27 to 33.92 %.

In multivariate models that controlled for demographic and early-life factors to the extent possible with available data, the odds of ever paying for sex were estimated to be 2.25–3.10 times higher among veterans than among non-veterans. In a supplemental analysis using data from the GSS, we found that longer duration of service was associated with an increased odds of ever paying for sex. While these results do not demonstrate a causal relationship between serving in the military and ever paying for sex, because some un-measured factors might predict both entrance into the military and paying for sex, the strength and consistency of the findings across three independent, high quality, nationally representative samples provides compelling evidence of an association that is worthy of further theorizing and empirical investigation.

These findings have various implications, which point both to the limitations of the current investigation and directions for future research. First, although we documented a strong association between veteran status and ever having paid for sex, we do not know when in the life course men initiated paying for sex or the context in which that initiation occurred. We also do not know which factors contributed to the maintenance of paying for sex or its re-initiation after a period of not paying for sex. One supplemental analysis using data from the NSHAP indicated that about 3 % of men engaged in paid sex after age 50 and there was no veteran status difference in paying for sex at those ages; however, the odds of paying for sex were approximately four times higher among Black men than White men. Determining when initiation occurs is important for determining whether men who pay for sex are selected into the military or whether military service per se—the institutional culture, peer influences, separation from sexual partners, the social distance from relationships that would constrain illicit behavior, the opportunity afforded by proximity to sex industries—causes men to engage in commercial sexual relations that they otherwise would not. However, even if selection is a factor, military service may contribute to the maintenance or amplification of such behavior during the active-duty period, at least among some groups, or prime some men to re-engage the behavior later in the life course, perhaps after a divorce. Recent evidence documenting higher rates of extra-marital sex among veterans relative to non-veterans (London et al., 2013) raises the possibility that some veterans may engage in paid sex during marriage although we know of no study that has directly examined that question. The fact that the three data sets that we analyzed were cross-sectional and only measured ever paying for sex, rather than a fuller sexual history that documents the initiation and pacing of paid sex across the life course, was a limitation of the study. Future research should take up these questions of initiation, maintenance, frequency, and timing in relation to other life events, such as marriage and divorce, as well as how all of these vary by veteran status and other demographic factors.

A second limitation of the study that points to new directions for research pertains to the measurement of military service experiences. With minor exceptions, in all three data sets, what we know about men's military service experiences was whether they ever served or not. Ideally, we would want to know a lot more about military service experiences, such as age at entry, rank, combat exposure, service-connected disability, and use of service-related benefits. Our finding that longer duration of service in the military was associated with a higher odds of ever paying for sex helped us characterize the association in dose–response terms even if it did not prove causation. Mapping histories of military service together with sexual histories would allow for a richer examination of veteran status differences in paid sex and other sexual behaviors, as well as heterogeneity in such experiences among veterans, that is currently impossible with existing data. Such future data collection efforts should be attentive to women's behavior as well. We limited our analysis to men because this outcome—paid sex—was not particularly prevalent among women.

There is much to be learned about this aspect of sexual behavior in its own right, as well as whether and how it matters for later-life trajectories and outcomes among non-veterans and veterans with different experiences. Thus, a third way that these results could be elaborated is in relation to the consequences of engaging in paid sex and whether those consequences are the same for veterans and non-veterans. For example, there may be health consequences. The military has had a long-standing concern about the health consequences of commercial sexual relations for both veterans and their spouses, and civilian public health authorities have, similarly, exerted substantial efforts aimed at reducing sexually transmitted infections, including HIV, among those who have never served in the military. If veterans and non-veterans have different patterns of engaging in commercial sexual relations over the life course and/or have different condom use patterns, then they may have different sexually transmitted infection outcomes.

Additionally, most men serve in the military at relatively young ages and may do things then that they will regret later. All service members pledge to behave morally and uphold the law (Kelty & Segal, 2013), which is, in most circumstances and by most standards, antithetical to engaging in paid sexual relations. To the extent that engaging in paid sexual relations leads to the emergence of feelings of guilt, self-directed anger, cognitive dissonance, or other forms of distress, or strains and conflict in interpersonal relationships, there may be negative psychological consequences associated with engaging in paid sexual relations, in the short-term or the long-term, as personal circumstances and life course contexts change. The higher exposure of veterans to commercial sexual relations might contribute to a higher prevalence of such outcomes, although it is possible that veterans have a different psychological response to paid sexual relations than non-veterans. Such questions have not been addressed in the extant literature.

Finally, there may also be family consequences of engaging in paid sex. Disclosure or discovery of such relations may contribute to the break-up of existing relationships. Paid extramarital relations that do not involve emotional attachment may or may not be less disruptive to marriage than un-paid extramarital hookups or relationships that do include an emotional attachment, but this is not something that has been investigated in relation to veteran status differences in marital outcomes. Whether and how engaging in paid sex affects men's parenting of daughters and sons, and whether that varies by veteran status, is also unexplored.

As the foregoing aims to suggest, veteran status was strongly associated with ever paying for sex in the American context and there are many questions about veteran status differences in paid sex and its consequences that remain un-studied. The same could be said of veteran status differences in sexual behavior generally although one recent study documented veteran status differences in extramarital sex (London et al., 2013). Using data from the U.S. and other national contexts, there is considerable room for advancing knowledge related to the influence of military service on sexual behavior and its consequences over the life course. Perhaps, there are data sets that include un-analyzed military service variables that could be analyzed to begin to address these gaps in the literature. The three we analyzed in this article were all publicly available. More likely, in our estimation, new data will need to be collected to specifically address the questions we have outlined above with respect to paid sex, as well as other questions related to military service and sexual behavior more generally.

References

- Allred, K. J. (2006). Peacekeepers and prostitutes: How deployed forces fuel the demand for trafficked women and new hope for stopping it. *Armed Forces & Society*, 33, 5–23.
- Belkin, A. (2012). *Bring me men: Military masculinity and the benign façade of American empire, 1898-2001*. New York: Columbia University Press.
- Bennett, P. R., & McDonald, K. B. (2013). Military service as a pathway to socioeconomic achievement for disadvantaged groups. In J. M. Wilmoth & A. S. London (Eds.), *Life-course perspectives on military service* (pp. 119–143). New York: Routledge.
- Boyer, C. B., Shafer, M. B., Shaffer, R. A., Brodine, S. K., Ito, S. I., Yniguez, D. L., et al. (2001). Prevention of sexually transmitted diseases and HIV in young military men: Evaluation of a cognitive-behavioral skills-building intervention. *Sexually Transmitted Diseases*, 28, 349–355.
- Brandt, A. M. (1987). *No magic bullet: A social history of venereal disease in the United States since 1880*. New York: Oxford University Press.
- Burland, D., & Lundquist, J. H. (2013). “The best years of our lives”: Military service and family relationships—A life course perspective. In J. M. Wilmoth & A. S. London (Eds.), *Life-course perspectives on military service* (pp. 165–184). New York: Routledge.
- Cooper, T. V., DeBon, M., Haddock, C. K., Esquivel, D. R., Klesges, R. C., Lando, H., et al. (2008). Demographics and risky lifestyle behaviors associated with willingness to risk sexually transmitted infection in Air Force recruits. *American Journal of Health Promotion*, 22, 164–167.

- Gimbel, C., & Booth, A. (1994). Why does military combat experience adversely affect marital relations? *Journal of Marriage and the Family*, *56*, 691–704.
- Hughes, D. M., Chon, K. Y., & Ellerman, D. P. (2007). Modern-day comfort women: The U.S. military, transnational crime, and the trafficking of women. *Violence Against Women*, *13*, 901–922.
- Hutchinson, J. W., Greene, J. P., & Hansen, S. L. (2008). Evaluating active duty risk-taking: Military home, education, activity, drugs, sex, suicide, and safety method. *Military Medicine*, *173*, 1164–1167.
- Karney, B. R., & Crown, J. S. (2007). *Families under stress: An assessment of data, theory, and research on marriage and divorce in the military*. National Defense Research Institute: RAND Corporation.
- Kelty, R., & Segal, D. R. (2013). The military as a transforming influence: Integration into or isolation from normal adult roles? In J. M. Wilmoth & A. S. London (Eds.), *Life-course perspectives on military service* (pp. 19–47). New York: Routledge.
- Kinsey, A. C., Pomeroy, W. B., & Martin, C. E. (1948). *Sexual behavior in the human male*. Philadelphia: W. B. Saunders Company.
- Laumann, E. O., Gagnon, J. H., Michael, R. T., & Michaels, S. (1994). *The social organization of sexuality: Sexual practices in the United States*. Chicago: University of Chicago Press.
- London, A. S., Allen, E., & Wilmoth, J. M. (2013). Veteran status, extramarital sex, and divorce: Findings from the 1992 National Health and Social Life Survey. *Journal of Family Issues*, *34*, 1452–1473.
- Malone, J. D., Hyams, K. C., Hawkins, R. E., Sharp, T. W., & Daniell, F. D. (1993). Risk factors for sexually-transmitted diseases among deployed U.S. military personnel. *Sexually Transmitted Diseases*, *20*, 294–298.
- Mettler, S. (2005). *Soldiers to citizens: The G.I. Bill and the making of the greatest generation*. New York: Oxford University Press.
- Moon, K. H. S. (1997). *Sex among allies: Military prostitution in U.S.-Korea relations*. New York: Columbia University Press.
- Mulligan, T. (1991). Sexuality and aging in male veterans: A cross-sectional study of interest, ability, and activity. *Archives of Sexual Behavior*, *20*, 17–25.
- O’Muircheartaigh, C. O., Eckman, S., & Smith, S. (2009). Statistical design and estimation for the National Social Life, Health, and Aging Project. *Journal of Gerontology: Social Sciences*, *64B*, i12–i19.
- Shafer, M., Boyer, C. B., Shaffer, R. A., Schachter, J., Ito, S. I., & Brodine, S. K. (2002). Correlates of sexually transmitted diseases in a young male deployed military population. *Military Medicine*, *167*, 496–500.
- Smith, S., Jaszczak, A., Graber, J., Lundeen, K., Leitsch, S., Wargo, E., & O’Muircheartaigh, C. O. (2009). Instrument development, study design implementation, and survey conduct for the National Social Life, Health, and Aging Project. *Journal of Gerontology: Social Sciences*, *64B*, i20–i29.
- Smith, T. W., Marsden, P., Hout, M., & Kim, J. (2013). *General Social Surveys, 1972–2012* [machine-readable data file]. Chicago: National Opinion Research Center [producer]; Storrs, CT: The Roper Center for Public Opinion Research, University of Connecticut [distributor].
- StataCorp. (2012). *STATA statistics/data analysis 12.1 special edition*. College Station, TX: StataCorp.
- Sturdevant, S. P., & Stoltzfus, B. (1992). *Let the good times roll: Prostitution and the U.S. military in Asia*. New York: The New Press.
- Sun, S. (2004). Where the girls are: The management of venereal disease by United States military forces in Vietnam. *Literature and Medicine*, *23*, 66–87.