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SOLDIER RAPE, OUR OWN WORST ENEMY: THE EFFECTS OF DEPLOYMENT, SEX RATIOS, AND MILITARY BRANCH ON THE SEXUAL ASSAULT OF ACTIVE DUTY WOMEN IN THE US MILITARY

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SOLDIER RAPE, OUR OWN WORST ENEMY: THE EFFECTS OF DEPLOYMENT, SEX RATIOS, AND MILITARY BRANCH ON THE SEXUAL ASSAULT OF ACTIVE DUTY WOMEN IN THE US MILITARY

A DISSERTATION APPROVED FOR THE
DEPARTMENT OF SOCIOLOGY

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This dissertation is dedicated to my father who never had the opportunity to finish his Ph.D. because of his dedication to his family and his faith.
This is our degree, Dad.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

Since 1988, the Department of Defense (DoD) has conducted wide-scale surveys about the sexual assault experiences of active-duty military members. Despite the growing body of research on this topic and widespread gender integration efforts for female soldiers, scholars still lack an understanding of rape occurring in the military, especially how conditions of deployment, military branch, and sex ratios relate to this issue. For example, in the recent military campaigns in Iraq and Afghanistan, what effect does deployment have upon the likelihood of becoming a sexual assault victim for women? Do deployment conditions affect the likelihood of rape or does it have more to do with the organization of men and women within the work unit or the culture of the military branch? "Cultures of rape" or behaviors that allow for sexual assault to occur and/or go unresolved are prevalent within heavily male institutions such as the military. This study uses the *2006 Workplace and Gender Relations Survey of Active Duty Members* to examine the relationship between sexual assault, deployment, sex ratios, and military. Findings suggest that female members of the Army, Marines, and Navy are significantly more likely to be sexually assaulted compared to those within the Air Force but the effect of branch diminishes when deployment and sex ratios are taken into account. The most consistent factors for predicting victimization for female service members is membership in the Army and being currently deployed. While the sex ratios

of women's workgroups (consisting of all or mostly males, being the token female in the unit, etc.) do account for the increased likelihood of rape, these sex ratios do not explain why currently deployed women have increased risks of rape. Further, it appears that the "culture of rape" exists within certain military branches such as the Army and not in others (Air Force). Deployment generally (those currently or previously deployed) increased the likelihood of rape victimization for women with being currently deployed as the more significant predictor. Overall, being a member of the Army, despite the deployment status or sex ratios of the workgroup, greatly increased the odds of experiencing sexual assault. This may be evidence of differing opportunity structures for victimization inherent in the Army as compared to the other military branches.

CHAPTER 1: INTRODUCTION

What explains the likelihood of female members of the military being sexually assaulted? Rape is a violent crime with long-lasting consequences and is often perpetrated against women working within male-dominated environments, such as the Armed Services, which, despite a recent influx of women, continues to be composed mainly of men (Sadler et al. 2001; Nelson 2002; Dept. of Defense 2010). Little is known about what contributes to this problem even though surveys have been conducted on the topic for years by the Department of Defense (DoD) (Bastian et al. 1996; Lancaster 1999; Ormerod et al. 2003; Lipari and Lancaster 2004; Fitzgerald et al. 2005; Nye et al. 2007). These prior studies have provided descriptive data about military rape, but the mechanisms behind the likelihood of rape victimization have not been adequately examined.

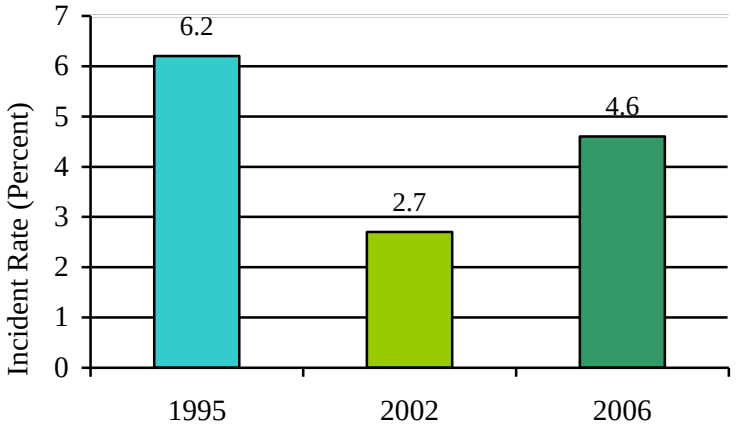
Historically, women have served in the US military in official and unofficial capacities (Binkin and Bach 1997; Moskos 1988; Burk 1993; Segal 1995; Burke 1996; Nelson 2002; Solaro 2006; Monahan and Neidel-Greenlee 2010). With the formal infusion of women into the Armed Services in the last half of the 20th century, women's military experiences have undergone closer examinations as they have entered into new occupational roles putting them ever closer to controversial combat-related work (Hosek and Peterson 1990; Binkin 1993; Dunivin 1994; Segal 1995; Rosen et al. 1999; Ritchie 2001; Solaro 2006).

The difference today in women's military experience is not only increased access to more occupations than ever before but also how these opportunities place them among male comrades rather than in traditional occupations in nursing and clerical roles. Accompanying these increased career opportunities are new risks in the workplace, including the increased likelihood of rape victimization.

Increased participation of women in the military and emerging new occupational roles have also produced an increase in sexual assault since 1988 (Dept. of Defense 2010). More recently, the sexual assault issues that arose at the Tailhook Convention in 1991 for the Navy, at Aberdeen Proving Grounds in 1995 for the Army, and within the Air Force Academy in 2003 have aroused much public attention. For most of military history, there was not a system or legal language in place to deal with incidents of soldier-on-soldier sexual assault (Nelson 2002; Ormerod et al. 2003). In 1992, the Defense Department finally began acknowledging rape incidents as offenses and began to refine the reporting process.

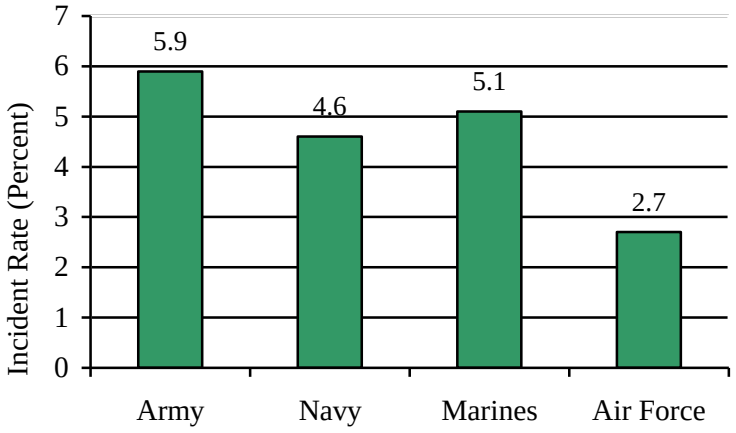
Rape victimization in the military has been measured via surveys, official DoD reports, and criminal data collection from 1995 to the present (Dept. of Defense 2010). (See Figures 1.1 – 1.2 from the 2006 Workforce and Gender Relations Annual Reports for the Department of Defense). The definition of "rape" this study relies upon comes from the *Uniform Code*

Figure 1.1. Sexual Assault Rate for Military Service Women for 1995, 2002, and 2006.



Source: Department of Defense, Workforce and Gender Relations Survey Overview Report 2006
Note: Unwanted Sexual Contact is defined by the Uniform Code of Military Justice and the survey as "sexual contact against your will or occurred when you did not or could not consent where someone sexually touched you (e.g., intentional touching of genitalia, breasts, or buttocks) or made you sexually touch them, attempted to make you have sexual intercourse, but was not successful, made you have sexual intercourse, attempted to make you perform or receive oral sex, anal sex, or penetration by a finger or object, but was not successful, made you perform or receive oral sex, anal sex, or penetration by a finger or object." Rate was calculated by reports per Thousand Service Members.

Figure 1.2. Sexual Assault Rate for Military Service Women by Military Branch for 2006



Source: Department of Defense, Workforce and Gender Relations Survey Overview Report 2006. Rate was calculated by reports per Thousand Service Members.

of Military Justice, or official code of law for military personnel, to be discussed further in the forthcoming chapter. Figure 1.1 indicates that the rate of sexual assault has fluctuated over time from 6 percent in 1995 to 2 percent in 2002 and then back to 5 percent in 2006. Sociologically, it appears that sexual assault rates in the military could have decreased due to the effects of increased deployment for the War in Iraq and Afghanistan when military personnel were heavily focused on accomplishing a mission (in 2002). As these wars became normalized and lengthened in duration, deviant behaviors such as sexual assault began to return to the normal rates (in 2006) as compared to those seen in 1995. Figure 1.2 demonstrates the 2006 sexual assault rates by military branch with the Marines Corps and Army containing the highest rates. The Pentagon estimates that figures for assaults on women likely represent less than 20 percent of actual incidents (Department of Defense 2010; Ellison 2011). Overall, the military maintains a slightly lower rape rate as compared to the general population, ranging from 4.1 to 7.1 percent depending upon the type of population the rate is calculated upon while the national average for rape victimization hovers around 6.2 percent (RAINN 2011).

Since 1990, despite awareness campaigns launched by the Defense Department and increased resources being provided for victims coping with the trauma of rape, sexual assault is still a major problem for women in the military (Sadler et al. 2003; Rao 2009; DoD 2010). Independent observers might be

inclined to think that the issues surrounding rape victims in the general public are really no different for female soldiers currently serving in the military. This line of thinking does not acknowledge the uniquely male-dominated environment female soldiers find themselves in within the military. Indeed, some might suggest that the military would provide an environment ideal for a rapist looking for victims who are isolated and without natural coping outlets available to them (Baker 1995; Dean 1997; Nelson 2002). On the other hand, others suggest that an environment that is as highly regulated as the military should provide protective mechanisms against the risk of rape victimization for women (Burrelli 1996; Ritchie 2001).

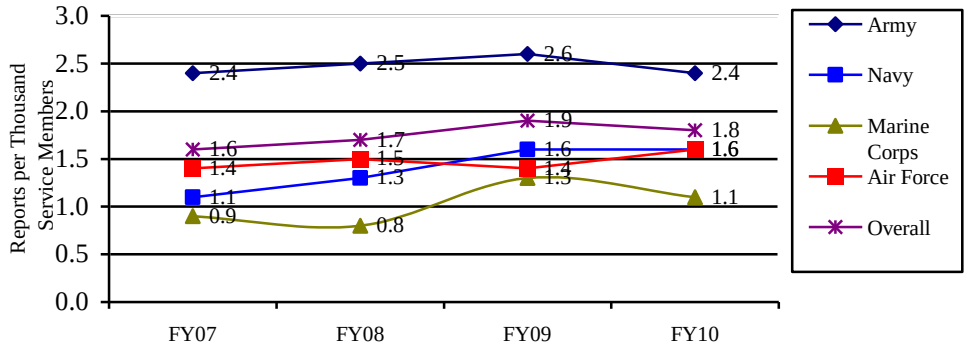
Most analyses have only begun to address the explanations as to why sexual assault for women occurs in such a socially controlled institution such as the military (Bastian et al. 1996; Burrelli 1996; Dean 1997; Drasgow et al. 1998; Lancaster 1999; Magley et al. 1999; Martin et al. 2000; Ritchie 2001; Nelson 2002; Firestone and Harris 2003; DoD 2004; Lipari et al. 2005; Solaro 2006; Nye et al. 2007; Rosen 2007; Buchanan et al. 2008; Rao 2009; DoD 2010). These studies have suggested that military rape is different from civilian rape for women; specifically, the male-dominated environment in which these rapes occur within is unique (Dean 1997; Solaro 2006), the chain of command's hindrance to the rape reporting process (Nelson 2002; DoD 2007), the risk of a

woman's military career (Solaro 2006), and the victim's isolation from friends and family due to deployment or training (Lipari et al. 2005) .

Department of Defense studies have suggested military rape is an important and growing problem (Bastian et al. 1996; Lancaster 1999; Ormerod et al. 2003; Lipari and Lancaster 2004; Lipari et al. 2005; Nye et al. 2007; DoD 2010), particularly since women in the armed forces are now more likely to be assaulted by a fellow soldier than killed in combat (Ellison 2011). The majority of rape cases for women in the military involve soldier-on-soldier assault (72 percent) and almost three out of four occur within military environments (DoD 2010). In 2010, the Department of Defense recorded 1,870 military service member victims of rape (DoD 2010), over 86% of which are female. The majority of rape victims in combat areas of interest are members of the Army (81 percent) (DoD 2010). Current sexual assaults in combat areas occur mostly in Iraq (53 percent) and Afghanistan (26 percent) while the remainder of assaults occur in many different installations throughout the world (DoD 2010). This represents a 16% increase in the combat-based reporting of rape from 2008, very similar to the 11% increase seen in overall reporting from 2007 (DoD 2010). (See Figures 1.3 and 1.4).

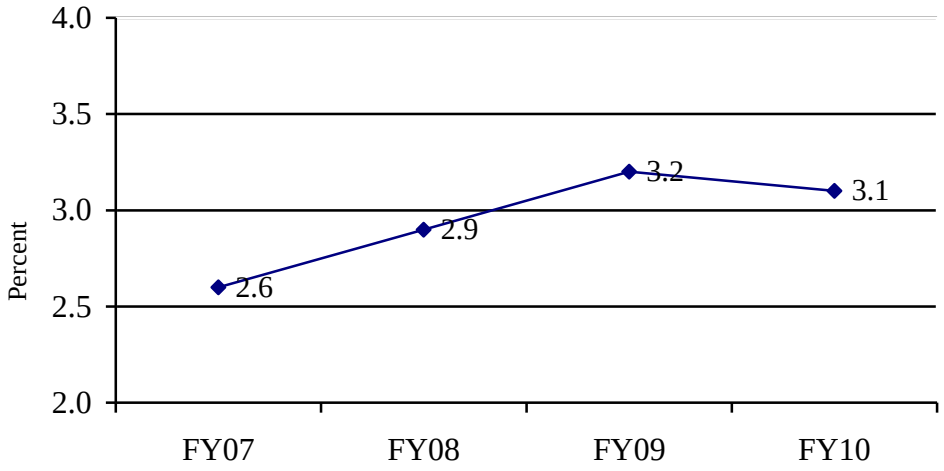
The objective of this study is to explain the likelihood of active-duty females becoming a victim of sexual assault in the military. The population of focus of my study is on "soldier-on-soldier rape", (although some soldiers and

Figure 1.3. Sexual Assault Report Rate to the Department of Defense for Fiscal Years 2007-2010 by Military Branch.



Source: Department of Defense, Workforce and Gender Relations Survey Overview Report 2010.
Note: Reporting rates are calculated using the number of Service member victims and Active Duty Service end strength for each fiscal year on record with DMDC. Rates listed are reports per thousand Service members. Rate was calculated by reports per Thousand Service Members.

Figure 1.4. Sexual Assault Report Rate to the Department of Defense for Fiscal Years 2007-2010.



Source: Department of Defense, Workforce and Gender Relations Survey Overview Report 2010. Rate was calculated by reports per Thousand Service Members.

military spouses also experience rape at the hands of others in the military community). My argument examines this problem with three key independent

variables: (1) active duty deployment, (2) female integration into the military branches, and (3) sex-ratio imbalances in the workgroup.

Deployment

As of 2010, active-duty women in the military comprise approximately 11 percent of the total deployed forces (DoD 2010). To put this into perspective, it means than one out of every seven troop members in Iraq is female. While considering the deployment of women in military operations since 2001, some have speculated that deploying women in active combat zones, such as Iraq and Afghanistan, is an act of "sending women into the lion's den" in regards to increased likelihoods of rape victimization (Nelson 2002; Solaro 2006). Despite volumes of work documenting female service members' experiences in the field, hardly any of the literature is based upon observations of women on long-term deployments and the potential victimization sexual risks associated with them (Devilbiss 1985; Stiehm 1989; Binkin 1993; Armstrong et al. 2005; Rosen 2007; Jacobson et al. 2008). No study to date has explored the extent to which deployment to major military operations is related to the sexual victimization of female service members.

The Military Branches

The Department of Defense is comprised of four military branches (Army, Navy, Marine Corps, and Air Force), as well as national guard and reserve units (Army National Guard, Air National Guard, Army Reserve, Marine Corps Reserve, Navy Reserve, Air Force Reserve). The Coast Guard was historically an additional military branch unit, but it was moved under the Department of Homeland Security in 2003 and is mobilized by the Department of Defense under the Navy's direction in times of specific need.

Each military branch offers a variety of career opportunities and assignments for both men and women. People working in military careers may find themselves employed in such diverse activities as managing a hospital, commanding a tank, programming computers, operating a nuclear reactor, or repairing and maintaining helicopters. The military provides educational training and work experience to more than 2.5 million people across the country (DoD 2010). Women in the military perform a variety of duties, from communication specialists, truck drivers, medics, supply loaders, pilots, administration, and clerical work.

There are significant differences between the military branches and how women experience being a part of those branches. The Air Force is the newest official branch and is viewed as highly technical, requiring more brains than brawn, and as the least antagonistic to women (Burelli 1996; Herbert 1998).

Not surprisingly, the Air Force has the highest proportion of women serving (approximately 19 percent) and it was first among the branches to endorse equal pay for equal work allowing some to conclude that it has integrated women the most successfully (Burelli 1996; Herbert 1998; Nelson 2002; Segal 2001). The Navy has experienced the largest share of negative publicity surrounding women in the military largely due to the 1991 Tailhook Convention scandal, incidents of sexually hazing women at the Naval Academy, and the discharges of alleged lesbians aboard ships. The Navy is viewed by some people to be the most antagonistic toward women with the Army and Marine Corps falling somewhere in the middle of the branches (Burelli 1996; Solaro 2006).

The Marine Corps is very different from the other branches in that women are specified as "women marines," or "women first" and "marines second," answering the common call given to them to "free a man to fight." In this way, Marines may also be antagonistic toward women in that femininity is valued above a service member's duty, but men are valued as both marines and masculine. In fact, the Marines (as well as some of the other service branches) require women to attend make-up and etiquette classes in their training regimen (Burke 1996; Segal 1977; Herbert 1998; Monahan and Neidel-Greenlee 2010). This means that not only is femininity valued, but a certain *type* of femininity is *expected* from women in the military. Since prior research has indicated that the service branch a member belongs to does matter in some regards to their risk of

rape (Sadler et. al 2003; Lipari et al. 2005; Rosen 2007), this risk represents an essential consideration for the current study. Other branch-specific research relevant to this topic will be discussed in Chapter 3.

Gender Integration

Central to the understanding of deployment and military branch relationships with rape is the idea of the military as a "gendered institution," male-dominated, and triggered by workplace stressors, especially those encountered in combat. "Gendered institutions" describe gender as something that "is present in the processes, practice, images and ideologies, and distributions of power in the various sectors on social life" (Acker 1992: 567). When an institution is dominated by men, the integration of women into such an institution is problematic because it has been historically organized and defined by the *absence* of women (Herbert 1998). Accordingly, when women enter the military institution, the gender dynamic changes and occasionally the experiences of sexual tension, frustration, and/or isolation lead to sexual violence (Dean 1997; Nelson 2002; Solaro 2006; Rao 2009). I argue that these sexual tensions are escalated by deployment-based stressors.

The military, as a gendered institution, has made some progress in the inclusion of women, particularly with the opening up of military occupations to all qualified personnel. At present, 95 percent of its occupational roles are open

to women; with the exception being combat and front-line jobs. Although these open occupational fields indicate gender neutrality for women, the military still struggles to incorporate women into the symbolic, social, and cultural values that were present in its inception. The traditional masculine values of toughness, brute strength, control, vigilance, and domination often found within military men can become a justification for male sexual offenders to victimize women. Specifically, a military culture across the branches that allows sexualized remarks or harassment by officers, produces sexual advances on duty and in barracks, and harbors a failure of leadership to address these behaviors has been connected to risk factors for sexual assault (Sadler et al. 2001). These cultural forces are at least partly responsible for increases in military rape and I argue that they can intensify when military personnel are sent into active combat zones. Accordingly, this study takes these concepts into account when evaluating the work environment, sex ratios of men and women, and the deployment of females as potential risk factors for rape in the military.

Summary

This research is extremely important for two reasons. First, it seeks to provide a better understanding of the contexts and risk factors associated with female service member rape victimization, a topic that has been somewhat ignored by scholars (exceptions of include Sadler et al. 2003, Rosen 2007; Rao

2009). Second, this research begins to address the effects and personal consequences of deployment upon female soldiers.

I begin this study with a review of the literature on the known correlates of sexual assault or rape. This is followed by a discussion of the military organizational cultural context, focusing on the extent to which it may influence rape rates. The primary research question asks, to what extent does deployment determine the likelihood of sexual assault for active-duty female service members? Another equally important question asks, to what extent does military branch membership determine the likelihood of sexual assault for women in the military? A final question asks, to what extent does the sex ratio of a female service member's workgroup determine the likelihood of sexual assault? These questions represent important aspects regarding the safety and well-being of female soldiers and their families. The intention of this study is to extend a line of research to more fully explore the impact of deployment, military branch membership, and the sex ratios of workgroups on sexual assault experiences for women.

Chapter Overview

Chapters 2 and 3 present a review of the literature regarding sexual assault as well as an exploration into the military cultural context as it relates to the experiences of unwanted sexual behaviors and the risks of victimization.

The review draws from the work of military sociologists, criminologists, psychologists, and clinicians to bring together women's military studies with the sexual assault literature in criminology. The literature review describes the current state of the research available from both academia as well as from researchers and policy makers working in the DoD. This study merges these literatures together into a more comprehensive discussion that more thoroughly examines sexual assault as an issue in the military. These chapters specifically elaborate on two theoretical themes that are relevant to military rape: gender tokenism and rape culture.

Following the literature review, Chapter 4 outlines the procedures of analysis and provides a detailed description of the dataset and variables. This chapter contains the methodology for the current study as developed by both the DoD in the gathering of the data and my own construction of the variables under analysis. Included in this section are descriptions of both the study sample and the population from which it is drawn (including response rates), a thorough discussion of the survey instrument used to collect these data, and the procedure used in survey administration.

Chapter 5 includes a summary of the survey responses, a comparison of the study sample and population to show representativeness, and an analysis of the data in regards to the research questions. The results and findings of the analysis are contained within this chapter. Finally, Chapter 6 contains a

discussion of the findings and suggestions for future research. Also included within Chapter 6, is a conclusion about the limitations of previous studies and an explanation as to what sets these data apart from previous studies and makes this study unique and beneficial.

CHAPTER 2: SEXUAL ASSAULT

Terms and Definitions

During the course of this study, the terms "sexual assault" and "rape" may be used interchangeably, but specified descriptively when the analysis calls for this type of specification or it follows a logical decision as signaled by the literature. This definition includes both *attempted* and *completed* sexual intercourse as well as a variety of sexual acts such as sodomy, object penetration, sexual touching, etc. As indicated earlier, the definition of sexual assault for this study relies upon the same term defined in the *Uniform Code of Military Justice* (UCMJ). The UCMJ, Article 120 was known as the "Rape and carnal knowledge" statute at the time the survey was conducted (2006). As of 2007, Article 120 is entitled "Rape, sexual assault, and other sexual misconduct."

Article 120 specified that a sexual act included "contact between the penis and the vulva, however slight; or the penetration of the genitals, by finger or object, with intent to abuse, humiliate, harass, or degrade any person or to arouse or gratify the sexual desire of any person." Sexual contact included "the intentional touching, either directly or through the clothing, of the genitalia, anus, groin, breast, inner thigh, or buttocks of another person, or intentionally causing another person to touch, either directly or through the clothing, the

genitalia, anus, groin, breast, inner thigh, or buttocks of any person, with an intent to abuse, humiliate, or degrade any person or to arouse or gratify the sexual desire of any person" (UCMJ, Article 120). The survey collected the language for both sexual acts and sexual contact to specify the unwanted sexual contact measure under examination.

When it comes to sexual crimes committed in military contexts, the negative consequences of sex offending are much higher for military personnel than they are for civilians due to the increased number of sanctions provided in the UCMJ. For example, a member of the military found guilty of rape can receive a dishonorable discharge, forfeiture of all pay and allowances, confinement, and/or reduction of grade (Army Regulation 12-10, 2005).

While most rape studies include "forced vaginal, oral, and anal sex" (Klaus and Rand 1984; Stark and Flitcraft 1988; Kilpatrick et al. 1992; Koss 1993a & 1993b; Michael et al. 1994; Drasgow et al. 1998; Kilpatrick 2000; Martin et al. 2000; Fisher et al. 2001; Detis 2001; Belknap 2001; McFarlane and Malecha 2005; Gonzales et al. 2006; Nye et al. 2007; Kilpatrick et al. 2007; Rao 2009; Reddington and Kreisel 2009) some studies include both "attempted and completed" assaults (Crowell and Burgess 1996; Kilpatrick 2000; Tjaden and Thoennes 2006); others document only "completed" assaults (McFarlane and Malecha 2005). These definitions, with their obvious operationalization issues, are mentioned to point out the variance that can exist between studies and

demonstrate how difficult it can be to complete a meta-analysis of the existing rape literature.

The word "rape" actually stems from the Latin word *rapere*, which means "to take by force" (Reddington and Kreisel 2009). Though this word seems to easily establish what rape is, many definitions, criminal/legal, psychological, and sociological have emerged over time. These variances in definitions make it difficult to determine accurate rates of sexual assault over time. It truly depends on the terms that one uses. For example, many codes of criminal laws, including the *Uniform Code of Military Justice*, use the notion of "carnal knowledge." "Carnal knowledge" is a legal substitution for an expression used to replace what was thought to offend or suggest something unpleasant to the receiver. It historically became a sort of euphemism for sexual intercourse (Reddington and Kreisel 2009). The term originates from the Biblical use of the verb to know/knew, as in the King James Bible and other versions of Genesis 4:1, *"And Adam knew Eve his wife; and she conceived, and bore Cain, and said, I have gotten a man from the LORD."*

In order to more fully understand rape, both its definitions and prevalence, and apply this to how sexual assault occurs in the military, it is important to understand what is known about rape generally. Then we can determine what the sexual assault incident rate for females in the general population is and compare it to what we find in the military population. In this

endeavor, there are a number of sources one can turn to. Generally, rape statistics are collected by government sources or private researchers usually funded by federal grants.

Rape Official Statistics and Sources

Sexual assault or rape statistics can be difficult to interpret and compare because it is one of the most serious and underreported violent crimes in America (Lonsway and Fitzgerald 1994; Ullman 1997; Belknap 2001; Renzetti and Goodstein 2001; Ullman 2010). Official data from numerous sources such as the *Uniform Crime Report* and the *Bureau of Justice Statistics* describe rape prevalence over time. In addition, there are *National Crime Victim Surveys* that provide self-reported data (not official data). There are also several national surveys focused specifically on females as victims as well as intimate partner violence including the *National Women's Study* and the *National Violence Against Women Survey*.

The estimates of the number of rapes experienced by women yearly differ from study to study because the sources of these estimates use *different samples* (adults only or minors/adults), *different definitions of rape* (attempted vs. completed, touching vs. penetration), *different time frames of measurement* (within last year vs. lifetime), *different ways of measuring whether a rape has happened*, and *different units of analysis* in reporting statistics (police reports,

in-home interviews, etc.) (Kilpatrick 2000). If a study measures "rape cases" instead of "rape victims" then the numbers will differ for those women raped more than once due to decisions to include/exclude "per incident" or "per victim" data.

There is also a difference between what is known to be the *incidence* of rape and the *prevalence* of rape. *Rape incidence* usually refers to the *number of cases* that occur in a given time period (usually a year), and incidence statistics are often reported as rates (e.g., the number of rape cases occurring per 100,000 women in the population) (Kilpatrick 2000). *Rape prevalence* generally refers to the *percentage of women* who have been raped in a specified time period (e.g., within the past year or throughout their lifetime) (Kilpatrick 2000).

Uniform Crime Report (UCR) Data

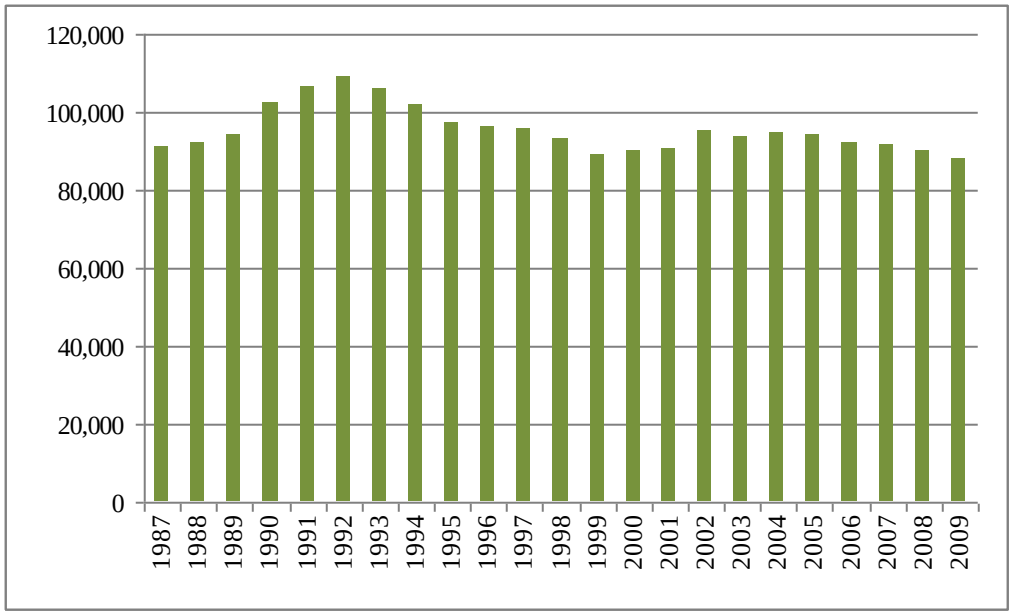
The *Uniform Crime Report* (UCR) represents voluntary reporting on criminal offenses from law enforcement agencies across the entire United States and has been the standard in calculating criminal statistics since the 1930s. These data reflect what is known as "the Hierarchy Rule," requiring that only the most serious offense in a multiple-offense criminal event can be counted. The hierarchal order for violent crimes is first, murder/non-negligent manslaughter; second, forcible rape; third, robbery; and fourth, aggravated assault; followed by property crimes (burglary, larceny-theft, motor vehicle

theft). "Forcible rapes," as defined by the UCR, are "the carnal knowledge of a female forcibly and against her will" and excludes males as rape victims (UCR 2006).

In what the UCR terms "forcible rape," there is a strong likelihood that the hierarchy rule will allow for the continued capture of this behavior as a priority category in violent crime, though one would not know the exact cases in which this would apply. One widely known drawback to using UCR to analyze rape data is that it only contains crimes that were voluntarily reported by both the victims and law enforcement agencies. It is well-documented in the literature that sexual assault events are underreported to law enforcement agencies (Belknap 2001; Renzetti and Goodstein 2001; Ullman 2010), but this data source can at least provide us some knowledge of the prevalence of sexual assaults that are reported. Overall, it seems probable to be able to capture a relatively reliable number reflecting reported sexual assaults in the United States using these data with the limitations already known.

Nationally, violent crime incidents including sexual assault have been falling for decades. Forcible rape is one of the least reported violent crimes at 6.7 percent of the total incidents in the violent crimes category (UCR 2006) (See Figure 2.1 and Table 2.1). In 2009, the total number of forcible rapes in the U.S. population was estimated at 81,992 which represents a steady decrease since 2005. The sexual assault rate per 100,000 females was estimated at 28.9 rapes

Figure 2.1. Crime in the United States, Forcible Rape Yearly Totals from 1987-2009



Source: Uniform Crime Report, Crime in the US 2009.

Table 2.1 Crime in the United States by Volume and Rate per 100,000 Inhabitants, 1987–2009

Year	Population[1]	Forcible rape	*Forcible rape rate*
1987	242,288,918	91,111	37.6
1988	244,498,982	92,486	37.8
1989	246,819,230	94,504	38.3
1990	249,464,396	102,555	41.1
1991	252,153,092	106,593	42.3
1992	255,029,699	109,062	42.8
1993	257,782,608	106,014	41.1
1994	260,327,021	102,216	39.3
1995	262,803,276	97,470	37.1
1996	265,228,572	96,252	36.3
1997	267,783,607	96,153	35.9
1998	270,248,003	93,144	34.5
1999	272,690,813	89,411	32.8
2000	281,421,906	90,178	32.0
2001	285,317,559	90,863	31.8
2002	287,973,924	95,235	33.1
2003	290,788,976	93,883	32.3
2004	293,656,842	95,089	32.4
2005	296,507,061	94,347	31.8
2006	299,398,484	92,455	30.9
2007	301,290,332	91,874	30.5
2008	304,374,846	90,479	29.7
2009	307,006,550	88,097	28.7

1 Populations are U.S. Census Bureau provisional estimates as of July 1 for each year except 1990 and 2000, which are decennial census counts.
Source: Uniform Crime Report, Crime in the US 2009.

in 2006 , the year the study was conducted (UCR 2006). Forcible rapes represent 93 percent of all reported rape offenses which also includes attempted rapes and violent assaults to commit rape. When rapes are reported, they tend to

be cleared at reasonable rates. Approximately 41.2 percent of forcible rapes are cleared, (meaning a person is arrested, charged, and submitted for court prosecution for the rape offense) or cleared by exceptional means (death of the offender, victim's refusal to cooperate, or denial of extradition to surrender the suspect to another state due to an additional criminal commission) (UCR 2006).

National Incident-Based Reporting System (NIBRS)

The *National Incident-Based Reporting System* (NIBRS) provides greater specificity in crime reporting. The UCR Summary reporting system collects most of its crime data in the form of categories while NIBRS has a greater ability to capture and breakdown data into specific subcategories. NIBRS data are received from participating local, state, and federal law enforcement agencies having automated records systems. Compared to the UCR, NIBRS collects more details on more categories of crime, including concurrent offenses, weapons, injury, location, property loss and characteristics of the victims, offenders and arrestees.

For NIBRS reporting purposes, "forcible rape" is defined as "The carnal knowledge of a person, forcibly and/or against that person's will; or not forcibly or against the person's will where the victim is incapable of giving consent because of his/her temporary or permanent mental or physical incapacity (or because of his/her youth)" (*UCR Handbook*, NIBRS edition, 1992). It should

also be stated that not all law enforcement agencies are currently participating in NIBRS. The data from those agencies represent 25 percent of the U.S. population and 25 percent of the crime statistics collected by the UCR Program. NIBRS suppresses the "Hierarchy Rule" of offenses utilized by the UCR. Rape rates in NIBRS are about 1 percent higher, on average, than in the UCR (Rantala and Edwards 2001). Out of 5,334,322 total victims in the 2006 NIBRS report, there were 72,734 victims of forcible rape, forcible sodomy, sexual assault with an object, forcible fondling, and statutory rape, or roughly 1.3 percent of the total victim population (NIBRS 2006).

National Crime Victimization Survey (NCVS)

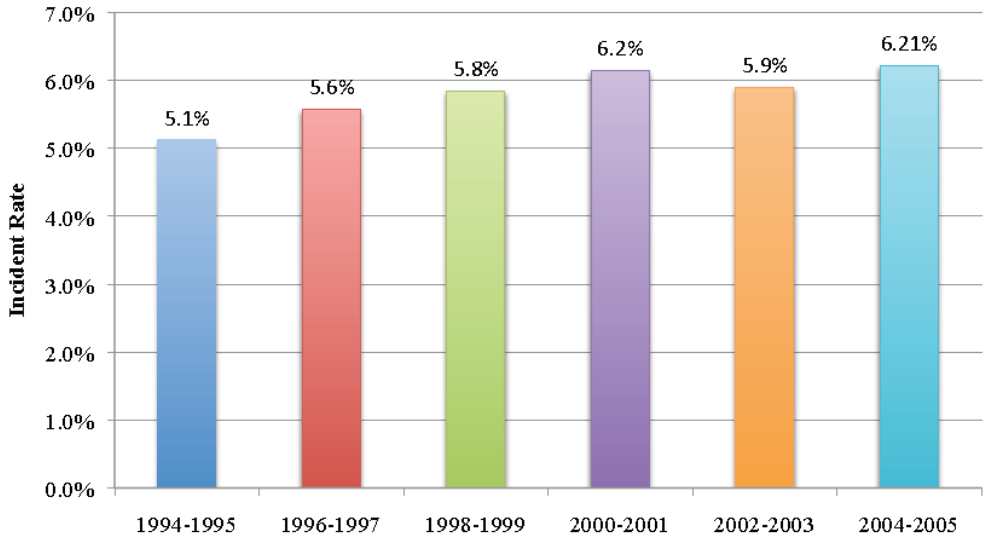
The U.S. Department of Justice's *National Crime Victimization Survey* (NCVS) estimates the number of reported and unreported serious crimes nationwide including violent crimes such as rape/sexual assault with data on victim, crime, and offender characteristics. Victimization surveys have the potential for being the most accurate source of data on the incidence of sexual assault since the surveys are administered out and into the population rather than waiting for incidents to be reported to an agency. However, there is no guarantee that individuals will be any more willing to report sexual assaults to survey workers than to the police (Greenfield 1997; Tjaden and Thoennes 2006). In

addition, the quality and quantity of information obtained by a survey is very sensitive to how the questions are asked.

Weaknesses of the NCVS are similar to those which one might expect from other survey efforts including the inability of the respondents to recall rape events in detail. The NCVS does *not* include Armed Forces personnel living in military barracks within the scope of the survey. Similarly, U.S. citizens residing abroad (such as deployed females in the Armed Forces) and foreign visitors to the United States were also excluded. In the NCVS survey, rape was defined as "Forced sexual intercourse (vaginal, anal, or oral penetration) including both psychological coercion as well as physical force" (NCVS 2006). Sexual assault was defined as "a wide range of victimizations, separate from rape or attempted rape" (NCVS 2006).

The NCVS demonstrated a forcible rape rate which had increased nationally over a ten year period (1994 and 2004) prior to the year of the study (See Figure 2.2). Within the 2006 NCVS survey, 38,000 households were interviewed (a 91 percent response rate), and 67,650 individuals were interviewed within those households (86 percent response rate) (NCVS 2006). According to the NCVS 2006, there were 232,960 rapes/sexual victimizations of females aged 12 years and older, a rate of 1.8 per 1,000.

Figure 2.2 National Crime Victimization Survey - Percent of Females Reporting Nonfatal Intimate Partner Violence to Police, 1994-2005



National Women's Study (NWS)

There are other nongovernmental studies that provide more information about rape from another perspective. The first nationally conducted major survey on rape was the *National Women's Study* (NWS), funded by the National Institute of Drug Abuse in 1990. This was a longitudinal survey of household samples of 4,008 adult women (aged 18 years and older) who were surveyed in 1990 and at one and two year follow-ups. The NWS generated the influential text *Rape in America: A Report to the Nation* (Kilpatrick et al. 1992) as well as a number of other peer-reviewed scientific publications. The NWS measured rapes and other sexual assaults occurring throughout victims' lifetime as well as new cases occurring to adult women during the follow-up period (Kilpatrick

2000). This study provided the first national empirical data about the forcible rape of US women.

The NWS study estimated that 683,000 adult American women were raped during the past twelve-month period in 1989 (.5 percent of the population) and 13 percent of women had been raped at some time in their lives (Kilpatrick et al. 1992). Based on U.S. Census estimates of the number of adult women in America at the time, one out of every eight women, or at least 12.1 million women, had been the victim of forcible rape sometime in her lifetime (Kilpatrick et al. 1992). While 56 percent or an estimated 6.8 million women experienced only one rape during their lifetime, 39 percent, or an estimated 4.7 million, were raped more than once; and five percent were unsure as to how many times they were raped (Kilpatrick et al. 1992). The number of rapes per year in *Rape in America* was approximately five times higher than the Uniform Crime Report at the time (Kilpatrick et al. 1992).

National Survey of Adolescents (NSA)

The second major national source on rape was the *National Survey of Adolescents* (NSA), funded by the National Institute of Justice which conducted interviews with a household sample of 4, 023 adolescents age 12-17 years in 1995. These adolescents were interviewed about sexual assaults that occurred

throughout their lifetimes (Kilpatrick and Saunders, 1996) and about the consequences of these experiences.

The study found that 8.1 percent of U.S. adolescents had been victims of at least one sexual assault (Kilpatrick & Saunders, 1997; Kilpatrick et al. 2000). This indicates that an estimated 1.8 million 12 to 17 year olds have been sexually assaulted (Kilpatrick 2000). Researchers estimated that 13 percent of female adolescents had been victims of a sexual assault at some point during their lives (Kilpatrick & Saunders 1997). Data from the NWS and NSA indicate that re-victimization is a problem for both women and adolescents (Kilpatrick 2000). Thirty-nine percent of rape victims in the NWS had been raped more than once, and 41.7 percent of the adolescent victims said that they had been sexually assaulted more than once (Kilpatrick 2000).

National Violence Against Women Survey (NVAWS)

The National Violence Against Women Survey (NVAWS) was funded by the National Institute of Justice and the Center for Disease Control in 1995-1996. This survey was conducted via phone interview with 8,000 women over age 18 years between 1995-1996 to determine current victimization within the last year and the lifetime prevalence of rape. Almost 18 million women have been raped during their lifetime in the United States (Gonzales et al. 2006). One out of every six women, or approximately 17 percent, had been raped at some

time during her life (Gonzales et al. 2006). In a single year, it was estimated that more than 300,000 women have been raped (Gonzales et al. 2006).

Other privately conducted surveys also support the findings from the NVAWS, NWS, and NSA. For example, the 1992 National Health and Social Life Survey found that 22 percent of women had been "forced to do something sexual in their life" (Michael et al. 1994). Not all of the findings in every survey are meant to be covered in this chapter, however, the major surveys and sources of data on sexual assault/rape do give us an idea of what this behavior looks like across multiple methodologies.

Examining these sources is not to be undertaken without sufficient caution in that the estimates of the *prevalence* and *incidence* of rape and sexual assault vary widely from study to study and data source to data source. For example, rape victimization rates and estimates from a source such as the *National Crime Victimization Survey* are substantially lower than the rates found in the *National Women's Study* (Tjaden and Thoennes 2006). Nevertheless, these comparisons can still be a useful exercise in providing the necessary background and basic understanding into the issue of rape for military women if we begin with a more general overview of rape in society.

Risk Factors of Rape

I now turn to a discussion of the well-known correlates of sexual assault. This study does not attempt to exhaust every correlate of rape but does cover the more prominent ones suggested in the literature such as prior victimization, age, race, marital status, acquaintance/familiarity with the offender, drug or alcohol use, health, and stress. These risk factors are covered in the survey for this study, however they were withheld due to confidentiality reasons for those responding by the survey team.

Prior Victimization

Some of the known correlates of being a sexual assault victim include having been raped as a minor (Department of Justice 2004; Siegel and Williams 2003; Fisher et al. 2001; Gonzales et al. 2006; Belknap 2001), where these women were twice as likely to be raped as adults. Whether or not this comes as a part of a person's vulnerability, the effect of a prior assault remains to be understood.

Age

Having been raped as a minor or previously raped in one's youth is highly predictive of future sexual assault (Belknap 2001; Fisher et al. 2001; Siegel and Williams 2003; Department of Justice 2004; Gonzales et al. 2006).

In most national studies, younger women under the age of 25 years are significantly more likely to experience sexual assault. According to the NCVS 2006, younger victims between the age of 12-15 years are more often sexually assaulted by people they do not know (43.7 percent). As women age the number of victims assaulted by a stranger decreases: age 16-19 years (36.1 percent), age 20-24 years (25.1 percent), age 25-34 years (21.5 percent) (NCVS 2006).

In the NVAWS survey, younger women (between 18-49 years) are significantly more likely to experience a rape in their lifetime as compared to older women (50 years and older). This is especially noteworthy given that women in the older age category were at risk for a longer time period than young women (Gonzales et al. 2006). It is easy to misinterpret these findings by assuming that rape prevalence has increased over the past generations or that younger women are more willing to report their rape experiences to interviewers. This may be the case with the changes in the last few decades with the inclusion of spousal rape which has applied for more years during younger victims' lives rather than for older victims (Bergen 1996). The NVAWS survey also reported that first rape occurs on average for most victims before age 18 years (Gonzales et al. 2006). About 1 out of 6 younger rape victims (between age 18-29 years) were raped before their 18th birthday (Gonzales et al. 2006). The rates of adolescent rape are lower for the older age groups which suggests

that the risk of being raped as a child or teen could have steadily increased over the past five decades (Gonzales et al. 2006) or at least the reporting has increased for these groups at a minimum.

Race/Ethnicity

According to the NCVS 2006, perceived race of the offender is White only 48.8 percent of the time, and 18.1 percent report "Black only". In the NVAWS survey, combining data on Hispanic, Black, American Indian/Alaska native, Asian/Pacific Islander and mixed-race women revealed no statistically significant difference in rape prevalence between minority and nonminority women (Gonzales et al. 2006).

Past cross-sectional studies have generally indicated that risk for sexual assault does not vary by race (Finkelhor et al., 2005; Basile et al., 2006; Hussey et al., 2006; Elwood et al. 2011), although white females tend to be more at risk of acquaintance rape as compared to black females (Belknap 2001). Prior research has also indicated that the majority of rapes occur among victims and perpetrators of the same race (Koss and Harvey 1991; White et al. 1998).

Acquaintance/Familiarity with the Offender

According to the NCVS 2006, Black females are sexually assaulted mostly by strangers (61.8 percent), White females (32.3 percent). White victims

are assaulted more commonly by intimates (21.2 percent) and friends or acquaintances (46.4 percent). Other minority female victims including American Indians, Eskimo, Asians, and Pacific Islanders are assaulted by strangers 41.3 percent of the time. Married females who are sexual assault victims are assaulted mostly by strangers as well (73.7 percent), never marrieds (36.4 percent), Divorced or separated (24.4 percent). Female victims generally are sexually assaulted by an intimate partner 21.4 percent of the time, 3.2 percent by another relative, 44.3 percent by a friend or acquaintance, 31.1 percent by a stranger.

Generally, females tend to be raped by intimate partners such as spouses, boyfriends, and dates (Belknap 2001; Gonzales et al. 2006) or former partners in the cases of ex-boyfriends and ex-spouses. The NVAWS survey confirms prior research that most rape victims know their rapist (Belknap 2001; Gonzales et al. 2006). Victims under the age of twelve tend to be raped by relatives (Gonzales et al. 2006). In 8 out of 10 rape cases, the victim knows the perpetrator (Tjaden and Thoennes 2000). Of people who report sexual violence, 64 percent of women were raped, physically assaulted, or stalked by an intimate partner including a current/former spouse, cohabitating partner, boyfriend, or date (Tjaden and Thoennes 2000).

Marital Status

According to the NCVS 2006, divorced or separated females have the highest rates of sexual assaults at 4.3 per 1,000 persons over age 12 years. The next highest category is for never married (single) females at 3.7, and then married females at .4 and widowed females at .3. One out of ten victimizations of rape is reported to be at the hands of a spouse. In the NVAWS survey, female victims are more likely to be raped by a current or former intimate partner (Gonzales et al. 2006). Specifically, those in ended relationships, especially divorced or separated women, are posed with an increased risk of intimate partner violence such as rape as compared to married women (Klaus and Rand 1984; Stark and Flitcraft 1988; Zawitz 1994). Though it is not entirely possible to assemble from the data how many rapes were committed against women before, during, and after relationships and how those relationships related to their risk of rape, the research has suggested that this is an area where rape victimization does matter by virtue of a woman's marital status (Gonzales et al. 2006).

Drug/Alcohol Use

Drug and alcohol use also maintain an important role in rape victimization in that it is common for the offender or victim to be under the influence of drugs and or alcohol during the rape episode (NVAWS 1996;

Gonzales et al. 2006; Kilpatrick et al. 2007). Additionally, in the NVAWS survey, female victims reported that almost 20 drugs and or alcohol during the time of their rape (Gonzales et al. 2006). Kilpatrick et al. (2007) reported that about out of 1 million women who were raped, 200,000 were raped with the facilitation of drugs. According to the NCVS 2006, 26.8 percent of rape/sexual assault victimizations occurred while the offender was perceived to be under the influence of drugs or alcohol. (1.2 percent drugs alone, 14.8 percent both drugs *and* alcohol.)

In prior cases of military sexual assault, alcohol use by either the victim, offender, or both was a noted factor in approximately 35 percent of the reports of assault incidents (DoD FY07 Report). The DoD believes that this number represents an underestimate in the true involvement of alcohol in DoD reports (Department of Defense 2007). Other research has also shown a relationship between deployment and drinking behaviors (Lindstrom et al. 2006; Jacobson et al. 2008; Maguen et al. 2008). Reserve and National Guard personnel and younger service members who deploy with reported combat exposures are at increased risk of new-onset heavy weekly drinking, binge drinking, and alcohol-related problems (Jacobson et al. 2008). We also know that women in male-dominated professions tend to drink more than women in female-dominated professions (Goldman and Hatch 2000), suggesting a stronger likelihood for rape to occur with intoxicated victims and offenders.

Stress, Health, and Well-being

One of the major considerations in sexual assaults of female soldiers serving in Iraq, Kuwait, and Afghanistan was increasing numbers of soldiers experiencing post-traumatic stress disorder (PTSD) in "360-degree combat zones." Many soldiers had been redeployed more than once and were reporting symptoms of PTSD, especially as tours in Iraq and Afghanistan became extended and redeployment became the rule, rather than the exception with an exhausted all-volunteer force (Kimerling et al. 2007). Some of the constant combat stress came from living conditions, food, and having to stay on higher levels of security alerts due to repeated bombings and attacks in extremely active conflict zones (Monahan and Neidel-Greenlee 2010).

For soldiers serving multiple deployments their chances of developing PTSD increases by 50 percent (Kimerling et al, 2007; Department of Veteran Affairs 2010) and with women, it is often accompanied by symptoms of military sexual trauma (MST) (Jacobson et al. 2008). Women in combat support occupations were found to be significantly less likely to be hospitalized for a mental disorder than women in all other military occupations, but selection effects of health prior to deployment may be a factor as well (Lindstrom et al. 2006). These results are reassuring but further studies are needed to assess how service in combat support occupations affects the long-term health of U.S. military women (Lindstrom et al. 2006).

These risk factors tell us that overall, those at highest risk of sexual victimization are females who are young, unmarried, stressed, and those previously victimized (Karmen 2001). The DoD has acknowledged this in some of its own studies. Notably the 2007 report found that low sociocultural power (i.e., age and marital status) was associated with an increased likelihood of both sexual assault and sexual harassment (Department of Defense 2007). More research on the long-term social and health consequences of rape is needed to better address the needs of victims (Gonzales et al. 2006; Ullman 2010). This study focuses on the context of sexual assault victimization to determine other mitigating factors in rape issues, such as the workplace.

Rape in the Workplace

In this section, I discuss theoretical approaches that focus on hostile work environments and gender to understanding the causes of rape. There is a growing body of judicial decisions and policies expanding the definitions of sexual assault and the emerging complexity of these issues in the workplace as indicated in research from the private sector (Fitzgerald et al. 1994; Koss et al. 1994; Fitzgerald et al. 1997; Lancaster 1999; Casey and Rissetto 1999; O'Connell and Korabik 2000; Detis 2001; Tjaden and Thoennes 2001; Harned 2002; Siegel 2003; Gonzales et al. 2006; Ullman 2010).

For example, Fitzgerald et al. (1997) have analyzed some of the consequences of sexual assault in various organizations following a theoretical framework that sexual misconduct illustrates an organization's climate, the gender composition of one's workplace, and the extent to which others of the same/opposite gender perform one's similar tasks and duties. Of the approximately 1.7 million incidents of workplace sexual violence that occur in the US every year, approximately 18,700 (1.1 percent) are committed by an intimate: a current or former spouse, lover, partner, or boyfriend/girlfriend (Fitzgerald et al 1997; Detis 2001). Some abusive partners may even try to stop women from working by calling them frequently during the day or coming to their place of work unannounced. Research indicates that about 50 percent of battered women who are employed are harassed at work by their abusive partners (Baker 1995; Hulin et al. 1996).

Daytime work hours also attract offenders to their victims given that rape victimizations occur during multiple periods of the day and at even distributions (NCVS 2006). About one-third of rapes occur between 6 a.m. and 6 p.m. with the remaining two thirds split between 6 p.m. and midnight and Midnight to 6 a.m. About 41 percent of sexual assaults occur outside the victim's home, but it is difficult to tell if the event occurred in the workplace or not although 7.1 percent of victims reported that the assault occurred in some other commercial building, though it is unclear if the building was the victim's place of

employment (NCVS 2006). Approximately 5.9 percent of rape incidents occurred while the victim was working or "on duty" and about 2.5 percent occurred while the victim was on the way to or from work.

Sex Ratios

Much research has confirmed that the work performance of mixed-sex groups is sensitive to the composition of the mix (Webber 1976; Ruble and Higgins 1976; Kanter 1977; Arkin and Dobrofsky 1978; Baker 1995; Binkin 1993; Brewer and Brown 1998; Burgess and Borgida 1997; Burke 1996; Crosby 1982). When women are minorities among a workgroup they are subject to stereotypes and are often faced with having to project male images (Kanter 1977). Women become isolated and group conflict and often decreased productivity ensues (Webber 1976; Ruble and Higgins 1976). Rosabeth Moss Kanter made a similar conclusion in her study of professional men and women when she saw that outnumbered women became resented tokens. This resentment resulted in drained energy and many felt that token women were not worth having around (Kanter 1977).

Obviously this paradigm draws heavily from the concept of "doing gender," a routine/performed behavior and recurring accomplishment. West and Zimmerman (1987) described gender as action rather than a state of being where

men and women are responsible for their own constructions of their identities of masculinity and femininity.

The question becomes what are the costs of gender imbalance of sex ratios in the workplace? First, it may distract time and energy otherwise devoted to productivity toward issues of management of one's impression upon others. Second, it can cause sex-based issues (harassment, privacy, inequality of pay/duties/resources, abuse, etc.). These issues resulting from gender imbalance might be labeled for women as "the costs of not fitting in" as employees experience undue stress and suffer the consequences associated with it (poor health, missed work, turnover, etc.) (Herbert 1998).

Sex and Gender in the Workplace

A person's sexuality is assessed frequently by others and people are often described in sexual terms of attractiveness and the degree to which a person fits the gendered notion of what is appealing (West and Zimmerman 1987; Herbert 1998). "Sexual meanings are not universal absolutes but ambiguous and problematic categories" (Plummer 1982; 231). Gender and sexuality then reinforce each other over time. Sexuality also leads to the use of deviant labels (slut, pimp, whore, homosexual, butterfly, pansy, dyke) to ensure that girls and boys act accordingly to their heterosexual expectations of behavior (West and Zimmerman 1987; Herbert 1998).

The degree to which sex is acceptable in the workplace is usually termed in the argument of sexuality as a public or a private practice. People are "publicly sexual" when they laugh at lewd jokes and demonstrate sexual availability, especially in office romances, matchmaking, flirtation, and gossip. If the workplace is seen as public and dependent on order and discipline for productivity then public sexuality is seen as a detriment to that function (Davis 1996; Herbert 1998). If the workplace is seen as a private affair, afforded pleasures outside the home and polity, then public sexuality may be viewed as acceptable and part of the sexual tension that contributes to work life. Most would hold that sex and work do not mix, that they are incompatible with one another due to the intense mixture of emotional strains and logical pursuits. A related but important question also arises when considering the public or private nature of sexuality in various physical settings and what *type* of sexuality is to be kept private and public (Herbert 1998).

Precursors to Rape: Hostile Work Environments and Sexual Harassment

While the primary topic of this study is rape, it is reasonable to discuss it within the context of recent research in sexual harassment in the workplace as a precursor to the hostile work environments often preceding rape. Sexual harassment, which refers to a variety of unwanted gender-related comments and

behaviors, continues to be a pervasive problem in the workplace and the military is no exception. Differential sex role socialization between men and women reinforces the organizational dynamics associated with sexual harassment (Firestone and Harris 2003).

Males typically are taught to be dominant and aggressive, while females are taught to be subordinate and submissive, which then appears behaviorally in the work environment (Gutek and Morasch, 1982; Firestone 1984; Terpstra and Baker 1986; Tangri and Hayes 1997). A possible outcome of these gender socialization processes appearing at work may be the creation of an environment in which harassing and assault behaviors are consistent with the expectations associated with each gender role (Firestone and Harris 2003; Burgess and Borgida 1997).

Research has demonstrated that a contextual factor potentially important to the interpretation of sexual harassment or violence in the workplace is the organization's tolerance of harassment (Fitzgerald et al., 1994; Baker 1995; Burgess and Borgida 1997). Perceptions of tolerance should, in turn, be influenced by the occupational gender composition associated with an organization's industry. For employees in previously all-male or all-female professions, when one of your co-workers is the opposite sex, sexualized jokes and comments that were used before tend to come to a marching halt, or so we would suppose. The dynamic has certainly changed over the last 40 years, but

many problems of abuse and harassment still persist, especially in male-dominated workplaces (Pryor 1995; LaFontaine and Tredau 1986; Rowe 1996; O'Connell and Korabik 2000; Firestone and Harris 2003).

Current research indicates a number of important considerations for rape in the workplace. First, occupational gender composition contributes significantly to women's workplace hostility (Lach and Gwartney-Gibbs, 1993). Second, sexual harassment and assault occur more often in male-dominated than in female-dominated occupations (Terpstra and Baker, 1986; LaFontaine and Tredeau, 1986; O'Connell and Korabik, 2000). Third, some male-dominated professions actually permit sexual harassment and abuse to occur (Fitzgerald et al. 1994; Pryor 1995).

Some research has concluded that "context is everything" when it comes to sexual misbehaviors in the workplace (Harned et al. 2002; Sadler et al., 2003). Even though public awareness has increased and organizations have placed more emphasis on prevention, it is unrealistic to expect sexual harassment or assault to disappear entirely from work settings. One of the few studies to examine sexual misconduct in the military outside of the DoD was a project by Magley, Waldo, Drasgow, and Fitzgerald (1999) where the unique experiences of harassment were compared between men and women. Men and women both experienced negative psychological, health, and job performance outcomes as a result of harassment (Magley et al. 1999).

Overall, some observers believe sexual harassment may be a bigger problem for women in the military, however, because of the traditionally male environment and the smaller proportion of women in the sex ratios of work units (Burrelli 1996). Again, accurate data on the rate of sexual trauma, harassment or rape, is notoriously difficult to achieve partly because of underreporting (Rosen 2007; Ullman 2010), and the military is no exception to this.

Before continuing further, it will be useful to describe the relatively brief history of women in the US military and the military as a unique occupational setting. Doing so will provide the necessary context to understand the factors that influence the risks of rape victimization in the Armed Forces. This is the focus of the next chapter.

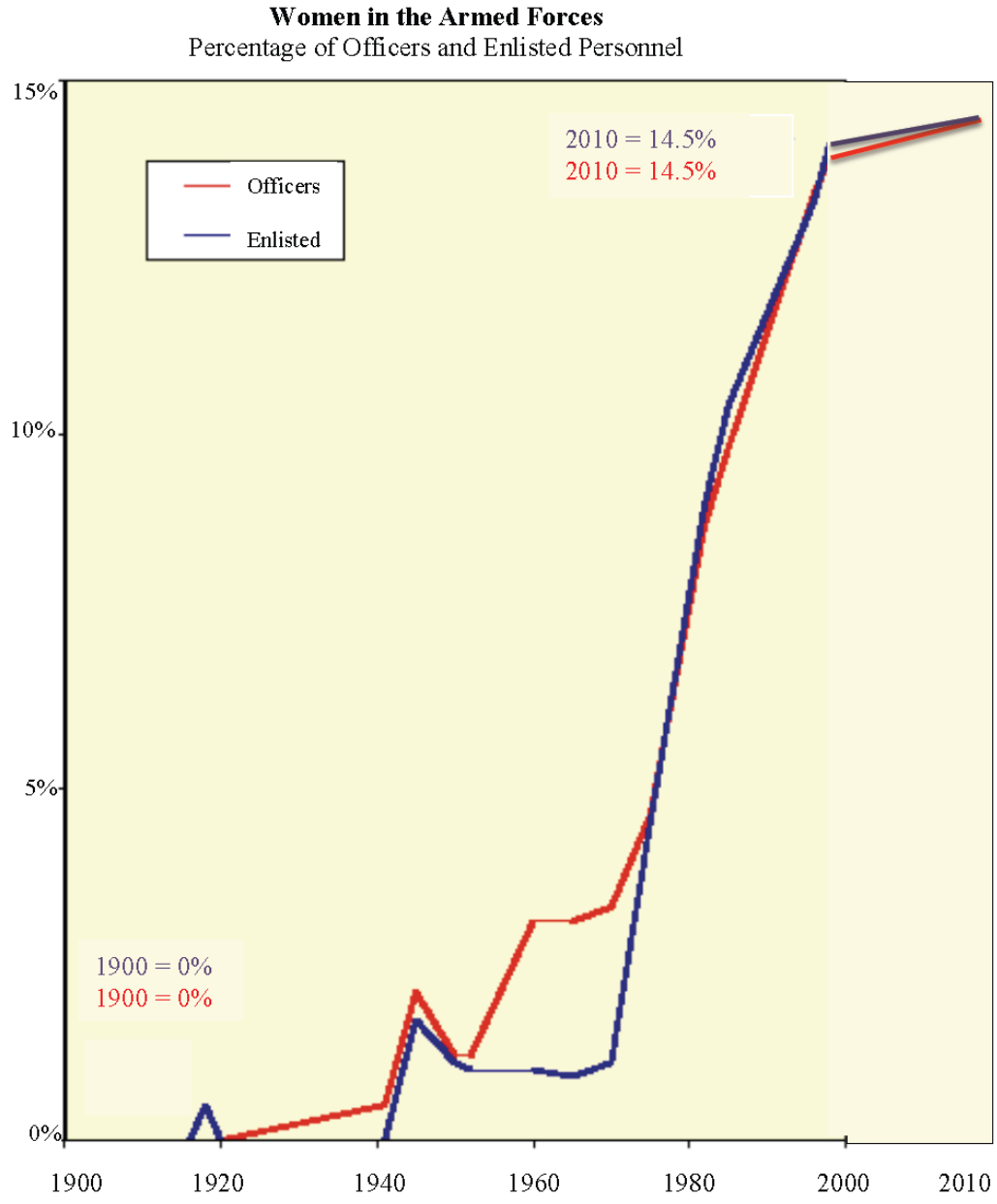
CHAPTER 3: WOMEN IN THE US MILITARY

History and Background

Military service has almost always been described as a male calling, even in contemporary times. However, women have engaged in that calling in increasing numbers due to the removal of restrictions on military career opportunities and retirement provisions (Monahan and Neidel-Greenlee 2010). The largest increases of "G.I. Jane recruits" occurred between 1971 and 1981, when it became clear that limitations on the role of women had been taken down. During this period, the momentum of the Equal Rights Amendment (ERA) movement was fully underway, and a task force was appointed to prepare for increasing the use of women to offset potential male shortages expected in the coming years (See Figure 3.1). Though new frontiers for women in the military were not made explicitly in the ERA, it had a demonstrable effect on women, challenging previous boundaries of gendered occupations.

Discrimination on the basis of gender was a normal part of military life until the 1970s (Segal 1978). Many employment practices that previously discriminated against women across the branches were altered which provided even greater integration of women into the armed services. As the result of sweeping decisions by military and political leadership, major studies, public debates, commissions, task forces, hearings, and litigation slowly removed the

Figure 3.1. Women in the Armed Forces, Percentages of Officers and Enlisted Personnel within the Total Military Population



Source: Department of Defense's Military Personnel Statistics 2010

barriers. More obvious were those obstacles for women such as family entitlements, family medical leave, enrollment in ROTC and military service academies, few leadership positions for women, and combat skills training (Segal 1986). Most significant, pregnant women were no longer forced to leave the military; although a discovered pregnancy during the physical demands of basic training still require women to be immediately discharged (Moskos 1988). Research has suggested that both men and women in the armed forces agree that field duty is no place for pregnant women (Moskos 1988; Solaro 2006).

Historically in the U.S. military, for example, despite the abolishment of separate corps for women and the quota system used in recruiting, women still struggle to achieve the highest leadership positions (Nelson 2002; Firestone and Harris 2003; Solaro 2006; Rao 2009). Oftentimes leadership roles are defined and created by the types of networking that occurs along gendered lines (Herbert 1998). Maureen Honey's work on class and gender during wartime illustrates how these barriers to leadership in a male-dominated institution can challenge the recruitment and retention of women in the armed forces. Honey (1984) found that there are too many women who do not even consider enlistment due to the perceived opinions of others feeling they have given up their femininity. To overcome this issue, Honey suggested educational programs for men to help them understand that women's contributions in the military increases rather than diminishes their feminine characteristics and make them "no less a woman."

Once in the military, women continue to be outnumbered in many settings or treated as "the other" who cannot participate in combat or certain military occupations. Constraints still exist for women both personally and institutionally, through policy and experience, and as a sexist ideology not quite yet overcome in society. As long as social definitions about military service as "a male domain" affirm men's masculinity, women will continue to experience a disconnected integration into their pursuits of soldiering.

As of September 2010, women represented 14.5% of the active duty military, 19.6% of the Reserves, and 15.2% of the National Guard (DoD 2010). Today, women make up 20 percent of all new military recruits and seven percent of the veteran population (DoD 2010). The largest numbers of women enlisted are in the Air Force and the smallest in the Marine Corps (See Table 3.1 Frequency Counts of Military Service Branch). Women also have increased their participation in military leadership, particularly in the last two decades. These changes illustrate how sex ratios and the perceptions of females as leaders have slowly but surely become more acceptable in military life (Segal 2001).

Women generally enter the military for non-economic reasons and often use military service as an escape from ordinary life, a way to get to see the world, do something different, and experience some unique leadership and job training (Segal 1978, 1986, 1995; Moskos 1988; Hosek and Peterson 1990; Burke 1996; Burrelli 1996; Solaro 2006; Lundquist 2008; Monahan and Neidel-

Table 3.1 Frequency Counts of Active-Duty Women by Military Service Branch in the Sample and General Population.

	Army	Navy	Marine Corps	Air Force	Total
Total Women by Branch in Sample*	3,114	1,849	894	2,202	8,059
Percentage of Sample	38.6	22.9	11.1	27.3	100
Total Women in Military Population	76,193	52,546	15,257	64,275	208,271
Total Members of Military **	566,045	328,303	202,441	334,196	1,473,343
Percent of Women of Military Population	13.5	16.0	7.5	19.2	14.1

* Military women in sample are as of 2006.
** Military population totals are as of 2010.

Greenlee 2010). The military was more of a hiatus in a woman's life plans that could be appreciated in and of itself rather than as its own career. This is one of the major differences between men and women in the military. Most women come into the military with education and plan to pursue more education upon their military exit (Moskos 1988; Segal 1995). For men, the military represents a strong potential career plan. Despite changes over decades of integration and efforts to integrate women in the public workplace, there still remains a degree of marginalization for women within all military settings. Women who enlist in the military are often faced by criticisms and the lack of support from family and friends (Herbert 1998; Segal 2001). On the other hand, enlisting in the military for males follows a strong career path, economic security, and is usually well supported by family and friends (Segal 1986; Moskos 1988).

Many research studies have examined military life for women (Segal 1978, 1986, 1995; Janowitz 1974; Honey 1984; Moskos 1988; Burke 1996;

Herbert 1998; Segal 2001), but these studies have emphasized more *what* women experience rather than *how* they manage that experience (Herbert 1998). The discourse on women's experiences in the military has been carried out for decades and is certainly not a neglected topic in research today.

The Military as an Occupation

The military is unique compared to civilian occupations since it is both a place of work and a lifestyle. First, members of the military typically work and reside in the same locales or in locales adjacent to their work domains (Lundquist 2008). Military housing, barracks, and frequent relocations are a basic and understood part of military life. The center of military social life is often the on-base military club or the clubs closest to the base's proximity. Even though many members of the military may live off base in civilian housing, for many active-duty members the base is still the center of their daily lives (Lundquist 2008; Monahan and Neidel-Greenie 2010). As a result, military rules and norms govern its members conduct whether on or off base or engaged in work or off-duty. The occupations available to the citizenry do not demand these same lifestyle changes as the military does (Segal 1986).

A second important difference is the hierarchal nature of the military as an institution rather than the horizontal organization of the civilian occupational structure (Moskos 1977). While there is some level of hierarchy in work

organizations, the experience of rank and authority is felt differently among military members. People who work in traditional civilian occupations are organized so that they feel a sense of identity with those who do the same sort of work and are compensated with similar pay. These workers have reference groups outside of their own organization. In a total institution, on the other hand, and particularly in the military, the living and working conditions that create identity also creates the solidarity that binds them together (Moskos 1977). Few occupations require its members to sacrifice their lives. It is one's duty to protect and come to arms when called upon in the face of battle. Shared interests are felt in the armed forces beyond simply the work or pay one receives because of this call to serve and sacrifice. The feeling generated by the military as a whole, or at minimum within a person's military branch, is usually more salient and overpowering than the identity accomplished by a civilian person's work role or job (Segal 1986).

A final difference is that the military identity for members carries over into one life's well beyond the years of service they invested. Veterans will usually enjoy services that are not available to non-veterans, particularly in employment, in government entitlements, recognition (e.g. Veteran's Day), and in social accommodations in civilian life (United States Department of Veterans Affairs 2010).

Women's Military Work

Women have never been conscripted (and perhaps never will be) into the U.S. military, and their patterns of work and service differ markedly from men's patterns (Bachman et al. 2000). First, women have held more traditional roles in nursing and administrative support for much of their military participation history (Segal 1977; Binkin 1993; Burk 1993; Dunvin 1994; Burke 1996; Monahan and Neidel-Greenlee 2010), although there has been a shift to more diverse occupations since the 1990s (Segal et al. 1998; Segal and Segal 2004). Second, women have struggled to eliminate barriers blocking them from full participation in many settings and while this study focuses on the military occupational setting, it is not quite possible to determine all of the rules that govern women's conduct in all workplace settings that define women professionally.

Even though women have experienced high levels of integration in the military over the past four decades, there persists a varying degree of resistance to women's participation in the Armed Forces, and particularly in combat settings (Herbert 1998; Segal 2001). For example, in the past women entered the military to serve in limited support roles and usually in separate female corps or encampments where possible. Due to the current needs of recruitment with an all-volunteer force and the entry of women into the workplace at large numbers since the Second World War, women are finding more military career

opportunities open to them than ever before (DoD 2010). This study does not attempt to fully understand this resistance, despite more open occupations, or fully explain the gender inequality present in the military, but these areas are critical in attempting to interpret how deployment and sex ratios may or may not contribute to sexual victimization.

Military occupations often suffer from becoming gendered as "male occupations." Gutek and Morasch (1982, 1985) described generally how occupations become gendered. "Sex-role spillover" suggests that jobs will become defined by the sex-role expectations of the more dominant sex in the workplace (Gutek and Morasch 1982). The work becomes defined as inherently male or female and then is assumed to be natural for those of the dominant sex and unnatural for those of the minority sex. These roles presumably question a woman's femininity, sexual orientation, or prior social script as sexualized beings for men in these occupations (Baker 1995; Pryor 1995; Herbert 1998).

The military and the private sector contain many different non-traditional occupations in which women work where men make up the majority of their coworkers. Women make up less than 2% of the workforce profession of small engine mechanics, bus and truck mechanics and diesel engine specialists, aircraft pilots, flight engineers, and operating engineers (U.S. Bureau of Labor Statistics 2009). They constitute less than 10% of other trades/professions common for the military such as construction equipment operators, heavy

vehicle or aircraft mechanics, mobile equipment service technicians, maintenance/repair workers, machinists, service technicians, surveyors, motor vehicle operators, mechanical engineers, aerospace engineers, sound/radio operators, broadcast engineers/technicians, and electrical engineers (DoD 2010).

Available data suggests that all military women are entering more nontraditional fields such as aviation, surface warfare, air traffic control, and field artillery (DoD 2010). However, as was the case in the early 1990s, a large percentage of military women continue to work in the areas of health care, administration, personnel, and supply occupations. In 1993 and 1994, significant changes in legislation and policy allowed women to fly combat aircraft, serve on combat ships, and serve in more combat-related occupations. In 2010, women can now serve alongside men on naval submarines. The major areas closed to women include infantry, armor, special forces/SEAL, and submarine warfare due to the restrictions on women in combat roles.

Women as Military Leaders

One way in which women affect how they are perceived in the military is through rank, achievement, and status. In military occupations, there are two distinct categories: enlisted positions and officers. Enlisted personnel comprise the majority of the Armed Forces at about 85 percent and their primary duties

are to execute the fundamental operations of the military including combat, administration, construction, engineering, health care, and human services (Bachman et al. 2000). Alternatively, the officers in the military are responsible to act as leaders, supervising and managing activities, projects, employee performance, and conduct across the occupations available within the Armed Forces (DoD 2010). Specifically the careers available for enlisted members of the military include administrative occupations, combat specialty positions, construction, technical services, engineering, health, human resources, machine and equipment operators, media and public affairs, security (military police), transportation, and mechanics.

For those women who do choose to enlist, despite a lack of support, the career battle for them becomes an effort to improve their opportunities for command and promotion while eliminating or overcoming sexual harassment and assault in the process (Firestone 1984; Segal 1986; Dunivin 1994; Nelson 2002). Due to a lack of command assignments in combat units, career advancement can be limited for women as compared to men, so female officers often must make the most of what they can control (Segal and Segal 2004).

In a study of deployed military women conducted by Moskos (1988) he observed that some women envisioned participating in a future officer commissioning program. Few women saw themselves as NCOs (non-commissioned officers), military occupational specialists, or on assignment with

extended field duties (Moskos 1988). Many junior enlisted women viewed NCO status as inconsistent with their life goals and family plans (Moskos 1988; Burrelli 1996; Herbert 1998; Bachman et al. 2000). Enlisted women generally saw their service in the military as a temporary life event (Bachman et al. 2000) while female officers have to be much more careful because of the longer term commitment to the military as a career, henceforth their actions were much more consequential (Moskos 1988; Dunivin 1994; Lundquist 2008).

Enlistees tended to have limited understandings and definitions of sexual harassment and assault while officers had a wider knowledge of it and often added sex-based definitions of suitable work and combat exclusion rules (Moskos 1988). Enlistees described sexual harassment as something that simply comes with military life (Nelson 2002; Solaro 2006). Officers described it as something that could be alleviated. The attitudes of officers were quite similar as to what one might expect to encounter with other professional women. On the whole, officers experience less sexual victimization than the enlisted women (DoD 2010).

Enlisted women in the Army generally are better educated than their male counterparts (Burrelli 1996; Moskos 1988; Binkin 1993; Bachman et al. 2000; Lundquist 2008). In fact, some critics suspect that the movement toward the all-volunteer force would have failed if it weren't for the entrance of better-educated and highly-qualified women in the 1970s and 1980s (Binkin 1993). A

principal argument in favor of increasing the numbers of women in the Armed Forces has been that it would be better to increase the number of women recruits who are better educated than to recruit less educated men (Burrelli 1996). Women with more education are more likely to be in fields such as nursing and military intelligence, and subsequently may experience less sexual harassment and assault due to being employed in those fields (Herbert 1998; Nelson 2002), and having mostly women as coworkers.

Deployment and Women in Combat

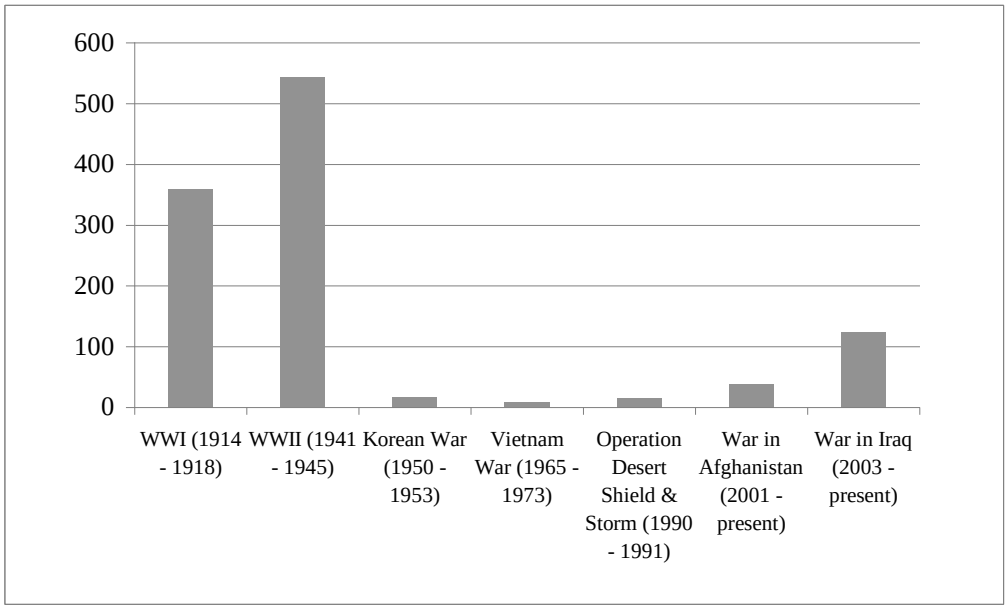
To gain the proper motivation to endure active combat a soldier must be effectively led, disciplined, and have unit cohesion or "esprit de corps." To partake of this environment, a sort of military socialization must take place. Women and men both experience this socialization in combat settings through basic training. Basic training, as preparation for deployment and underscoring additional job training, is a process of depersonalization and unit cohesion. Drill sergeants must strip a soldier of their personal identity and force them to secede to the needs of their entire unit. Basic training not only teaches one the skills of soldiering but also invests a person into the idea of what it means to *be* a soldier (Herbert 1998). This process is built around strict orders, discipline, leadership, sacrifice, determination, stamina, and brute strength all of which surround masculine ideology. Women who complete basic training must not only

assume a role that combines her femininity and work ethic as a soldier, but also become accustomed to the idea that they will be present in active combat zones (Holm 1992; Herbert 1998; Segal 2001; Benedict 2009).

After completing basic training, most military women experience deployment. Women service members have become increasingly vulnerable to being killed in action due to the changing nature of combat zones (See Figure 3.2 Women Killed in Combat by War). Combat zones are not as clearly defined as they once were. Terrorism, insurgencies, and guerilla warfare routinely transform any military work environment as a place where death is possible with regular bombings and attacks. Perhaps the best way to summarize this point is that there is no clear "front line" in modern war. With women closer to the frontlines than ever before, the debate on women's roles in combat has become more salient. The controversy surrounding women in combat has focused on several themes: (1) women's physical limitations for the rigor of infantry, (2) women's socialization to be non-violent, (3) women's emotional capacity to handle battle stress, (4) the interference with male unit cohesion and effectiveness, (5) financial and logistic costs to modify military life with privacy accommodations and for women, (6) the American public's view on women as prisoners of war (Binkin 1993; Segal 2001).

Recent campaigns of the all-volunteer force in Desert Storm and Desert Shield (1990 – 1991) made strong inroads for notions of women's readiness in

Figure 3.2 Military Women of Any Occupational Specialty Killed in Combat by War Since WWI



Sources: Defense Manpower Data Center & Women in Military Service for America Memorial Statistics 2010.

modern wartime. Desert Storm and Desert Shield (1990 – 1991) (or "First Gulf War," or "Persian Gulf War" 1990) itself began to defy the myth that women are protected from exposure to combat. Bombs and modern war weapons did not discriminate on the basis of gender, job, or location in combat (Holm 1992). The 1991 Gulf War was the first major military deployment where female troops were integrated into almost every military unit, with the exception of ground combat units (Monahan and Neidel-Greenlee 2010). In modern conflicts today more casualties are sustained from behind the lines than on the front due to

missiles, terrorist attacks, and chemical and biological warfare. There are no longer any "safe" zones for military personnel.

After 1991, society began to come to terms with female casualties and women's performance in combat environments though few women were killed in action. In fact, in these combat theaters men and women proved that they could work well together without privacy, sexuality, or gender getting in the way of performing their duty. It was not that these campaigns were free from fraternization or harassment but many soldiers showed more discipline and respect than people expected by "sharing tents without sharing beds" (Holm 1992).

The Gulf War campaign (1990-1991) represented the largest deployment of women to a combat zone since WWII, and the first major test of the all-volunteer force. Within this campaign, approximately 41,000 female service members or 7 percent served among the troops, with 30,855 from the Army, 4,449 from the Navy, 4,246 from the Air Force, and 1,232 from the Marine Corps (Department of Defense 1992). Women were not only employed in traditional occupations such as nursing, health care, and clerical occupations, but were assuming more active roles alongside men than ever before. Both the armed forces leadership and the American public began to acknowledge the contributions of military women, as much needed players in an all-volunteer

force. It also appeared that social reservations about women embedded in dangerous combat conditions were diminishing rapidly.

Though women were restricted from combat in the Gulf War operations and no formal or effort to study women's performance was organized, the evidence of their contributions was clear in the interviews and observations during and after the conflict with the media and the DoD. Direct conflict was defined as "closing with the enemy by fire, maneuver, or shock effect in order to destroy or capture, or while repelling assault by fire, close combat, or counterattack" (Department of Defense 1992). At present, more female soldiers have been killed in the Iraq War than any other war in US history (DoD 2010). This is due to the changing nature of battle and randomized attacks in areas where women have are used mostly for transport, patrols, clerical, nursing, administration, and supply chain units.

Sex Ratios in the Military

Many labor markets are particularly sex-segregated with the armed forces being a pertinent example. Other issues that create sex polarization include the debate over women in combat roles and sexual assault incidents at Tailhook (1991) and Aberdeen Proving Ground (1997). However, in today's integrated military, it generally has less gender occupational segregation than the civilian workforce across all branches and ranks (Firestone 1992). Since the

civilian workplace also contains these types of disruptive challenges, one can imagine how much greater the challenge would be in a combat setting in the military, where masculinity reigns supreme and is thought of as a premium characteristic for survival and victory (Herbert 1998).

The military plays a central role in gender constructions for its members. Women have to consider how their actions are being assessed as workers and as women by their coworkers, both male and female. What is perhaps most important about this active creation of self is that women base their behaviors as being appropriate (or not) for the setting in which they are observed (West and Zimmerman 1987). This is where the behaviors create meaning. For women, it becomes an ultimate challenge in attempting to maintain female identity and soldier identity in a masculine military setting without overplaying either role (Herbert 1998; Segal 2001; Solaro 2006). Whatever strategy women use in this challenge is based largely upon the perceptions and responses surrounding them (Herbert 1998). Women have to delicately balance not only what it means to enter a male defined institution/occupation, but also an occupation where masculinity is such a central part of the definition of that occupation.

Femininity is both valued and devalued in the military setting since it lends itself to stigmas on both sides (Herbert 1998; Segal et al. 2001). If one is too feminine, she is a poor soldier, not carrying her weight alongside her male comrades. If one if not feminine enough, she may be labeled as a "dyke or

bitch" that makes work more difficult. Many sets of standards underscore what it means to be a "good soldier" and a "good woman" but these two roles are rarely compatible with each other (Herbert 1998).

Interestingly enough, the military had experimented with sex-integrated basic training in the 1970s, with one of the only differences in sleeping quarters (Segal and Segal 2004). The idea was to examine unit cohesion and camaraderie during periods of stress, especially for basic training, when communication outside with one's friends and family is severely restricted. However, the military returned to sex-segregated basic training in 1983 due to the perceptions that fraternization between the sexes was a problem that women lowered training standards, and that men's training was made easier (Moskos 1988).

An alternative point of view is the idea that group cohesion, as described as occurring via primary groups by military researcher Morris Janowitz, has given way to individuation (Janowitz 1974; Moskos 1988). There is less importance given to the influence of social networks or those small social groupings in which social behavior is governed by intimate face-to-face relations. Squads, platoons, and other work units have evolved due to more rapid turnover and have held a change in value systems based on personal survival (Binkin 1977; Segal and Segal 2004). Supportive leadership and unit cohesion are associated with more favorable outcomes for military rape victims

(Martin et al. 2000). The incidence of sexual abuse might decrease if zero tolerance (explicit stance on rape as a detriment to all in the unit) as a practice was truly enforced by military leadership down to the unit level (Pryor et al. 1995).

Sex and the Military Workplace

Women in the military face different penalties when it comes to their sexuality including the ostracizing or disapproval by other women, being viewed as a slut, not being taken seriously, and being viewed as incompetent or incapable. Sexual activity can overcome the focus on work and limit promotion or career mobility (Herbert 1998). This illustrates that the gendered sexual penalties women experience come from both sexes. Women have to walk a fine line in order to address potential penalties that may arise as they "do gender" (West and Zimmerman 1987). Women are caught between the feminine demands of the sex role and the masculine demands of their work role (Herbert 1998), especially in military setting.

Women who enter occupational and institutional domains defined as "male-dominated" will often be challenged by what it means to be "feminine" or be a woman (Schneider and Schneider 1988; Segal 1995; Herbert 1998; Lipari et al. 2005; Solaro 2006). Sometimes these challenges result in violent consequences such as sexual assault. In the military context, women are not

supposed to like weapons, wander muddy trenches, or share unisex latrines. Women are not supposed to be into the things that men enjoy doing which constitute manliness or masculinity such as tracking enemies, firing artillery, and getting dirty. Of course, definitions of what is masculine and feminine vary by culture and socialization. The "boundaries of gender" are often widespread throughout society and used to keep men and women in check of their own expected behavior so social life can remain "organized" (West and Zimmerman 1987; Michael et al. 1994). This means that females in the military are posed with the unique challenge of being both masculine enough to endure the physical and emotional tolls of military work and culture yet also feminine enough to maintain their gender identity as well as their privacy while surrounded by their male comrades in arms.

One might suspect the behaviors such as the use of crude language and/or locker room talk to subside when women and men reside together in deployed environments. This often is the case but is certainly not the standard. Men can behave less foul-mouthed when co-residing with females and often women become bawdier in a pre-dominantly male environment (Moskos 1988; Herbert 1998).

While this study is not the first to investigate issues of a male-dominated military culture for women that can produce violence (for a review, see Arkin and Dobrofsky 1978; Segal 1978; Dean 1997; Herbert 1998; Magley et al. 1999;

Lancaster 1999; Monahan and Neidel-Greenlee 2010), it extends the literature by examining the several conceptions of women's gendered experiences in a male institution including: (1) the sex ratios of work units, (2) the experiences of being the lone female in one's military occupation, and (3) having few females in one's military environment. At present, there are no quantitative studies on female sexual assault that investigate the ratios of men and women in the work unit, especially how this changes in active duty deployment situations.

Gender and Sexuality in the Military

Gender and sexuality are intertwined and often become a topic that is socially taboo to discuss. The military is an interesting exception to this due to its identity of hyper-masculinity. Sexuality is both a reward and a punishment and is demanded and condemned in military settings (Herbert 1998). No matter which side you view sexuality on, sexuality is regulated. It is not my intention to provide any sort of history of sexuality or sexual deviance in this study. That is a study (or two) in its own right. Instead, I briefly discuss how sexuality and gender relate to deployment, ratios of men and women in work settings, and rape in the military.

One element to consider in the examination of gender integration and gender tokenism is the organizational cohesion and the brotherly aspect felt about "comrades in arms." The notion of protecting fellow soldiers as a sense of

"a duty to one's brother (or sister)" is one that originates within the military corps. However, different members of the corps may not define the same actions as intimidating, hostile, or offensive, which is commonly the case between males and females (Fitzgerald and Shullman, 1993; Saal et al.1993; Thomas 1995; Katz et al. 1996; Saal 1996). Therefore the level of protection or prevention offered among soldiers may vary by interpretation, particularly for something as complex and serious as sexual assault. The most difficult part of assertions that unit cohesion could be affected with the presence of integrated and co-ed units is that there is virtually little empirical basis for this assertion, yet tradition and logic prevail (Binkin 1993).

A second element within military culture involves the exacerbation of reporting problems since "snitching" or "tattling" on traditional behaviors such as lewd jokes, sexualized whistles, and obscene gestures which can label women as outsiders who do not fit into the organization (Firestone and Harris 2003). A final element, in a culture where hostile interactions toward women are oftentimes acceptable practices, is the social pressure that arises among comrades to engage in the horseplay, the jokes, and the gestures to maintain their peer groups. Additionally, while cohesion is highly valued in the military, it has been used to *exclude* rather than *include* women into the organization (Segal 1986, 1995; Harrell and Miller 1997; Rosen et al. 1999; Firestone and Harris 2003).

After considering military life, occupational roles, the utilization of women in combat areas, and women's military integration, this study focuses on deployment and sex ratios that may increase the likelihood of sexual assault in the military for women which heavily draws from how men and women interact together according to gender roles, sexual scripts, and occupational expectations.

Gender Tokenism

There appears to be little dispute over whether or not becoming a soldier is a descriptor of male-oriented activities. Firing weaponry, driving trucks, and flying aircraft are largely male bastions. These tasks not only signal masculinity and manhood but also how one identifies themselves occupationally as a soldier and as a person. When young men were drafted into the military, it represented a rite of passage, social maturity, and a turning point in their lives (Moskos 1988). It also represented part of a traditional sex-role identity for American men generally and a socializing agent for this identity (Herbert 1998).

The armed forces comprise an organization in society which defines rules, standard operating procedures, and regulations very carefully for its missions. It is an exacting institution that controls the movements of thousands on the ground, in the air, and upon the sea. In this atmosphere, men and women are to behave just as that, "men are to be men" and "women are to be women." But what does this mean? Exactly how are men and women to act in the

military so that order can be maintained? When soldiers deviate from what is considered to be a normalized gender role, it creates problems for military units and operations. Women are often caught up in the middle of this dilemma in trying to become a soldier and a woman simultaneously without detracting from either role. Men, on the other hand, have the advantage of having their roles amplified (and subsequently rewarded) when endeavoring to become both men and soldiers (Herbert; Segal and Segal 2004).

All male settings tend to bolster a proclamation of sexual prowess and the conquering of women. "Locker room talk," bragging about one's sexual actions, jokes, rituals, slang, and songs all continue to denigrate women (Burke 1996). Males tend to compete to be the most masculine or manly within their unit, and that competition tends to include earned sexual trophies (Solaro 2006).

Another method of demonstrating one's masculinity involves rejecting that which is feminine or using femininity as a way to criticize other males. The use of slang descriptors of women or their anatomy (e.g. "don't get your titties in a tangle," "don't be such a pussy") is used to belittle males that don't cut it as soldiers (Herbert 1998). If you truly want to destroy other males, then accuse them of being female. This is a part of Nancy Chodorow's (1978) claim that men are defined in masculine terms by virtue of *not* being feminine. Most male soldiers would surely be ostracized for being accused of marching, shooting, or throwing like a girl. Even as more women have appeared as regular coworkers

in military units, and certainly challenge the use of these traditions of masculinity in language and action, it still becomes difficult for women to overcome this environment of feeling less suitable as a soldier.

The socialization processes attempting to address these traditions are a viewpoint into how women's disadvantages are produced in organizations. Compared to men, female soldiers experience different social conditions, distributions of work, and access to rewards and protections (Segal 1986; Dean 1997; Acker 1992; Binkin 1993). Gender in the military is more than a category, a social role, or an identity. It is an understanding of how the processes creating and maintaining sex segregation occur (Plummer 1982; Segal 1995). Qualitative and socio-historical research has examined these processes but additional methodological tools must be used to comprehend concrete practices and processes. Quantitative studies based upon random samples of active-duty women can help illuminate the military as a workforce with its own rewards and risks for women, including the risk of rape.

Sexual Harassment in the Military

Sexual harassment has been a growing concern for female soldiers and is one of the most frequently discussed topics when examining women in the military. Many female enlistees believe that it is up to the women herself to handle individual incidents of sexual harassment and reporting to one's

supervisor, (who is almost always a male), should be taken as a last resort (Moskos 1988; Bastian et al. 1996). The majority of women have experienced some form of sexual harassment, however a series of firm messages indicating an intolerance of it usually was sufficient to ward off the unwanted sexual attention (Moskos 1988).

The most difficult and stressful rule regarding sexual conduct in the military from the women's point of view was the anti-fraternization rule that no formal relations or dating between superiors and subordinates should exist regardless of sex (Moskos 1988, Binkin 1993). To men and women in the service, this meant "no dating coworkers of different ranks." However, dating of this kind is actually quite common, performed outside one's unit, and done in a more discreet manner. The majority of women and junior enlisted males were opposed to the anti-fraternization rule with the prevailing notion that private lives and dating should be kept to one's personal business not the military organization (Moskos 1988).

Sexual Assault in the Military

Sexual assault is not only a problem within the public and private sectors of society but the military as well (Bastian et al. 1996; Fitzgerald 1993; Gutek 1985; Koss et al. 1994). The military occupational setting is a unique venture in regards to examining rape in the workplace. In the 1970s, "hostile work

environments" begin to bring sexual assault and harassment in the workplace into the forefront of legal definitions. The DoD followed suit as civil law began to delineate sexual harassment and assault more fully by incorporating broader based definitions within their own policies. (See Figure 3.3 Historical Timeline of Sexual Assault/Harassment Events and Milestones in the US Military).

Historically, the military has been engaged in an effort to address sexual assault for decades. In the 1970s the women's movement and several benchmark cases spurred the momentum of organizations to address sexual harassment, assault, and sex discrimination. In 1980, Congress officially held hearings on sexual harassment allegations of military women and the Defense Manpower Data Center conducted its first survey of active-duty military members addressing sexual behaviors in the workplace in 1988.

For FY07, there were 2,085 total reports of sexual assault involving military service members (DoD 2007). Most sexual assaults (1,620) included service members as victims, almost 2 out of 3 reports represented events of rape while the rest comprised forcible sodomy, indecent assault, and attempts to commit these offenses (DoD 2007). The majority of cases, (56 percent), included service member-on-service member sexual assault occurring mostly on military installations, rather than off such installations. Across the service branches, most victims were members of the Army.

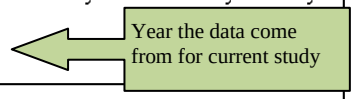
Figure 3.3 Historical Timeline of Sexual Harassment & Assault Events and Milestones for the US Military

1964	Title VII of the Civil Rights Acts prohibited sex discrimination in private sector employment
1967	Executive Order (EO) 11375 prohibited sex discrimination in Federal sector employment. Implementation rules did not mention sexual harassment.
1970s	Sexual Harassment interest spurred by women's movement and national survey results
1976	*Quid pro quo* sexual harassment recognized as a form of sex discrimination in William v. Saxbe
1980	First government-wide sexual harassment policy promulgated. Sexual harassment was defined as "deliberate or repeated unsolicited verbal comments, gestures, or physical contact of a sexual nature which is unwelcome." (includes some activities of sexual assault such as inappropriate touching, groping, etc.) Congressional hearings begin on sexual harassment allegations of military women The Equal Employment Opportunity Commission sexual harassment guidelines are issued to federal agencies. Congressional report is released on sexual harassment in Federal government The US Merit Systems Protection Board conducted the first sexual harassment survey of Federal civilians
1981	Department of Defense (DoD) policies promulgated
1986	Sexual harassment as a "hostile environment" established as a form of sex discrimination under Title VII
1988	The US Merit Systems Protection Board conducted second sexual harassment survey of Federal civilians The Defense Manpower Data Center (DMDC) conducted the first sexual harassment survey of active-duty military members

1990-1991	Government Accounting Office studies sexual harassment issues at Naval Training Base in Orlando, Florida Secretary of Defense issued 8-point sexual harassment program Clarence Thomas, nominee for Supreme Court, is accused of sexual harassment "Hostile Environment" ruling is expanded – plaintiff no longer required to prove psychological injury Navy military women are sexually assaulted at Navy's Tailhook Convention. The Tailhook Association loses Navy sponsorship after widely reported incidents of alcohol abuse, destruction of private property, and sexual assault at the association's annual convention. An Update Report on the Progress of Women in the Navy. Woman's Study Group
1992	The House Armed Service Committees conducts a hearing on gender discrimination in the military in July.
1993	DoD Inspector General releases The Tailhook Report: The Official Inquiry into the Events of Tailhook
1994	The US Merit Systems Protection Board conducted third sexual harassment survey of Federal civilians Congressional hearings held on sexual harassment of military women and DoD's sexual harassment complaint system DoD Inspector General reviewed DoD-wide equal opportunity processes Defense Equal Opportunity Committee Task Force on Discrimination and Sexual Harassment established
1995	The DMDC conducted the second sexual harassment survey of active-duty military members The DoD Task Force on Discrimination and Sexual Harassment convenes.

1997	Incidents of rape, sexual assault, and sexual harassment occurring at the Army's Aberdeen (Maryland) Proving Grounds are revealed from 1995. In the aftermath, several drill sergeants are convicted by courts-martial of rape or charges related to sexual harassment. As a result of the problems found at Aberdeen, the Army convenes a Senior Review Panel to look at the problem of sexual harassment Army-wide. The Senate Armed Services Committee conducts a hearing on Aberdeen. The Army's top enlisted man, the Sergeant Major of the Army, is charged with sexual harassment. As a result of the incidents at Aberdeen, the Secretary of Defense appoints the Federal Advisory Committee on Gender-Integrated Training and Related Issues with former Senator Nancy Kassebaum-Baker as chair. The committee's report is issued in December 1997. First Lieutenant Kelly Flinn fraternization incident occurred Fraternization studies and new policies released Commission on Military Training and Gender Related Issues established
1998	The Sergeant Major of the Army is court-martialed on five charges springing from the accusations of sexual harassment lodged against him. He is acquitted of all charges related to sexual harassment, but convicted of one charge of obstruction of justice. In response to the incidents at Aberdeen, Congress orders its own commission—The Congressional Commission on Military Training and Gender-Related Issues—to review matters.
1999	The Report of the Congressional Commission on Military Training and Gender-Related Issues is released.
2002	The DMDC conducted the third sexual harassment survey of active-duty military members
2003	Investigations into charges of sexual assault at the Air Force Academy and retaliation against women cadets who report it are initiated by the Air Force and the DoD Inspector General. Congress also sponsors its own investigative panel.

2004	Task Force Report on Care for Victims of Sexual Assault conducted review of all sexual assault programs and policies in the military The DMDC conducted Sexual Harassment Survey of Reserve Component Members (Workplace and Gender Relations Survey)
2005	Corrective actions taken at US Air Force Academy to address sexual assault and harassment Sexual Assault Prevention and Response Office established in the DoD The DMDC conducted the service academy Sexual Harassment and Assault Survey
2006	The DMDC conducted the fourth sexual harassment and assault survey of active-duty military members, as well as the Gender Relations Survey for the service academies and active-duty military members
2007	The DMDC conducted Worplace and Equal Opportunity Survey of Reserve Component Members
2008	The DMDC conducted Gender Relations Survey of Reserve Component Members, and the service academy Gender Relations Survey Substantial revisions to Article 120 of the UCMJ took effect in FY08, giving commanders new options for charging sexual assaults.
2009	Sexual Assault Prevention and Response Office spearheads social marketing campaigns, —"My Strength Is for Defending: Preventing Sexual Assault Is Everyone's Duty." And "Hurts One, Affects All." within the military branches.
2010	The DMDC conducted the fifth sexual harassment and assault survey of active-duty military members and the service academy Gender Relations Survey



As far as the victim-offender relationship goes, 664 cases of service member on service member rape and 457 cases of indecent assault and 63 cases of sodomy (DoD 2007). As far as the gender of the victim and offender was concerned, 1,066 of the cases of service member-on-service member sexual assault were male on female. The age range for the assaults varied, but most victims were young. Out of the 897 total service member female victims, 534

were between age 20-24 years, 170 between 25-34 years, and 25 between age 35-49 years (DoD 2007). Approximately 88 percent of the pay grade of victims was E1-E4 (enlisted personnel) (DoD 2007). Prior to the creation of sexual assault response offices, data on the issue were not collected uniformly (Lipari 2002). Analysis of the issues was so shallow that even survey distribution to address those issues would also be limited. The DoD had conducted wide scale surveys in 1988, 1995, and 2002 that confirmed the prevalence of sexual abuse within the armed forces. These surveys were sent to over 89,000 military personnel representing all of the service branches over the past fifteen years attempting to track any changes over time. DoD officials used a pre-tested behavioral list to from the university of Illinois ask military members about their exposure to specific behaviors of sexual misconduct and discuss the most significant events in the past year. All of the surveys included questions which asked about perceptions of the reporting process, reprisals, training, and types of sexual misconduct experiences occurring both within and outside of the workplace. Some of the things the DoD discovered that 2 out of 3 women were experiencing unwanted sexual behaviors at work in 1988 but this number decreased to 1 out of 2 by 1995 (Bastian et al. 1996).

Overall, 6.8 percent of women indicated experiencing unwanted sexual contact (WGRA 2006). That number has decreased from those reporting in a prior 1995 survey, but represents an increase in reports when compared to a

2002 survey. So according to the DoD's own studies, rape is a reality for many service women (Nelson 2002; Ellison 2011). One drawback, which continues to be a limitation in surveys administered today, is that respondents were asked to only reflect on incidents occurring in the last 12 months prior to the survey and do not represent a soldier's entire period on active duty (Nelson 2002; DoD 2007).

Anita Lancaster (1999) from the Defense Manpower Data Center described the growing need for analyses, especially after the Tailhook sexual assault scandals in 1991 and ensuing investigations which occurred afterwards. From the media's coverage of Tailhook, among other public/private-sector sexual harassment scandals, the public became increasingly aware of what was involved in sexual misconduct in the military workplace (Lancaster 1999).

In 2002, the military rape rate was lower than 1995 levels indicating that one out of twenty five active-duty women (4 percent) were victims of rape or attempted rape within the last year (Lipari and Lancaster 2003). This finding was attributed to be likely to be an effect of 9/11, where sensitivities toward violent behaviors were heightened, service members were more positive and patriotic in their perspectives of the military, and the War in Iraq had recently begun (DoD 2007). Rates of harassment and assault varied across the service branches with the highest amongst the Marines (9 percent), the Army (8 percent), the Navy (6 percent), and 4 percent for the Air Force (Lipari and

Lancaster 2003). Even though the Defense Dept. had confirmed the magnitude of the problems of sexual assault over the years, neither adequate steps nor a strong response to the issue had not been taken for years (Bastian et al. 1996) until several task forces and a sexual assault response office was created in 2005.

Sexual Assault While Deployed

All soldiers share the hardships, dangers, and enemies that confront them while they are deployed. In the words of Charles Moskos, "field conditions depress eroticism." While sexual escapes certainly occurred periodically, they appeared to be low in number and infrequent as compared to sexual activity available back in the United States. When soldiers are sexually isolated for longer and multiple deployments in the current wartime (2001-2011), obviously their access to sexual activity is somewhat limited. This may have dramatic consequences for the risk of rape victimization.

Female soldiers and some male soldiers face the threat of being raped by their comrades in hostile environments where "anything goes" and "no rules were enforced." These lawless conditions contributed to an environment that permitted, tolerated, and encouraged soldier rape. Some blamed policy and chain of command, while others thought it had more to do with the discretion afforded to commanding officers in handling assault reports

In the wars in Afghanistan and Iraq (2001 – 2011), sexual assault numbers continued to escalate between 2004 and 2009. In 2004 there were 1,700 sexual assaults reported by U.S. military women of which 329 brought charges against men who allegedly perpetrated the crimes. This means that 1 in 5 reports (approximately 19.3 percent) resulted in charges. By 2005 female soldiers reporting sexual assaults increased to 2,374 (DoD 2009).

The DoD changed its data reporting years to use a fiscal year instead of a calendar year, making yearly comparisons difficult. For 2006, after the reporting parameters had changed, 2,947 female military member victims were reported, representing a 24 percent increased from 2005 and a 73 percent increase from 2004. The majority (60 percent) of the 2,688 assaults reported in 2007 were confirmed as rapes via military court martial. Rape has accompanied war historically, but this pattern of rape of soldiers on soldiers within the same military in Iraq and Afghanistan was a very different pattern than prior wars produced.

One of the major considerations in sexual assaults of female soldiers serving in Iraq, Kuwait, and Afghanistan was increasing numbers of soldiers experiencing post-traumatic stress disorder (PTSD) in "360-degree combat zones." Many soldiers had been redeployed more than once and were reporting symptoms of PTSD, especially as tours in Iraq and Afghanistan became extended and redeployment became the rule, rather than the exception with an

all-volunteer force. Many rape victims suffer serious mental health consequences (Kang et al. 2004; Gonzales et al. 2006; Kimerling et al. 2007), newly diagnosed as military sexual trauma.

Military sexual trauma arises from sexual harassment or sexual assault during a person's military service leading to symptoms including paranoia, nightmares, depression, substance-dependency, anger issues, irritability, and other physical health problems (U.S. Dept. of Veterans Affairs 2010). This consequence of rape is further discussed in the concluding chapter.

Rape and Military Law

Members of the military conduct themselves under a military rule of law, the *Uniform Code of Military Justice* (UCMJ), which covers the major offenses found in civilian law. This rule of law also applies to reserve and guard members (Titles 10, 14, & 32) as well as Cadets and midshipmen at the service academies, but does not apply to Reserved Officer Training Corps members (ROTC). Other offenses, like cowardice, desertion, and insubordination, are purely military crimes.

Over the years, the armed services have seen a shift in emphasis in the handling of cases via courts-martial and have moved instead to the use of administrative procedures and usually administrative discharges. In 1982, the Defense Dept. revamped its administrative discharge program to restore the

integrity of the "honorable discharge" and strengthen the concept that "military service was a calling different from any other civilian occupation" (Moskos 1988). According to the Sexual Assault Prevention and Response Office within the DoD, civilian sexual assault reporting laws can support, extend, or possibly contradict the UCMJ laws and policies on sexual assault response. Each state has unique reporting requirements that military members are supposed to refer to when disclosing an incident.

In continuing with the definitions provided by the UMCJ, rape is defined as "the cause of another person of any age to engage in a sexual act by using force against that other person, causing grievous bodily harm to any person, threatening or placing that person in fear that any person will be subjected to death, grievous bodily harm, or kidnapping, rendering another person unconscious, administering…a drug, intoxicant, or other substance….that impairs the ability of that other person to appraise or control conduct" (UCMJ 2010, Article 120). Aggravated sexual assault is defined similarly in the UCMJ as rape and adds that the victim is "incapable of appraising the nature of the sexual act, declining participation in the sexual act, or communicating unwillingness to engage in the sexual act" (UCMJ 2010, Article 120). For a brief overview of the history and background of the UCMJ see Appendix A.

Sexual misconduct falls amongst numerous categories of indecent exposure, conduct unbecoming an officer, indecent acts, and abusive sexual acts

within the UCMJ. Sexual contact includes both penetration and intentional inappropriate touching. At present, the Dept. of Defense has a "no tolerance policy" toward sexual assault as it harms the victim, destabilizes the workplace, and threatens national security (Gates 2010).

Military order depends on discipline, and discipline depends upon the UCMJ and those who interpret it. This structure has been intact for over two hundred years and the basis of this structure is the UCMJ, Geneva Conventions, and the US Constitution. Soldiers are subject to the rules of law as they live and work in their military lives. Their chain of command is an ever-present entity in the soldier's mind even in the beginnings of one's basic training. There is never a time when a solider is not subject to a chain of command or the UCMJ, even veterans must continue to do so under veteran eligibility benefit policies (United States Department of Veterans Affairs 2010). No circumstance, including times of war, ever justify crimes such as rape committed by American soldiers, but the chain of command also shoulders some of the responsibility.

Reporting Rape in the Military

Female soldiers can report rape in the military in two ways. One is "Restricted reporting" where a victim can report anonymously and seek medical and emotional counseling apart from the notification of their chain of command which could be a possible barrier to reporting (DoD 2010). The drawback of

restricted reporting is that while it is treatment-centered it does not trigger an official investigation, leaving victims wary that their attackers will find out about the complaint and come after them or that their rapist remains unknown and active in the community (Rao 2009). The second reporting option, "unrestricted reporting," allows victims to go directly to the commanding officer of their unit and register their complaint (DoD 2010).

The complaint, if verified and pursued at the commander level, is recorded officially and thus begins the investigation process. However, the level of discretion at the commander level is broadly defined, most commanders are male, and overall less than 8 percent of reported rapes result in prosecution (Rao 2009). The military does not have a strong track record for prosecuting those accused of rape or punishing rapists once convicted (Rao 2009). The same is true in the civilian sector in that the majority of rapists are not prosectued (Belknap 2001). If a person wants to change their report from restricted to unrestricted, they have the ability to do so and the DoD tracks those cases which convert (usually around 100 yearly cases) (DoD 2010).

According to the DoD 2010 report, 224 reports were "unrestricted reports," of which 149 (67 percent) were made in Iraq and 32 (14 percent) were made in Afghanistan. This represents a 16 percent increase in combat-based reporting from FY08, very similar to the 11 percent increase seen in overall reporting from FY07. Within fiscal year 2009, 1,956 "soldier" victims, 1,338 of

which were "soldier on soldier" (53 percent) and 61 percent of rapes were on a military installation. Many females believed that issues of sexual harassment or assault were up to the individual woman herself to handle and that a series of firm "No's" would usually be enough to close the situation (Moskos 1988). In the civilian sector, the problems of reporting are similar and have similar results in that only one in five adult women reports their rape to the police (Gonzales et al. 2006; Ullman 2010).

In Terri Spahr Nelson's 2002 study, which presented qualitative interviews and accounts of rape from female veterans and found that some of the most often mentioned concerns from service women included: (1) fear or intimidation about reporting the abuse, (2) frustration about the internal handling of the reporting process between commanders and military police, and (3) inconsistencies in how rape cases are handled in the DoD. The DoD has a no tolerance policy against sexual assault. It uses the term to cover a wide variety of offenses that represent a continuum of severity, from rape or nonconsensual sodomy to indecent assault, as well as attempts to commit these offenses (DoD FY07 Report).

"Sexual assault is termed as intentional sexual contact, characterized by the use of force, physical threat or abuse of authority or when the victim does not or cannot consent including rape, oral or anal sex, unwanted sexual contact through touching or fondling. 'Consent' shall not be deemed or construed to mean the failure by the victim to offer physical resistance." (DoD FY07 Report).

The commander is the person ultimately responsible for the path to start disciplinary action, sanctions, and punishment. In the civilian sector, punishment occurs through formal trials and hearings. In the military sector, military offenders can face courts-martial, prison time, forfeiture of pay and allowances, reduction in rank, or punitive discharge from military service all of which may have a lasting impact upon the person's career (DoD FY07 Report). Commanders may also reject the complaints if they do not find them to be credible, and not much protection against retaliation against the women who come forward has been put into place. Victims who report assaults are often faced with disbelief by commanders, these actions can protect their assaulters, and continued harassment and abuse may occur.

Reporting Rape While Deployed

There were several options of reporting sexual assault in Iraq and Afghanistan (Cohn 2006). There was an 800 number in the United States women could use to report sexual assaults, but many females did not have access to phone lines and a live person did not answer the number (Cohn 2006). Rather, the 24-hour rape hotline was merely a machine that told callers to leave a message. A victim could also contact her supervisor in her chain of command, tell a coworker, go to a medical/therapeutic treatment facility, or report the assault to civilian authorities.

With an alarming rate of rapes continuing to rise, the DoD appointed a task force to examine care for victims of sexual assault and recommend solutions to the problem (DoD 2010). The task force found that the DoD lacked policies and standards that focused adequately on sexual assault. Often sexual assault was not adequately identified from other behaviors in protocols meant to address fraternization or "conduct unbecoming an officer". The DoD also failed to integrate these policies for effective prevention and response. Many commanders lacked training on how to address victims of assault (DoD 2010), and the DoD did not provide guidance and resources to commanders. Another issue was the problem of appropriate handling and disclosure of assault cases for the victims until they formally created a restricted and unrestricted reporting option. Furthermore, the DoD did not create more transparent efforts to hold offenders accountable (DoD 2004) so often victims would not be made aware of the final sanctions offenders received.

Additional recommendations from the task force included that a single point of accountability was to be created. Until 2005, no work unit was assigned to address sexual victimization. This unit, the Sexual Assault Prevention and Response Office (SAPR), streamlined the leadership responsibilities be presented in handling assaults at upcoming conferences and trainings. SAPR also identified gaps be filled in sexual assault awareness through DoD-wide communication outlets. Overall, SAPR convened a summit to develop a

strategic plan, develop policy for prevention, reporting, response, and accountability, establish an advisory council, collect data on sexual assault, and establish program evaluation, quality improvement, and oversight mechanisms (DoD 2005).

A Rape Culture

Sarah Ullman (2010) contends that despite progress being made in assisting survivors of sexual assault, we still live in what has come to be termed as a "rape culture." Rape culture embodies the ideas in the U.S. that society holds women responsible for rapes, rapists are often ignored or excused for their behaviors, and victims do not receive the support they need for recovery afterward (Herman 1984; Buchwald et al. 1993; Nelson 2002; Ullman 2010). Feminist theories have postulated that the way males are socialized about sexuality and aggression as a form of masculinity teaches them that rape behaviors are a normal part of social life (Herman 1984). This is not to say that all men who are aggressive will become rapists or that rapists always exert observable aggressive tendencies. There is a population of males who do associate the two behaviors of aggression and sex together culminating in the ultimate form of aggression against women (Nelson 2002).

Although rape has occurred throughout history, the birth of the anti-rape movement in the US occurred only in the early 1970s (Kilpatrick 2000). In

the nearly three decades since its birth, the anti-rape movement has accomplished many of its goals of national reform of rape statutes refinements in the way criminal justice officials treat victims, improved medical and mental health services, and the establishment of rape crisis centers and funding for others who assist victims (Kilpatrick 2000). This study cannot test the existence of a rape culture in the military per se, but what it can do is examine those factors contributing to a rape culture where victims are outnumbered in their work units and also ignored in deployment settings.

Overall the DoD has disclosed sexual assault reporting for military women to indicate that it occurs: almost exclusively with a single male offender, usually a coworker, and with someone the victim knows (DoD 2010). Over half of women were also either stalked or harassed by the offender prior to the assault (DoD 2010). The most common reason women do not report rape is a feeling uncomfortable in coming forward, and very few people do not know how to come forward with a report (DoD 2010).

Summary

An overall theme apparent in this chapter has been that while women in the military is a heavily researched topic, there is an absence of empirical data and analyses providing evidence of women's contributions. Most studies to date have collected qualitative analyses, conducted interviews, relied upon anecdotal

information, analyzed press releases, and speculated about limited observations available to the public (Moskos 1988; Nelson 2002; Solaro 2006; Rao 2009). Decisions about how to approach women in the military, their successes and their struggles, is unfair to make with this current work present. Until more quantitative analyses test the assumptions and themes that have arisen in prior qualitative accounts, it will be difficult to arrive at any firm conclusions.

Deployment in recent major military operations (Operation Iraqi Freedom, Operation Enduring Freedom, and Operation Noble Eagle) has not been as closely examined in the context of sexual misconduct prevalence. Veterans of these major military campaigns have been studied clinically to determine how their lives have changed since returning from deployment (Kimerling et al. 2007, Jacobson et al. 2008). Generally, those unsettled veterans have been found to be less connected with their peer groups, feel alienated, experience family/work adjustment challenges, acute distress, heightened anger, hyper-vigilance, hopelessness, and self-destructive/reckless behaviors, to name a few (Armstrong et al. 2005). While these outcomes are important, researchers have not paid as much attention to how deployment may affect different sexual assault outcomes for victims. Deployment may provide the stress to increase one's vulnerability to sexual assault as a victim or perhaps even the opportunity to engage in sexual assault as an offender with limited

resources nearby to address it. (See Table 3.3 Women's Deployment to Major Military Operations 2001-2006)

Research Questions and Hypotheses

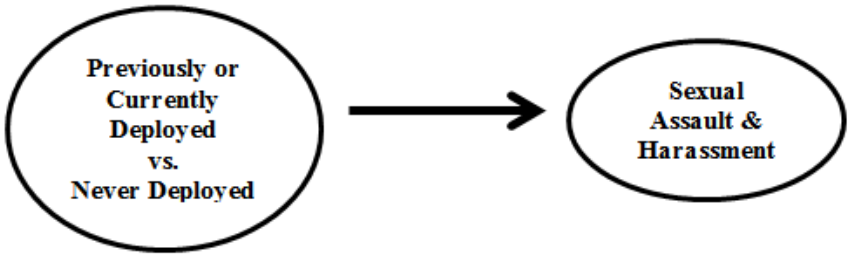
At its core, this study seeks to address three major questions. First and foremost, *does deployment increase the likelihood of a female experiencing sexual assault?* That is, does deployment increase both a person's vulnerability to assault as well as provide the opportunity for these events to occur amongst limited resources for coping and prevention? Deployment may create a suitable target-rich environment or may provide protection and distraction from what occurs in garrisons back in the United States. As previously described in the prior chapters, deployment represents a stressful and potentially hostile work environment in which men and women are expected to perform life-saving tasks on a daily basis in an active combat zone.

The assumption behind this question is that being in a war zone is different from being on a base in the United States (Rao 2009). In a deployed environment, people come and go and they are surrounded by each other constantly with little privacy, so it may provide opportunities for people with proclivities for rape. I hypothesize that:

H1) Women who have been previously or currently deployed experience a greater likelihood of being sexually assaulted or harassed as compared to those

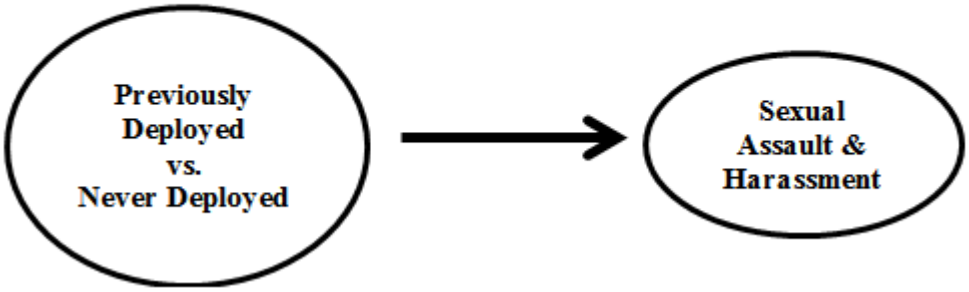
who have never been deployed. (Figure 3.4)

Figure 3.4 – Hypothesis 1: Previously or Currently Deployed vs. Never Deployed



H2) Women who have been previously deployed (but are not currently deployed at the time of the survey) are at a greater likelihood of being sexually assaulted or harassed than those who have never been deployed. (Figure 3.5)

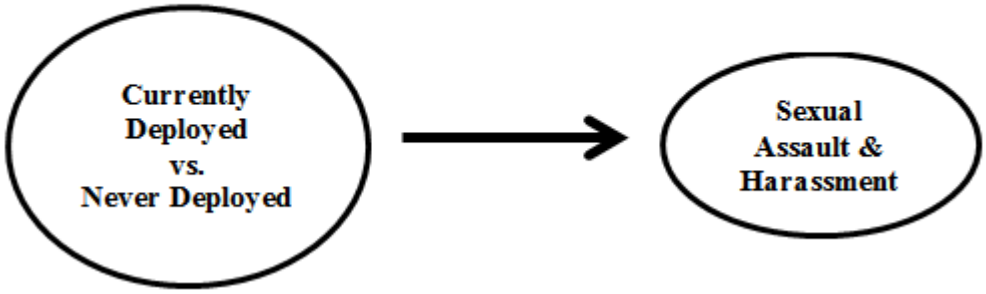
Figure 3.5 – Hypothesis 2: Previously Deployed vs. Never Deployed



H3) Women who are currently deployed (at the time of the survey) increase their likelihood of being sexually assaulted or harassed as compared to those

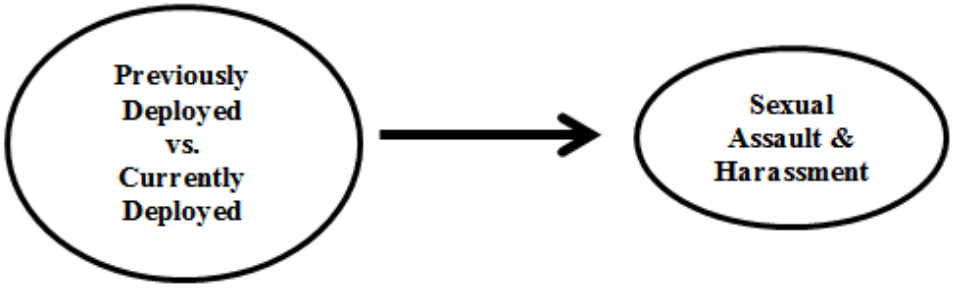
who have never been deployed. (Figure 3.6)

Figure 3.6 – Hypothesis 3: Currently Deployed vs. Never Deployed



H4) Women who are currently deployed have an increased likelihood of sexual assault or harassed as compared to those who have been previously deployed but are not currently. (Figure 3.7)

Figure 3.7 – Hypothesis 4: Previously Deployed vs. Currently Deployed



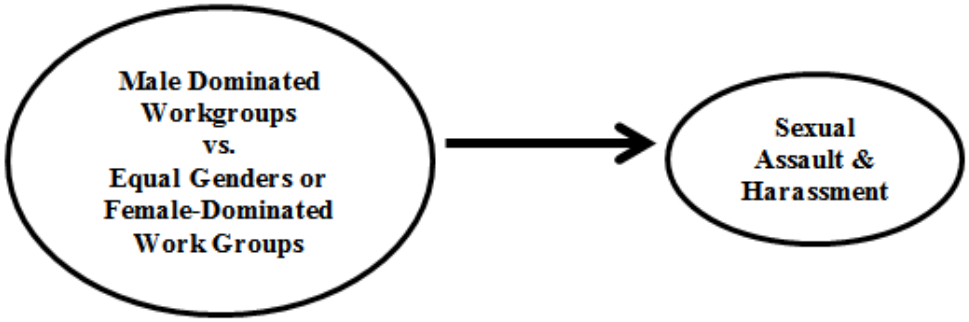
Second, does the gender ratio of the workgroup explain the likelihood of experiencing sexual assault? This study seeks to add to the literature of understanding how the lives of military women connect to risks of hostile work environments ending in rape as well as how women in male-dominated institutions experience the barriers of maintaining a gender identity and

contributing to unit cohesion which may put them at a higher risk for being raped.

To test this question, I utilize sub-samples based upon deployment within the larger sample to examine how the sex ratios change given a woman's deployment status. The gender composition of women's workgroups change significantly when taking deployment into account. For example, when a woman is currently deployed she often experiences a gender ratio with more males in her work group as compared to her work groups when not currently deployed. Accordingly, I test sex ratios within the currently deployed sub-sample and compare them to those never or previously deployed. I hypothesize that:

H5) Women who are in majority male workgroups ("all male," "almost all male," or "mostly male") shall have greater likelihoods of experiencing sexual assault, especially those who are currently deployed. (Figure 3.8)

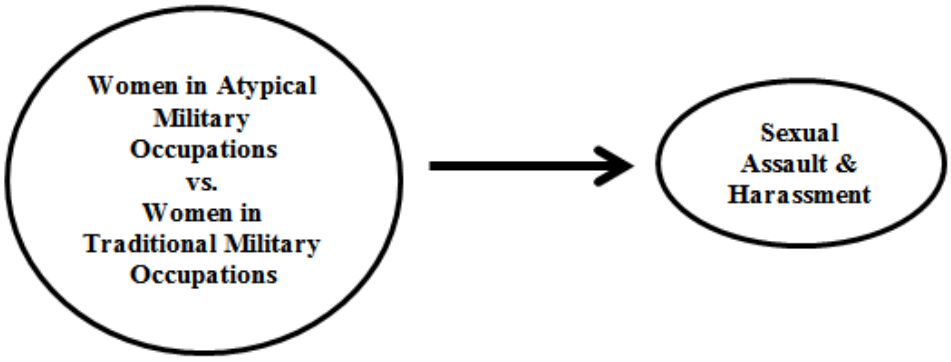
Figure 3.8 – Hypothesis 5: Male Dominated Work Groups (Gender Ratios in the Work Unit)



Two other measures of gender are also used to examine the likelihoods of sexual assault for women in atypical occupations for their gender and women who do not find other women common in their environments. Specifically, these additional measures of how women experience gender in the military capture life outside of work hours as well as the climate of the all-male profession a woman may find herself within.

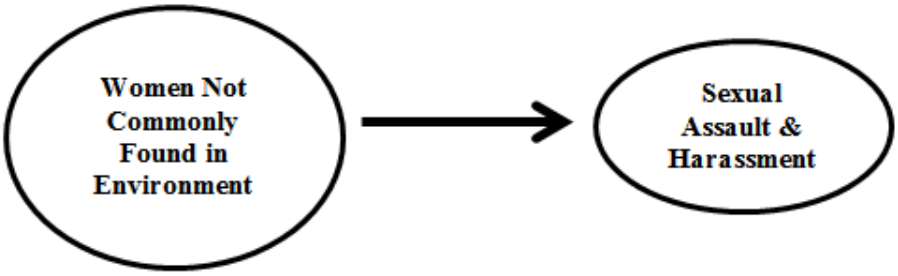
H6) Women who work in an occupational specialty not usually held by females also shall have greater likelihoods of experiencing sexual assault, especially those who are currently deployed. (Figure 3.9)

Figure 3.9 – Hypothesis 6: Women in Atypical Military Occupations for their Gender



H7) Women who find their gender uncommon in their environment shall have greater likelihoods of sexual assault, especially those who are currently deployed. (Figure 3.10)

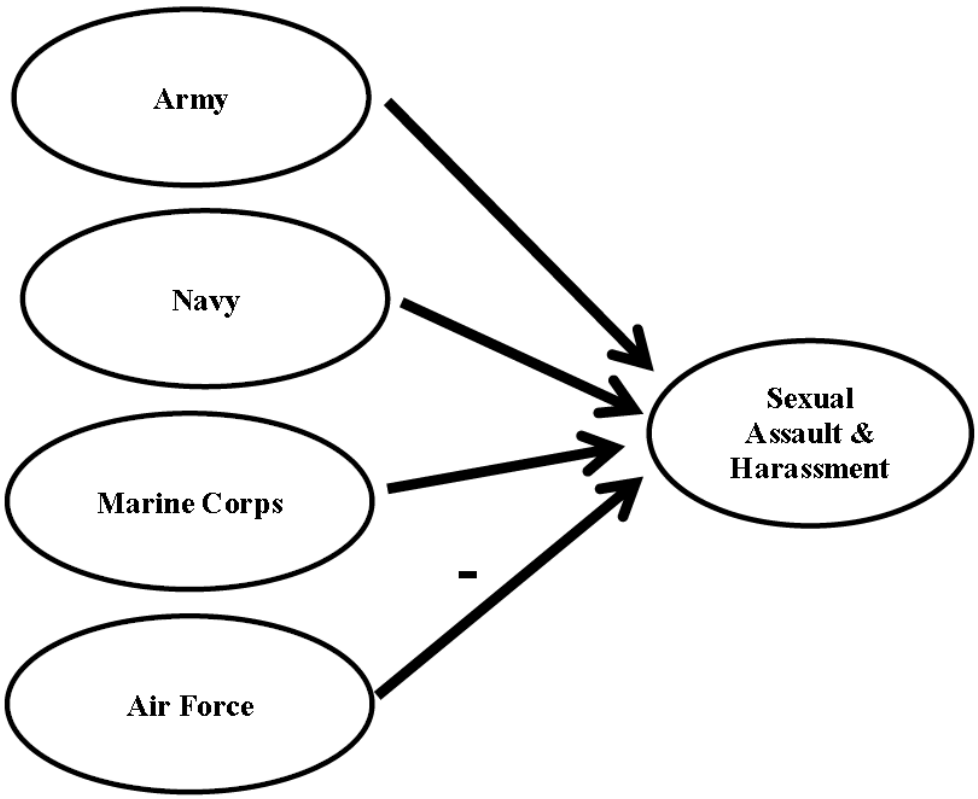
Figure 3.10 – Hypothesis 7: Women Not Commonly Found in Environment



Finally, *do the military branches (Army, Navy, Air Force, Marines) have varying likelihoods of sexual assault?* With the background provided of the military branches major sexual assault cases between 1991 – 1999, this has illustrated that some branches (Army and Navy) are not as well prepared for handling sexual assault victimizations.

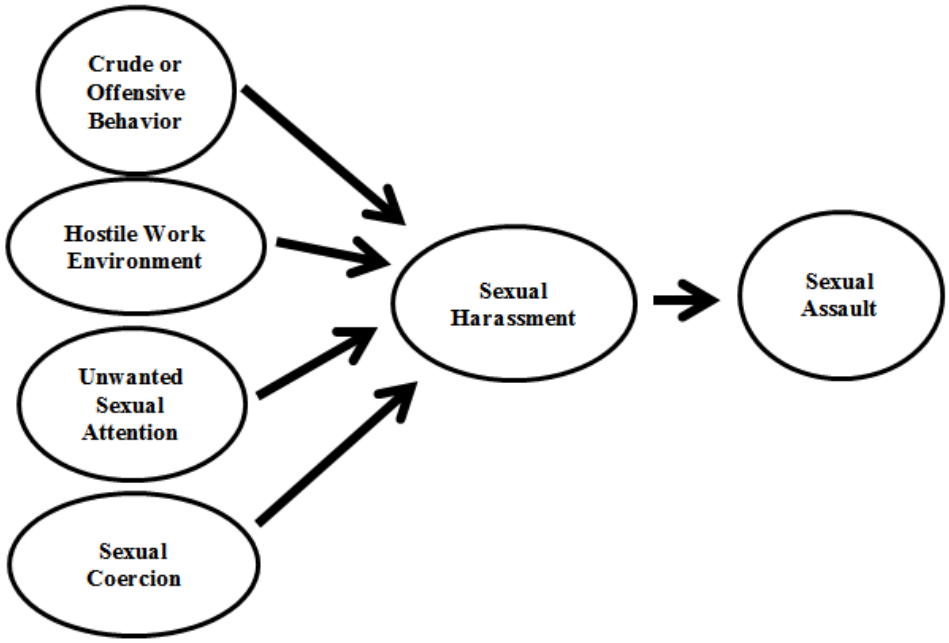
H8) Women who are members of the Air Force will not experience an increased likelihood of sexual assault while women who are in the Army, Marines, and Navy shall experience increased likelihoods of sexual assault. (Figure 3.11)

Figure 3.11 – Hypothesis 8: Military Branch



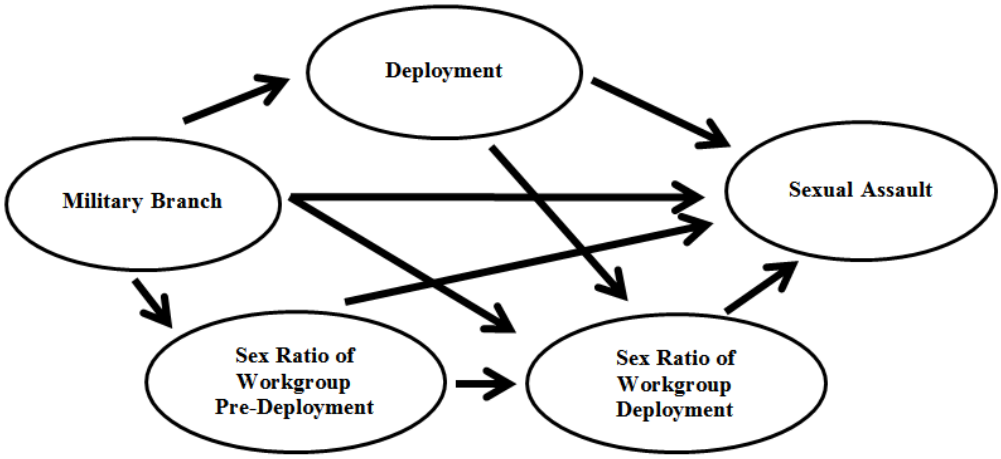
Additional models have been created to demonstrate the conceptual relationship between sexual harassment and sexual assault (See Figure 3.12) as well as an overall theoretical model to demonstrate the relationships between deployment, military branch, and sex ratios on the likelihood of experiencing sexual assault (See Figure 3.13)

Figure 3.12 – Conceptual Model for Sexual Harassment and Assault



To address these questions, I conducted quantitative analyses of a recent DoD survey completed by active-duty women. The women represented both white and minority service members from a variety of ranks/paygrades including both officers and enlisted personnel, early career women as well as those with many years of experience in the armed forces, women of different ages, and women across all armed service branches. The total sample included 8,059 military service women of which 387 (4.8 percent) had been sexually assaulted.

Figure 3.13 – Theoretical Model for Relationships between Sexual Assault, Deployment, Military Branch, and Gender Ratios



Additional descriptive statistics on the details of these women are available in the next chapters on methodology, analyses, and results.

CHAPTER 4: RESEARCH METHODS

Empirical Definitions

This study draws from a survey that was administered by the DoD to active-duty women about their experiences with sexual assault and harassment in the military. The definition of rape/sexual assault used for this study was predicated on the Uniform Code of Military Justice (UCMJ) or rule of law for the military justice system. Sexual assault was defined to match the same terminology used during the court-martial process. That definition included "unwanted sexual contact" and was specified as "without your consent and against your will, forced performance or receipt of sexual touching (e.g., intentional touching of genitalia, breasts, or buttocks), attempted or completed sexual intercourse, oral sex, anal sex, or penetration by a finger or object" (WGRA 2006; UCMJ 2010, Article 120).

Given the nature of research within the military setting, even with the proper resources, some topics such as sexual assault and harassment are still very difficult to investigate. Rape and sexual assault are definitely on that list of topics. Understandably, the DoD is concerned about its image and presentation to the public in its attempts to maintain itself as a professional, prepared, and efficient institution of security and peacekeeping for the nation state. Whether the reasons are political, practical, or emotional, the armed forces have a vested

interest in being perceived as legitimately as possible. Many military personnel are advised against speaking to the public about certain topics (gays and "don't ask, don't tell," scandals, Tailhook, Aberdeen, etc.), or if they do, to be made clear to the audience they are expressing personal, and not the military's views.

Nonetheless, rape is a topic of particular importance to the military, especially as the numbers of victims increase. Accordingly, the DoD has conducted wide-scale surveys on the sexual victimization experiences of members within Army, Navy, Marine, Corps, and Air Force in 1988, 1995, 2002, and 2006. The Defense Manpower Data Center collected data on the topic of sexual assault as well as overall workforce relations in the military generally and has made these data publically available to researchers for further study. While comparative analyses over time seem possible, the surveys themselves changed dramatically over time, making comparisons difficult. The women who have responded in large numbers to the survey questions in this study from the 2006 study have reported on very sensitive topics to be of benefit to the military and its community.

Overview and Study Population

The data for this study come from the 2006 Workplace and Gender Relations Survey (WGRS) of Active Duty Members conducted by DoD researchers in the Defense Manpower Data Center (DMDC). Reports measuring

gender relations and sexual harassment and assault are mandated by Congress. These studies are part of annual assessment cycles of active duty military service members, reservists, military spouses, and service academy students. They consist of alternating surveys and focus groups to determine the incidence of unwanted sexual contact, issues of harassment, gender discrimination, and work-related issues. This dataset continues the tradition of exploring sexual misconduct experiences and outcomes but in a controlled and confidential instrument that attempts to avoid stigmatizing and self-labeling victims. Specific military branches have attempted to collect data on these topics in the past as well, but most efforts have been incompatible with the DMDC's instruments and have produced more confusion than accurate results (DoD 2010).

The September 2005 Active Duty Master Edit File states that there were 1,332,791 eligible members within the population at the time the sample was to be drawn for the 2006 period of survey administration. The pool of respondents represents all branches of the military including the Army, Navy, Marine Corps, and Air Force who (1) had served a minimum of 6 months of active duty service, and (2) were below flag rank (meaning that they have not been commissioned or promoted/confirmed to a general officer by a political appointment process such as one star, two star, and three star officers, etc.) (WGRS 2006).

These data come from the responses to the 2006 wave of the *Workplace and Gender Relations Survey of Active Duty Members* (*WGRS*), which was conducted between June and September of 2006 by the DMDC. This survey, in different versions over the years, has provided data on military sexual misconduct since 1988 in order to provide new information on a variety of consequences and contexts (Bastian et al. 1996). Major surveys were administered in 1988, 1995, and 2002, with the 2006 data collection containing the most recently available information at the current time. (See Appendix D: Letter of Instructions to Survey Respondents).

The 2006 WGRS instrument covers the following topic areas: background information (service, gender, pay grade, race/ethnicity, and permanent duty station location), career intentions (years of service, likelihood to remain in active duty status, and commitment to serve), military life (deployments, safety, experiences with sexual harassment, misconduct, and assault/rape), climate of the military workplace (including gender mix of current workgroup, morale, mentoring, supervision characteristics, and unit cohesion), stress/health/well-being, gender-related military experiences in the past year (discrimination, unprofessional behavior, and harassment), personnel policy and practices, and perceptions of gender relations within the military. My research questions examine the survey items regarding unwanted sexual contact, or more bluntly, episodes of sexual assault and harassment, and being deployed to a

major recent military operation as increasing the likelihood for active duty members to be sexually assaulted. (See Appendix C: Survey Instrument).

The DMDC conducts both Web-based and paper-and-pencil surveys to support the personnel information needs of the Under Secretary of Defense for Personnel and Readiness. These surveys generally assess the attitudes and opinions of the entire DoD community on a wide range of personnel issues aspects that address the quality of life. While the instrument did not need Institutional Review Board approval, as is the case with similar projects, the research oversight office of the Office of the Under Secretary of Defense (Personnel and Readiness) and representatives of the U.S. Army Medical Research and Material Command reviewed the research as a part of their responsibility to protect human subjects in research and in supervising ethical research conduct.

Respondents within the sample were sent various communications during the survey administration including letters, DoD emails, and brochures inviting their participation. Residential addresses of active duty members were used as the primary address type for sending the self-administered survey by mail. A secondary address type of "member unit address" was used in cases where the residential address could not be identified. Approximately 11,842 members of the sample were eliminated due to incomplete address types

because of missing, incomplete, or out-of-date addresses on their file and steps to recover these address types were generally unsuccessful.

Members of the sample became ineligible and were excluded if they indicated in the survey or by other contact that they were not of active duty status as of the first day of the web survey, June 26, 2006 (0.46 percent of sample). Members were also excluded if they were unable to be located, refused to participate, or demonstrated some other non-response. A total of 2,130 respondents within the sample were determined to be ineligible for these reasons and were therefore eliminated. This elimination process decreased the sample size to 97.53 percent of its original size or 84,083 respondents.

Response rates were calculated using procedures advocated by the Council of American Survey Research Organizations (CASRO) whose guidelines attempt to minimize sampling problems and confusion in the interpretation of survey results. Useable surveys were deemed as those which had 50 percent or more of the survey completed and had contact information. Completed and useable surveys, both from the web and pencil/paper, were received from 30,633 eligible respondents representing a response rate of 30.4 percent (WGRS 2006). Exclusions of sample members came via non-response (41,254).

Informed Consent

The survey was administered by providing a notice to all survey recipients about privacy and informed consent. Respondents were informed that: (1) the information collected in the survey would be used to investigate attitudes and perceptions about gender-related issues, estimate the level of sexual harassment and unwanted sexual contact, and identify areas where improvements are needed, (2) the information would assist in policy formation, and (3) that reports would be provided to the Office of the Secretary of Defense, each Military Department, the Joint Chiefs of Staff, and used in Congressional testimony. Before completing the survey, respondents were made aware that some findings would be published by the DMDC or presented in academic conferences and that public-use datasets would be de-identified for use by researchers outside of the military community. The DMDC also provided a website address (URL) where results would be posted.

Respondents were told that the survey is confidential, voluntary, and without penalty for not responding. Researchers briefly described the sampling process, (random selection of participants from the Master Edit File), and included statements about the difference they believed participation would make. Potential risks were described as minimal other than accidental or unintentional disclosure of information. Researchers noted that a respondent who experienced sexual harassment or unwanted sexual contact could

experience discomfort and/or other emotions while completing the survey. Contact information was provided at the bottom of the disclosure section by military branch and through employee assistance programs below for those who experienced such discomfort.

Security protocols were described to respondents in order to maintain confidentiality (separating identifying information from the responses, security during the data entry process, and secure shredding of paper surveys). Respondents were told that tests were performed to determine if any combination of demographic variables could single out an individual, and therefore some variables were set to missing and that the research was overseen by a team of representatives in order to protect human subjects in research. Survey administrators would not contact respondents for follow-up purposes, but are legally required to report comments that indicate a threat of harm to self or others for appropriate action.

Sampling Frame and Procedure

The sampling design was a single-stage, non-proportional, stratified random sampling procedures pulled from the September 2005 Active Duty Master Edit File containing the 1.3+ million members. These 2005 data allowed the research team to develop the sampling frame, construct the stratifying elements, determine the sample size, and allocation. The sample size and

allocation were determined using a planning tool developed by the DMDC to mathematically estimate the minimum cost in accordance with the greatest allowable number of respondents in key reporting domains while maximizing representation to the greatest allowable extent. In the stratified random sampling procedure, all members of the population were categorized into homogeneous groups. For example, members were grouped by gender and Service (e.g., all male Army personnel in one group, all female Navy personnel in another). As each stratum was chosen, random selection occurred within each stratum with equal probability. However, since sampling rates varied across each stratum, individuals were not selected with equal probability overall as is the case in many stratified sampling endeavors.

The dimensions of stratification in the given dataset included: service (military branch), gender, pay grade group, race/ethnic category, and ranges of months for active duty occupations (months serving away on low and high ranges). These dimensions were used to develop population subgroups of particular interest to policy officials. Members were randomly chosen within each group and small group minorities were oversampled in comparison to their proportion of the population to ensure adequate coverage and enough responses from the population for analysis.

Survey Administration Process

The survey administration process began with the postal and emailing out of notification letters to sample members in June of 2006 for those respondents having valid residential and email addresses, explaining the purpose of the survey, how the information would be used, and why participation was important. During the administration period, additional e-mail and postal reminders were sent to members of the sample to encourage strong survey participation. Data were collected and compiled between June and September 2006 using mailed paper surveys and web-based surveys included together. The majority of surveys were collected from the web (92.5 percent). The DMDC utilized a survey control system to store and update project data, handle undeliverable mail, and determine eligibility statuses for respondents. The survey team made attempts to format and update addresses during the project where possible. Updates from sample members were also received via the toll-free telephone number, mail, fax, or email and were coordinated with the re-mailing schedules of the project. Mailings were quality checked before send-out and contained signed letters on official letterhead.

Survey Instrument

The web-based survey was hosted on a secure website to allow for online completion and respondents were prompted for an entry code to gain access to

the survey and further authenticate the user. A Privacy Notice and a page of Frequently Asked Questions (FAQs) were also provided at the point of entry. During survey completion, respondents could return to prior pages or move forward pages and also clear all responses to questions within a page, save, and/or exit the survey. All technical functions had full text explanations to facilitate the respondent's survey experience as clearly as possible. For those who had not completed their survey via the web (7.5 percent of respondents), a paper version with a business reply envelope was mailed to them with a reminder letter.

The survey was designed so that not all questions were applicable to each respondent. The survey instrument allowed for respondents to skip questions depending on prior answers. One question on sexual harassment was deemed a "critical question" and respondents must have answered this question as well as at least 50 percent of their survey for the applicable questions to be considered in the final sample tally. The critical question asked respondents about sex/gender related talk and/or behavior that was unwanted, uninvited, and in which they did not participate willingly. This question served as the major focal point for the survey. Respondents were told to consider "all military personnel and others in the military community" including active duty or reserve personnel on or off duty, DoD civilian employees, and contractors in the workplace. Of the total sample drawn of men and women, 9,336 women

completed the survey and 8,059 women comprise the sample for this study. Of the 8,059 women, 602 (7.5 percent) of them filled out a paper survey from the mail while the majority of the women responded to a web-based version (7,457 or 92.5 percent).

A Note Regarding Confidential Variables

A number of items were gathered about each respondent and were later deemed to be confidential by the DMDC to preserve the privacy of the respondents. The analysis conducted for this project uses only the publicly available dataset for analyses. Items not included in the public version of the dataset were marital status, educational level, prior victimization experience, housing type, number of children, pay grade, region, occupational group, dual service spouse, family status, risk behaviors during assault (use of alcohol/drugs, etc.), experiences of professional or social retaliation, multi- or bi-racial categories, relationship to offender, and the number and gender of offenders.

Many of the redacted variables would have provided good control variables for the analyses in this study. The category of marital status, for example has been an important in that retaliating partners or ex-partners are often the perpetrators of rape in the workplace (Firestone and Harris 2003). Specifically, divorcees experience high rates of assault (Belknap 2001; Ullman 2010), though this may not have mattered if divorcees were physically separated

during deployments and while on military work assignments. Prior victimization is also a strong predictor of rape, particularly if the rape occurred while in one's childhood or adolescence (Belknap 2001). Privacy concerns eliminated this question from the publicly available version. Other variables such as drug/alcohol use, education level, and relationship to offender (acquaintance rape) are also not available. While this is certainly a limitation of this study, this does not diminish the importance of the research questions regarding deployment, military branch, and sex ratios in increasing the likelihood of military sexual assault for active-duty women.

Dependent Variables: Sexual Assault and Harassment

Two dependent variables were used to in the analysis. The first measure, sexual harassment, was used to better understand the behaviors which create hostile work environments for women in the military. When women are sexually harassed, these behaviors often precede sexually assaultive behaviors. Sexual harassment represents sexual victimization in a more minor form. The idea behind this variable is to better understand an environment in which a culture of sexual misconduct may exist. The major dependent variable of interest is sexual assault. The sexual harassment variable was used to assist in understanding and analyzing the sexual assault variable but is not presented with

the multivariate analyses of sexual assault. Multivariate analyses tables for sexual harassment are provided for reference in Appendix F.

In the item measuring sexual harassment respondents were asked to think about sex/gender related talk and/or behavior that was unwanted, uninvited, and in which they did not participate willingly occurring in their workplace by persons of either gender. They were then asked to indicate how often the behavior occurred during the past 12 months in these situations involving anyone in the military community (active-duty or reserve military personnel, andDoD/Service Civilian Employees or Contractors) on- or off-duty. Respondents were presented a list of behaviors which they were able to respond to presented in Table 4.1.

Responses to these behaviors included "very often, often, sometimes, once or twice, and never." If respondents indicated that they had experienced any of these behaviors once or more then the sexual harassment variables captured the response as "experienced." All of the behaviors were collapsed into a dichotomous categorical variable of experiencing sexual harassment or not experiencing it (Yes/No). Over 2,000 women of the 8,059 women in the sample indicated experiencing sexual harassment. (See Table 4.2 Sexual Harassment Incidents).

Table 4.1 List of Behaviors for Sexual Harassment Variable.

Sexual Harassment Behavior	Frequency	Percent
Repeatedly told sexual stories or jokes that were offensive to you?	3,080	38.2
Made unwelcome attempts to draw you into a discussion of sexual matters (e.g., attempted to discuss or comment on your sex life)?	2,177	27.0
Made offensive remarks about your appearance, body, or sexual activities?	2,014	24.9
Made gestures or used body language of a sexual nature that embarrassed or offended you?	1,924	23.8
Made unwanted attempts to establish a romantic sexual relationship with you despite your efforts to discourage it?	3,080	38.2
Continued to ask you for dates, drinks, dinner, etc., even though you said "No"?	1,368	16.9
Made you feel like you were being bribed with some sort of reward or special treatment to engage in sexual behavior?	407	5.0
Made you feel threatened with some sort of retaliation for not being sexually cooperative (e.g., by mentioning an upcoming review)?	297	3.6
Touched you in a way that made you feel uncomfortable?	957	11.8
Treated you badly for refusing to have sex?	328	4.0
Implied faster promotions or better treatment if you were sexually cooperative?	234	2.9

n=8,059

Table 4.2 Sexual Harassment Incidents

	Frequency	Percent
Experienced	2,261	28.1
Did Not Experience	5,798	71.9

n=8,059

Respondents were then instructed to choose one sexual harassment or assault situation that had the greatest effect on them and were asked about where the sexual harassment situations occurred. Responses included “while you were deployed,” “at work (the place where you perform your military duties),” “at a

military installation," "in living quarters or barracks," "in the local community around an installation," "at your current permanent duty station," "while you were on TDY/TAD, at sea, or during field exercises/alerts," and "in a work environment where members of your gender are uncommon." (See Table 4.3 Sexual Harassment and Assault Settings)

Approximately 40 percent of the sexual assault or harassment victims were assaulted/harassed while they were deployed, 82 percent indicated that the assault occurred while they were at work, and 93 percent indicated that it occurred at a military installation. Over one third of the respondents indicated that the behavior occurred in a work environment where members of their gender are uncommon. In summary, the majority of sexual assault cases did *not* occur off-base, while recreating, and where many other women were nearby or in large numbers. Most assaults occurred within the purview of conducting one's military work and within military-controlled settings.

The primary dependent variable is sexual assault. The UCMJ defines rape as "the cause of another person of any age to engage in a sexual act by using force against that other person, causing grievous bodily harm to any person, threatening or placing that person in fear that any person will be subjected to death, grievous bodily harm, or kidnapping, rendering another

Table 4.3. Military Service Women's Sexual Harassment & Assault Settings

Harassment/Assault Experience Setting	None of it Occurred	Some/Most/All of it Occurred
While you were deployed?	3,197	1,318
At work?	1,071	3,451
At a military installation?	851	3,666
At a work environment where women are uncommon?	2,606	1,883

n=8,059

person unconscious, administering…a drug, intoxicant, or other substance….that impairs the ability of that other person to appraise or control conduct" (UCMJ 2010, Article 120). Aggravated sexual assault is defined similarly in the UCMJ as rape and adds that the victim is "incapable of appraising the nature of the sexual act, declining participation in the sexual act, or communicating unwillingness to engage in the sexual act" (UCMJ 2010, Article 120). Sexual assault includes both penetration and intentional or inappropriate touching.

In the construction of the survey items regarding sexual assault, there was considerable discussion on the use of the terms/labels "rape" and "attempted rape" (DoD 2010). DoD lawyers argued that rape and assault behaviors are not the same as harassment behaviors while DMDC researchers and the Defense Advisory Committee on Women in the Services requested that

these behaviors be retained in the survey but given a separate measurement item and use behavioral descriptions rather that the terms/labels themselves (Lancaster 1999). This led to an examination of other terms and labels which concerned researchers and officials, especially given the sensitivity of these topics.

Eventually, the survey was re-titled as "Gender Issues" and the labels "sexual assault and harassment" would not be introduced in the survey until the necessary time (Lancaster 1999). Many researchers have previously underscored the importance of word choice in constructing questions on survey that examine rape experiences (Hamby et al. 2003; Abbey et al. 2005; Koss et al. 2007; Ullman 2010). These changes are significant as they try to address issues of under-reporting and over-reporting and will be discussed more closely in the conclusion.

Respondents were asked to think about the situation(s) they experienced in the past 12 months regarding unwanted sexual contact or specifically "having experienced without your consent and against your will the forced performance or receipt of sexual touching (e.g., intentional touching of genitalia, breasts, or buttocks), attempted or completed sexual intercourse, oral sex, anal sex, or penetration by a finger or object." Three-hundred eighty seven respondents (4.8 percent) indicated unwanted sexual contact responding "Yes" to one of these categories of unwanted sexual contact. (See Table 4.4 Sexual Assault

Table 4.4. Sexual Assault Victimization

	Frequency	Percent
Sexual Assault		
Did not experience	7,672	95.2
Experienced	387	4.8
Specific Sexual Assault Type		
Experienced unwanted sexual touching only	159	2.0
Experienced attempt intercourse, anal, or oral sex	105	1.3
Experienced completed intercourse, anal, or oral sex	72	0.9
Other behavior	51	0.6

n=8,059

Victimization). Since both of my dependent variables are categorical, I use logistic regression to test my hypotheses.

Three Key Independent Variables: (1) Deployment

The first major predictor variable under examination measures the respondent's deployment experiences in major military operations. This variable explores possible opportunities for victimization during periods of isolation from family and other coping/treatment resources. This measure is represented by several survey items existing in the original dataset as well as some constructed variables for my study. I created several variables representing current and past deployment.

The categories of interest for deployed military women in this study were: currently deployed, previously deployed (deployed in the past, but not

currently deployed), and never deployed. Respondents were asked, "Have you ever been deployed longer than 30 consecutive days?" (Yes/No). This variable represents longer durations of deployment that not all soldiers are required to serve. If female military members served at least 30 days or longer, then they were counted as having been deployed. Approximately 60 percent of the women in the sample had ever served in longer than 30 day deployments (n=4,850) while about 39 percent had not been deployed at all (n=3,209) (See Table 4.5).

A second question examined whether or not women were currently deployed and asked, "Are you currently on a deployment that has lasted longer than 30 consecutive days?" Only seven percent of women (n=569) were currently deployed on a 30 day deployment or longer. Approximately 92 percent of the sample were not currently deployed at all (n=7,490). These two deployment questions were combined where responses could be distinguished between women who were currently deployed, women who had been deployed previously but were not currently deployed, as well as women who had never been deployed. The three variables constructed were three unique categories of deployment measured in the analysis: "previously deployed," "currently deployed," and "never deployed." As a result of these outcomes, I identify the most important deployment-related factors involved in the prevalence of sexual

Table 4.5 Sociodemographic and Military Service Characteristics by Deployment Status for Sample Active-Duty Women

	Never Deployed n=3,209		Previously Deployed (but not currently) n=4,281		Currently Deployed n=569	
Variables	Frequency	Percent of Category	Frequency	Percent of Category	Frequency	Percent of Category
Independent						
Military Branch						
Army	1,159	36.1	1,580	36.9	375	65.9
Navy	629	19.6	1,125	26.2	95	16.7
Marine Corps	368	11.4	483	11.2	43	7.5
Air Force	1,053	32.8	1,093	25.5	56	9.8
Sex Ratios of Workgroups						
All males (token female)	116	3.6	181	4.2	30	5.2
Almost entirely male	788	24.5	1,341	31.3	220	38.6
More males than females	1,004	31.2	1,419	33.1	179	31.4
Equal genders	867	27.0	978	22.8	106	18.6
More females than males	346	10.7	300	7.0	31	5.4
Almost entirely female	76	2.3	54	1.2	3	0.5
All female	12	0.3	8	0.1	0	0
Atypical Gender in Occupation	602	18.7	944	22.0	139	24.4
Gender Uncommon in Environment	770	24.0	1,280	29.9	192	33.7
Race/Ethnicity						
Minority‡	1,049	32.6	1,546	36.1	218	38.3
Hispanic/Latina†	431	13.4	474	11.0	98	17.2
White	1,729	53.8	2,261	52.8	253	44.4
Age						
19 years and younger	297	9.2	53	1.2	42	7.3
20-24 years	1,105	34.4	888	20.7	211	37.0
25-29 years	650	20.2	956	22.3	119	20.9
30-34 years	369	11.5	792	18.5	81	14.2
35-39 years	328	10.2	804	18.7	56	9.8
40-44 years	258	8.0	453	10.5	41	7.2
45 years and older	202	6.2	335	7.8	19	3.3
Rank/Pay grade						
Enlisted Personnel	2,243	69.9	2,826	66.0	416	73.1
Officers	966	30.1	1,455	33.9	153	26.8
Years of Service						
Less than 3 years	1,031	32.1	290	6.7	143	25.1
3-6 years	781	24.3	947	22.1	181	31.8
6-10 years	450	14.0	873	20.3	85	14.9
10 years or more	947	29.5	2,171	50.7	160	28.1

‡ Minority category consists of 1997 Federal Register definitions. American Indian or Alaska Native, Asian, Black, Pacific Islander.

† Hispanic or Latina. A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.

n=8,059

assault in the military.

(2) Military Service Branch

Military service branch (Army, Navy, Marine Corps, Air Force) was also used as an independent variable. The majority of women in the sample of 8,059 were members of the Army (3,114 or 38 percent). The next largest branch was the Air Force (2,202 or 27 percent), Navy (1,849 or 22 percent), Marine Corps (894 or 11 percent). In the general population of military personnel, women comprise a larger proportion of the Air Force than the Army. The stratified sampling frame allowed for the oversampling of females representing proportions of 20 percent - 35 percent within each branch's membership to allow for more than adequate coverage of women in the armed service branches.

(3) Sex Ratios in the Workgroup

The question for sex ratios of a female service member's current workgroup described the men and women in the group generally as male-dominant, equal, or female-dominant groups. One problem with this measure is that it captures *current* sex ratios in a woman's workgroup while I examine *past* sexual harassment and assault (in the last 12 months). Given the assignment of women according to their occupational role, it is assumed that women generally

experience similar current and previous sex ratios in their workgroups. For example, female nurses will typically have sex ratios of mostly/all women in their workgroups regardless of whether or not it reflects a current or previous workgroup assignment. While this measure of gendered work environments is less than ideal for this reason, it does capture the workgroup for currently deployed women, the primary group of interest in the hypotheses.

Two other measures of gender in the workplace are utilized to provide further descriptions of how women experience isolation in their military life. The first measure, referred to as "atypical occupations for one's gender" captures women who were isolated occupationally from other women. For example, women who work in traditionally male military occupations (machinist, truck driver, etc.) would find few or no women around them. The second measure allows for an understanding of women outside of their daily work shift where they find few or no women within their environment in the military generally. Military branches vary in how they distribute women among work units due to the differences in how women are utilized in that particular branch, the work positions available to women, and the occupational areas women choose to go into.

All military branches make the majority of occupational areas open to women but many occupations fall upon gendered lines because most women tend to work in nursing, clerical, and administrative roles. In 2004 for example,

the top occupations for female officers were nursing, health officers/administration, and personnel (Williams 2005). For enlisted women, the top occupations were general administration, supply administration, personnel, and medical care/treatment (Williams 2005). Even though women are beginning to diversify themselves into many occupations in the military, particularly since 1995, they remain a small minority of all military employees (less than 14.5 percent).

On average, no matter the profession they choose, most military women are outnumbered by males in their individual workgroups. In the survey women were asked, "Which of the following statements best describes the gender mix of your current work group, that is, the people with whom you work on a day-to-day basis?" Responses included: "all men (where the respondent is the only female in the unit)," "almost entirely men," "more men than women," "more women than men," "almost entirely women," and "all women." Not surprisingly, two out of three women indicated that they worked in units where they were the gender minority or were outnumbered by male coworkers. Sixty five percent of women were in workgroups described as either "all men," "almost entirely men," or "more men than women." Almost 11 percent of women work in units where their gender is the majority or mostly women and only 0.2 percent of women work in "all women" workgroups.

It is important to bring this social fact into the analysis because it may explain some of the opportunities for victimization for female service members. The major premise follows that where women do not have other women to rely upon for strategies in warding off harassment and unwanted sexual behaviors or touching, they would be at higher risk for sexual assault (Ullman 2010; DoD 2010). Women may also look to other women for coping strategies when signs start appearing that rape is a potential hazard for them from a particular colleague who has been harassing or stalking them. The sexual assault rate would likely be low or zero for women in "all female workgroups," by virtue of having no males around the majority of the time. Furthermore, the sexual assault rate would likely be higher in workgroups in which women are the "token females" in their units, completely surrounded or mostly surrounded by men. Certainly female on female sexual victimization exists but this not occur regularly nor represent the majority of sexual assaults in the military. Unfortunately detailed offender characteristics were removed from this version of the dataset due to confidentiality reasons, so they are not included in the analysis.

Examining sex ratios in the workplace is important since we know that that the majority of military sexual assaults on females occur within a woman's work unit. We can also further test the idea of gender tokenism in the workplace as a source of tension and victimization by using two other survey items as

independent variables. These additional items capture different elements of gender disparity in the workplace for women. Active-duty women were asked, "Are you currently in a military occupational specialty (MOS/D/R/AFSC) not usually held by persons of your gender?" About one in five women (20.9 percent) indicated that yes, they were. Some examples would include machinists, artillery suppliers, truck drivers, mechanics, engineers, etc.

Women were also asked, "Are you currently in a work environment where members of your gender are uncommon?" Twenty-seven percent of women sexually assaulted responded that yes, this was the case, but most victims identify other women around more commonly. These questions are limited in their application because much is left to the interpretation of the respondent's point of view as to what "occupations not usually held" and "members being uncommon" actually means to each person. My assumption as to what this question may indicate generally is how women experience gender tokenism in all military environments, (on- or off-base, on weekends, after work hours, while recreating, etc.).

Control Variables: Race/Ethnicity

Race/ethnicity was coded as "Non-Hispanic White" and "Total Minority," generally comparing the populations of "White" and "Non-White" with a separate question asking respondents about Hispanic/Latino ethnicity.

Unfortunately, the data were not available by racial groups allowing for detailed analyses by racial group membership (Black, Native American, etc.). This survey item was identified as a confidential variable extracted by the WGRS research team so that victims could not be identified or matched to their survey responses. The researchers noted that the racial/ethnic categories used are consistent with the 1997 standards for maintaining, collecting, and presenting federal data on race and ethnicity.

Buchanan et al. (2008) have defined the racial/ethnic outcomes for women from an analysis of the 2002 WGRS survey by the DoD. Results indicated that White women reported more overall sexual harassment, gender harassment, and crude behavior, whereas Black women reported more unwanted sexual attention and sexual coercion (Buchanan et al. 2008). While this dichotomous measure of White/Non-White provides an adequate control for the influence of race/ethnicity on sexual misconduct, it does not allow me to draw closer conclusions about specified minority groups and ascertain the racial relationship of *sexual assault* and *deployment* as was described by Buchanan and colleagues. The dichotomized racial groups within this sample are almost evenly split. Whites constituted 4,243 members (52.6 percent) and minorities constituted 3,816 (47.4 percent). Approximately 12 percent or 1,003 women indicated that they were of Hispanic ethnicity. These measures were broken down into "Minority-only" (non-White and non-Hispanic) and "Hispanic-only"

(Non-White and Non-Hispanic). Of the 3,816 minorities, 2,813 were of the "Minority-only" category, while the others were bi-racial, multi-racial, and/or identified as having Hispanic ethnicity.

Prior surveys indicated that minority women in the military were just as likely to be among those who were sexually assaulted as White women and that there was no significant different between the two groups. Minority women accounted for almost exactly half of the rape victims. Among the minority women, 16 percent of the rape victims were of Hispanic/Latina ethnicity.

Age

Age was originally a continuous/interval variable but this variable was collapsed by the research team due to privacy protocols. Age categories were created to allow for age-level analysis in 5-year intervals: 19 years old and younger, 20-24 years, 25-29 years, 30-34 years, 35-39 years, 40-44 years, and 45 years or more. Most women in the military sample fall between 20 – 29 years of age (48.7 percent). Only 392 women in the sample of 8,059 were 19 years of age and younger. Approximately thirty percent of women in the sample are between 30-39 years with the remaining 17 percent of women were aged 40 years or older. As described in the earlier chapters, age is a strong predictor of sexual assault in that younger women are more likely to experience sexual

assault than older women (Kilpatrick 2000; Belknap 2001; NCVS 2006; Gonzales et al. 2006).

The women in the present study generally reflect these age trends seen in nationally representative surveys. Most victims in the military are under 24 years of age (54 percent). Ten percent are age 19 and younger, but the almost half of the victims are between the ages of 20-24 years (170 of the 387 total victims). Women between 30-34 years represented 12 percent of the victims in the sample and this number decreased as women aged. The age category of women that contained the fewest victims was age 45 yrs. old or older.

Officers and Enlisted Personnel: Pay Grade

Any study on the armed services must take a soldier's rank into account, at least as a partial explanation for social behavioral phenomena attempting to be explained. There are some unique problems when it comes to conducting analysis by rank in that there are two coexisting rank structures, officer and enlisted. In a way, rank offers an indication of a person's socioeconomic status. More often younger, less educated and lower class men and women come into the military as enlisted personnel. Those with more education, training, and higher income levels (working class or middle class) tend to come into the military as officers. As of 2010, there were 1,187,294 total enlisted service members and 234,691 total officers out of the total active-duty military of

1,435,450 (comprising the Army, Navy, Air Force, and Marine Corps), meaning that 82 percent of service members are enlisted personnel (Department of Defense 2010).

Officers technically outrank enlisted personnel but there is a hierarchy of junior versus senior enlisted persons and following promotion through officer ranks may mislead a person to not account for years' experience, positions with supervisory roles, and entrenchment in the military system. This is particularly true for those who did not enlist before becoming commissioned officers.

A useful strategy to dealing with the interpretation of rank in research is by grouping rank or pay grades into junior and senior status, taking out of consideration whether or not a person is enlisted or an officer. However, variables can also be created to capture the "enlisted vs. officer" effect and determine whether or not it is a sufficient issue to overcome.

Women were asked to report their pay grade and this was cross-checked with available DoD data in its personnel master file. Most women in the sample were enlisted personnel (68 percent) with slightly more of them being of the higher E5-E9 pay grade. (See Table 4.6 Frequency Distribution of Pay Grades).

The variable was created so that enlisted personnel were compared to warrant officers and officers, to create a comparison between those of "officer-status" and those who were not. Again, this is another way of capturing age given that younger soldiers are much more likely to represent the enlisted

Table 4.6. Distribution of Military Paygrades

Paygrade	Frequency	Percent
E1-E4 ($17.6K - $22.9K)	2,278	28.3
E5-E9 ($25K - $55.6K)	3,207	39.8
W1-W5 ($32.6K - $71.8K)	154	1.9
O1-O3 ($42K - $59.4K)	1,169	14.5
O4-O6 ($50.6K - $70.4)	1,251	15.5

n=8,059
Salaries Source: Department of Defense Military Pay Table 2011
E=Enlisted, W=Warrant Officer, O=Officer

personnel. However, it is possible to enter the military as an officer rather than earning officer status on the way from being an enlisted soldier. This variable representing "officers and non-officers" then mixes both younger and older aged soldiers.

About one third of the sample represented officers and less than 2 percent of the sample represented warrant officers. Warrant officers are highly skilled, single-track specialty officers that serve as technical specialists in their fields, occasionally lead, and often advise those in command. This variable is used to try and examine rank as a potential vulnerability point for rape.

Ranks tend to be confusing to the civilian population because of differences between the services. Names for ranks in the Navy are different from those used by the Army, Air Force, and Marine Corps but one constant is the actual numbering system which shows a hierarchy for all of the branches. While policies and occupational responsibilities by rank do change regularly

within the branches, Figure 4.1 has been provided to illustrate officer and enlisted ranks and pay grades generally.

Years of Service

The variable years of active duty service, was originally a continuous/interval variable. DMDC researchers collapsed this variable due to privacy concerns. Years of active duty service categories were created to allow for age-level analysis in 3 and 5-year intervals: "less than 3 years," "3 years to less than 6 years," "6 years to less than 10 years," and "10 years or more." Most women (56 percent) in the military sample have 10 years or less of active duty experience completed and almost 40 percent of women have 10 years or more.

Variables Summary

The main dependent variable is having experienced *sexual assault*. A secondary dependent variable is *sexual harassment* which is used to provide information illustrative of hostile work environments and a proxy for the potential for future sexual assaults. The main independent variable predicting the likelihood of sexual assault is deployment which includes the following items: (1) having been *previously deployed* (longer than 30 consecutive days), (2) being *currently deployed*, and (3) *never deployed.* The second independent variable is *military branch* (Army, Navy, Air Force, Marine Corps). The final

Figure 4.1 Officers & Enlisted Personnel Chart

Navy
O-1 *Ensign*
O-2 *Lieutenant, Junior Grade*
O-3 *Lieutenant*
O-4 *Lieutenant Commander*
O-5 *Commander*
O-6 *Captain*

Army, Air Force, and Marine Corps
O-1 *1st Lieutenant*
O-2 *2nd Lieutenant*
O-3 *Captain*
O-4 *Major*
O-5 *Lieutenant Colonel*
O-6 *Colonel*

There are levels of Admirals and Generals as well. In addition to actual grades, the military has jobs. Billets are individual job slots, commands are units of the armed forces such as facilities, installations, air wings, squadrons, bases, ships, shipyards, and administrative units. A service member's Commanding Officer (CO), Commander, or Officer-In-Charge is the boss of an individual component or group of components.

ENLISTED RANKS:

An enlisted soldier joins the army without going to ROTC (Reserve Officers' Training Corps) or officer school. E stands for "enlisted" and the number denotes the pay scale. The ranks are Private (E-1), Private (E-2), Private First Class (E-3), Specialist or Corporal (E-4). Promotions through these four ranks are automatic, unless a soldier gets into trouble. To be promoted to a noncommissioned officer (NCO), one must pass a review board and an interview. The NCO ranks are: Sergeant (E-5), Staff Sergeant (E-6), Sergeant First Class (E-7), First Sergeant or Master Sergeant (E-8), Sergeant Major or Command Sergeant Major (E-9+).

OFFICER RANKS:

Officers must graduate from ROTC or officer school (often military service academies). The ranks are: Second Lieutenant, First Lieutenant, Captain, Major, Lieutenant Colonel, Colonel, Brigadier General, Major General, Lieutenant General, and General.

ORGANIZATION:

Each level contains groups of the level below it, so a squad, for example, will contain two or three teams; a platoon contains several squads, and a unit, several platoons.

Team = 2-3 soldiers
Squad = 6-10 soldiers
Platoon = 30-60 soldiers
Company or Unit = 60-300 soldiers
Battalion = 300-1,000 soldiers
Division = 10,000-15,000 soldiers
Corps = 25,000-45,000 soldiers

independent variable of focus is sex ratios, which is measured in the following ways: (1) *sex ratios of the workgroup* (all men, all women, equal, etc.), (2)

having worked in environments where *members of your gender are uncommon*, and (3) working in a military *occupational specialty not usually held by persons of your gender*.

The control variables are *race/ethnicity* (White/Non-White Minority and Hispanic ethnicity), *age* (young vs. older age categories), *rank/paygrade* (officer vs. enlisted), and *years in service*.

Statistical Tool of Analysis: Logistic Regression

Logistic regression was the statistical technique used to assess the effect of the independent and control variables on the likelihood of experiencing sexual assault and harassment. This type of regression works well with these data in that: (1) the dependent variable is dichotomous and need not be normally distributed or homoscedastic for each level of the independents, and (2) independent variables may be interval and unbounded (Garson 2008). For the present study, there is a large/sufficient sample size, straightforward meaningful coding, and dichotomous dependent variables.

In contrast to ordinary least squares (OLS) estimation, which seeks to minimize the sum of squared distances of the data points to the regression line, logistic regression utilizes maximum likelihood estimation which seeks to maximize the log likelihood that observed values of the dependent variable may be predicted from the observed values of the independent variables. In other

words, the maximum likelihood estimate is the value of the parameter that makes the observed data most likely. The estimates include logit coefficients converted to odds ratios (ORs) which tell us the probability or likelihood of a given outcome.

Data were analyzed using Statistical Package for the Social Sciences (SPSS) version 18.0 to create cross-tabulations, frequencies, descriptive statistics, and logistic regression analyses examining the effects of deployment status, military branch, and sex ratios for the likelihood of sexual assault and harassment. To make a more accurate determination of the likelihoods of sexual assault, the statistical technique of logistic regression and odds ratios are used in creating multivariate analyses.

In the analysis of the data, one may suggest using loglinear models (taking a natural logarithm of the cell frequencies within a contingency table) since the majority of the relationships being tested are between discrete, categorical variables. However, the variables investigated by log linear models are all treated as "response variables" and these models make no distinction between independent and dependent variables. Accordingly, loglinear models only demonstrate association between variables. Due to the fact that sexual assault is explicitly treated as the dependent or outcome variable, logistic regression is the more appropriate tool of analysis.

Logistic regression is perfect for situations of trying to predict whether

something "happens" or not, in trying to address binary outcome measures, and when the dataset is very large and the predictor variables do not behave in orderly ways, or disobey assumptions required of OLS regression analysis. Logistic regression does not assume a normal distribution for any variable or error terms in the analysis. But these advantages come at a cost requiring much more data to achieve stable, meaningful results. There is no homogeneity of variance assumption. For more thorough discussion on logit and logistic regressions see Agresti (1996) or Tabachnick and Fidell (1996).

Model Fits for Predictors of Sexual Assault

Logistic regression does not have an equivalent to the R-squared value found in OLS regression. There have been many statisticians who have tried to uncover an explanation of variance in the meantime (Efron, McFadden, Cox and Snell, Nagelkerke, Cragg and Uhler's, McKelvey and Zavoina, to name a few). The pseudo R^2 statistic does not explain the proportion of variance explained by the predictors variables, it should be interpreted cautiously.

We can evaluate the goodness of fit for all models using the Nagelkerke or pseudo R^2 value. It is important to note that when analyzing data with logistic regression, an equivalent statistic to R-squared does not exist. There are several measures intended to mimic the R-squared analysis found in ordinary least squares regression, but none of them are an R-squared “explanation of

variance" or exact interpretation of the goodness of fit. When interpreting the Nagelkerke value the interpretation is not the same as an R^2 value as most researchers familiar with ordinary least squares regression know it.

The Nagelkerke value can be loosely interpreted as an approximate variance in the outcome accounted for by the model of independent and control variables (Agresti 1996). More closely, this pseudo R^2 value is in interpretation of the improvement from a *null model* (a model predicting the dependent variable without any independent variables) to a *fitted model* with the independent variables included. The ratio takes into account the sum of squared errors from the *null model* and the sum of squared errors of the *fitted model* which indicates the degree to which the model improves upon the prediction of the null (Agresti 1996). The smaller this ratio, the greater the improvement and the higher the pseudo R-squared value.

Two measures, out of many developed, are given when running the analyses using SPSS including the Cox and Snell value as well as the Nagelkerke value. The Nagelkerke value simply adjusts the Cox and Snell value more or less so that the range of possible values extends to 1 (Agresti 1996). Therefore, if the full model perfectly predicts the outcome and has a likelihood of 1, then the Nagelkerke value will equal 1. (For a more detailed analysis and interpretation of using pseudo R^2 measures refer to Bruin 2006.)

Dataset Limitations: Cross-sectional data

These data are not without their limitations as is the nature of cross-sectional data collections. Each military member could only respond at one point in time as opposed to collecting data from the same respondents over several time periods. Therefore, these data will not be able show causal relationships or determine temporal order with the events of sexual assault, sex ratios, and deployment. Although it is safe to assume that some aspect of sex ratios (or the assignment of men and women into work units) occurs before deployment, it also happens after deployment as well with changing work conditions, transfers, turnover, and casualties. These data are merely a "one moment in time" or "snapshot" view of experiences and perceptions during a three-month period in 2006. Adequate capture of changes in attitudes and experiences over time are simply not possible with these data. As the DoD continues ongoing assessment of its military personnel it would be useful to collect longitudinal (panel) data. At the very least, the DoD must maintain consistency in survey instrument construction.

CHAPTER 5: RESULTS AND ANALYSES

There are three major areas of focus for the analyses to use as a guide for understanding the modeling approach used and forthcoming analyses: First, does deployment affect the likelihood of women in the military being sexually assaulted? Second, within the military, do certain branches have a relationship that is more or less likely in sexual assault victimization for women? Third, do sex ratios increase the likelihood of sexual assault?

The first question tests military deployment as its own independent variable, considering female soldiers across the different branches. The second question suggests the use of different models, separating out each military branch as its own unique predictor of assault. The final question examines how differences in the sex ratios of work units may account for the hostile work environment contributing to sexual harassment and assault. The final sets of analyses use specific deployment sub-samples (currently deployed, previously/never deployed, and never deployed) to examine the effect of sex ratios in the current work environment.

Bivariate Results: Sexual Harassment

The findings from bivariate analyses of sexual assault with other independent variables indicated that military women experience higher rates of sexual harassment in the following situations: when previously deployed, as

members of the Marine Corps or Army, in "all male workgroups," when they are in an atypical occupations for their gender, when other women are uncommon in their environment, if they are Hispanic/Latina, less than 29 years old, enlisted, and have fewer than 3 years of service in the military. Each of these variables are discussed in further detail. All characteristics and chi-square statistics of sexual harassment victims are presented in Table 5.1.

Deployment

First, women who are currently deployed have higher rates of sexual harassment (39 percent) as compared to those who were previously deployed (28 percent) or have never been deployed (26 percent). A variable for deployment generally (those currently deployed or previously deployed versus those never deployed) was created to test a deployment effect overall. After running chi-square tests this was relationship was confirmed. Those who have been deployed are significantly more likely ($p>.001$) to be sexually harassed than those who have never been deployed.

Military Branch

Besides being deployed, experiencing sexual harassment also depends upon which military branch a woman is a member of. Sexual harassment

Table 5.1 Chi-Square Tests and Contingency (2x2) Tables for Sexual Harassment Victims by Various Independent Variables.

Variables	Frequency	Chi Square Value	Percent of Harassment Victims	Harassment Victim Percentage Rate
Independent				
Deployment Status				
Never Deployed	836	(10.6)***	37.0	26.1
Previously Deployed (not currently)	1,223	(3.8)*	59.0	28.1
Currently Deployed	222	(36.4)***	9.8	39.0
Military Branch				
Army	998	(40.0)***	44.1	32.0
Navy	522	(.03)	23.1	28.2
Marine Corps	302	(16.3)***	13.4	33.8
Sex Ratios of Workgroups				
All males (token female)	129	(21.9)***	5.7	39.4
Almost entirely male	848	(106.3)***	37.5	36.1
More males than females	718	(.40)	31.8	31.8
Atypical Gender in Occupation	629	(90.7)***	27.8	37.3
Gender Uncommon in Environment	861	(164.7)***	38.1	38.4
Race/Ethnicity				
Minority‡	744	(2.4)	38.4	26.4
Hispanic/Latina†	323	(12.1)***	30.3	32.2
Age				
19 years and younger	139	(11.1)**	6.1	35.5
20-24 years	768	(69.2)***	34.0	34.0
25-29 years	545	(13.6)***	24.1	31.6
30-34 years	341	(.26)	15.1	27.5
35-39 years	252	(32.3)***	11.1	28.1
40-44 years	135	(41.9)***	6.0	18.0
Rank/Pay grade				
Enlisted Personnel	1,689	(63.7)***	74.7	30.8
Years of Service				
Less than 3 years	527	(55.9)***	23.3	36.0
3-6 years	646	(41.4)***	28.6	33.8
6-10 years	411	(1.0)	18.2	29.2

Note: Comparisons in 2x2 contingency tables for the categories are for dichotomous measures. For example, are you a member of the Army? (Yes/No), were you sexually harassed? (Yes/No).

‡ Minority category consists of 1997 Federal Register definitions. American Indian or Alaska Native, Asian, Black, Pacific Islander.

† Hispanic or Latina. A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.

*** Significance at the p<.001 level.

** Significance at the p<.01 level.

* Significance at the p<.05 level.

n=8,059, df= 1

experiences are not significant for the Navy and each military branch has relatively similar rates of harassment between 28 and 33 percent. The Marine Corps (33 percent) and Army (32 percent) have the highest rates of sexual harassment and both branches have significant relationships with experiencing sexual assault as compared to the Air Force. These relationships may be further characterized by the sex ratios and proportions of women within in each military branch, to be discussed later in this chapter.

Sex Ratios

The theory of the sexual tension and hostility in the workplace caused by unequal sex ratios was supported when running cross tabulations and chi square tests. The bivariate results showed that, as expected, sexual harassment occurred in all types of workgroups including work groups where more females were present. Almost 76 percent of harassment situations occurred in workgroups comprised almost entirely of men or mostly men.

However, the "all male workgroup," where the female was the only woman in her unit, accounted for less than six percent of all harassment situations but had the highest within group rate (39 percent). Despite the rate of harassment being substantially higher in workgroups where males are a significant majority, not all the groups were significant and the rates were comparable for the majority female groups. The "more males than females

workgroup" did not have a significant relationship. Similar numbers of harassment incidents (848 vs. 718) occurred for the "almost entirely male workgroup" as it did for the "majority male workgroup." Only the "all male" and "almost entirely male" workgroups were statistically significant.

My theory was supported in that the rates were highest in the "all male workgroup" when examining the descriptive statistics but this group did not account for the majority of incidents. This is partly due to the fact that military women are more regularly assigned to units where they are not the only woman in the unit.

Sex ratios were also clearly related to experiencing higher rates of harassment with the two gender tokenism variables: being a woman in an atypical military occupation (37 percent rate) or finding few women in their environments (38 percent rate). We still cannot say definitively that the harassment was from a member of the victim's work group, but it is clear that the workplace and the coworkers within it is the scene for most harassment episodes rather than in non-work environments (DoD 2010).

The remaining control variables indicated that younger women who are not officers and have few years of service are also at risk of experiencing sexual harassment. These variables are also examined in the multivariate results section. Further understanding of the relationships between age, race, rank,

gender, deployment, and military branch is uncovered in the subsequent logistic regression analyses.

Bivariate Results: Sexual Assault

Overall, 387 women in the sample (4.8 percent) responded that they had experienced sexual assault. Forty percent of women, and 39 percent of all individuals who reported an assault, placed their most serious offense in the category of "unwanted sexual touching (breasts, buttocks, genitals, etc.)." The sexual assault measure also contained questions about specific sexual behaviors women identified in their assaults such as "attempted intercourse, anal/oral sex" (27.4 percent) or "completed intercourse, anal/oral sex" (19 percent).

Women in the sample who were sexually assaulted share similar characteristics to those who were harassed in that younger women, members of the Army, those working in majority male workgroups, who were enlisted, and had fewer years of military service had the highest rates of sexual assault with statistically significant relationships. Table 5.2 presents the Characteristics of Sexual Assault Victims and Rates.

Table 5.2 Chi-Square Tests and Contingency Tables for Sexual Assault Victims by Various Independent Variables.

Variables	Frequency	Chi Square Value	Percent of Assault Victims	Assault Victim Percentage Rate
Independent				
Deployment Status				
Never Deployed	158	(.17)	40.8	4.9
Previously Deployed (not currently)	187	(1.2)	54.2	4.4
Currently Deployed	42	(8.9)**	10.9	7.4
Military Branch				
Army	188	(16.9)***	48.6	6.0
Navy	88	(.01)	22.7	4.8
Marine Corps	48	(.70)	12.4	5.4
Sex Ratios of Workgroups				
All males (token female)	23	(3.7)	5.9	7.0
Almost entirely male	137	(7.6)**	35.4	5.8
More males than females	122	(.10)	31.5	4.7
Atypical Gender in Occupation	106	(10.3)***	27.4	6.3
Gender Uncommon in Environment	134	(9.3)**	34.6	6.0
Race/Ethnicity				
Minority‡	139	(1.1)	42.8	4.9
Hispanic/Latina†	62	(2.7)	30.8	6.2
Age				
19 years and younger	41	(28.8)***	10.6	10.5
20-24 years	217	(56.2)***	43.9	7.7
25-29 years	81	(.05)	20.9	4.7
30-34 years	48	(2.8)	12.4	3.9
35-39 years	28	(18.2)***	7.2	2.4
40-44 years	15	(14.2)***	3.9	2.0
Rank/Pay grade				
Enlisted Personnel	331	(57.0)***	85.5	6.0
Years of Service				
Less than 3 years	134	(74.0)***	34.6	9.2
3-6 years	121	(12.9)***	31.3	6.3
6-10 years	53	(4.0)*	13.7	3.8

Note: Comparisons in 2x2 contingency tables for the categories are for dichotomous measures. For example, are you a member of the Army? (Yes/No), were you sexually harassed? (Yes/No).

‡ Minority category consists of 1997 Federal Register definitions. American Indian or Alaska Native, Asian, Black, Pacific Islander.

† Hispanic or Latina. A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.

*** Significance at the p<.001 level.

** Significance at the p<.01 level.

* Significance at the p<.05 level.

n=8,059, df= 1

Deployment

Deployment does not hold as strong of a relationship for sexual assault as it did for sexual harassment. Women who are currently deployed have twice as high a rape rate (7.4 percent) as compared to those previously deployed (4.4 percent) or never deployed (4.9 percent). The striking finding here is that a woman has a slightly higher rate of sexual assault if she has never been deployed as compared to previously deployed, suggesting that deployment may not play as strong of a role in rape victimization as originally hypothesized. Chi-square tests demonstrated that there is no significant relationship between those never or previously deployed versus those currently deployed.

The relationship between deployment and experiencing an increased likelihood of sexual assault was supported. Those who are currently deployed are significantly more likely ($p>.01$) to be raped compared to those who have never been deployed. The deployment relationship with sexual assault, controlling for other factors, is later tested within specific deployment sub-samples in the final sets of analyses to further examine this relationship.

Military Branch

Some of the findings in the 2006 WGRS survey statistical report indicated that women in the Army were more likely than women in any other service branch to indicate experiencing sexual assault whereas women in the Air

Force were the least likely (2006 WGRS). The descriptive statistics confirmed this finding and the bivariate results demonstrate a slightly different picture of how sexual assault is related to military branch. For example, despite having higher overall rates of sexual assault in the Navy and Marine Corps the relationships between these military branches and sexual assault are not significant. The highest significance levels ($p<.001$) were from the bivariate analyses of the Army indicating that sexual assault rates in the Army are due to more than just chance. Branch effects are further examined in the multivariate analyses.

Sex Ratios

Among the sample of 8,059 military women, as expected, no sexual assaults were indicated as occurring in "all female" units. Almost three out of four sexual assaults (282 incidents) occurred in workgroups that were more men than women or almost entirely men. However, only about 6 percent (23 incidents) of assault occurred in "all male workgroups" where the female was the "token female" or only one of her gender in the unit. My hypothesis would suspect that the rates were highest in the "all male" group, but descriptive statistics demonstrate that this is not the case. The rate is substantially higher in workgroups where males are a significant majority but where females are also present. Chi-square analyses demonstrated that a significant relationship does

not exist for “all male workgroups” or the “majority male workgroups” but does exist “almost entirely male workgroups” ($p<.01$)

As far as sex ratios experienced in other ways, 42 percent of assault victims responded that they were employed in an atypical occupation for their gender, though most were in typical work specialties for women (nursing, clerical work, and administration). Atypical work approaches nearly the same rate level (6.3 vs. 7.4) to the experience of being currently deployed. A statistically significant relationship was also found for women who find other women uncommon in their environments. Further understanding of the gender ratio relationships is uncovered in the subsequent logistic regression analyses.

The remaining control variables provided important conclusions about other relationships of rape for military women. Specifically, race/ethnicity is not a significant factor for military rape. This finding is not surprising given that the military was one of the first social institutions to integrate racially. Race/ethnic group membership matters for so many different types of behaviors, including sexual victimizations (Chilton and Jarvis 1999; Belknap 2001; Tjaden and Thoennes 2006; Gonzales et al. 2006; Buchanan et al. 2008), but not for victimizations occurring in a military context.

Another important finding, confirmed by the literature was that, women of younger ages and those having less than three years of service were at higher risk for sexual assault as compared to older, more experienced women. This is

not surprising due to younger victims not having as long of tenure in the military yet and having years' experience often reflected closely with a person's age. Forty-three percent of sexual assault victims were 24 years of age or younger. Very few women over age 40, (only 15 victims) were sexually assaulted. Seventy-four percent of women who were sexually assaulted had less than 3 years of active duty experience completed.

Half of the sexual assaults occurred with enlisted personnel in the E1-E4 paygrades (51.4 percent), representing early career soldiers. Enlisted personnel are sexually assaulted at a rate twice as high compared to the rate of officers within the sample. Less than 13 percent of the sexual assault victims were officers.

Within the next section, these bivariate relationships are further tested in multivariate logistic regression models that continue to examine the primary variables of interest: deployment, military branch, and sex ratios with the outcome variable sexual assault. The eight research hypotheses are also presented with their accompanying tables.

Multivariate Analyses

The first research question is does deployment increase the likelihood of a female experiencing sexual assault? There are two variables that explore this

question. The first variable assesses if a woman was ever previously deployed for longer than 30 days during her career and the second asks if she is currently deployed for longer than 30 days. There were 4,850 women deployed for 30 consecutive days in the sample at some point in time between years 2001-2006 of which 569 women were currently deployed. Among the previously deployed women (n=4,281) 187 were sexually assaulted. There were 3,209 women in the sample who had never been deployed at all of which 158 were sexually assaulted. On the outset, the rate of sexual assault is slightly higher for women who were *never* deployed (4.9 percent) as compared to *previously* deployed women (4.4 percent), but both the never and previously deployed rape rates were much lower as compared to *currently* deployed women (7.4 percent). From this point of view it appears that previous deployment provides a slight protective factor in the odds of being sexually assaulted and that current deployment increases the risk of assault.

Logistic regression results are reported in the upcoming tables and each model within its table is labeled with the primary independent variables being tested at the top and the tables display the results of tests of multiple models for the previously stated eight hypotheses. The logit coefficients are shown with the odds ratios (ExpB) in parentheses and statistical significance is noted by each variable. The omitted or referent categories are listed below each table for each of the independent variables.

Previously or Currently Deployed versus Never Deployed

The first analyses tests hypothesis 1 that women who are previously or currently deployed experience a greater likelihood of being sexually assaulted as compared to those who have never been deployed. Table 5.3 shows the relationship between general deployment, the military branches, the sex ratios of workgroups, and individual control variables. The first logistic regression model (Model #1) tested the effect of sexual assault on the military branches. This model indicated that there were statistically significant relationships between sexual assault and the military branches under examination. Being a member of the Army, Navy, and Marine Corps (as compared to the Air Force) all demonstrate stronger likelihoods of sexual assault with the Army containing the strongest relationship in terms of coefficient, odds ratio, and statistical significance. Army had the largest and most significant effect with women being two times more likely to be sexually assaulted (OR 2.18) as compared to the Air Force. Why would military branch be a possible predictor of assault? Differences in the sex ratios of workgroups across the branches could be the actual explanation which will be tested in the later models. Branch may be serving as a proxy variable for the differences in sex ratios, which could particularly be the case with the Navy and Marine Corps since these branches vary in sex ratios more so than the other branches.

When general deployment is examined alone (previous or current deployment), (Table 5.3, Model #2) there is not a statistically significant relationship with sexual assault. This variable accounts for all female soldiers who have been deployed in the past and/or are currently deployed. (Current deployment is examined in the next set of models.) In Model #3 when military branch and deployment are both included, the branches remain significant and gain strength in their coefficients and odds ratios, but deployment is not significant. There is also no improvement in the model (Nagelkerke value = .01).

The effect of general deployment does not exist until all variables are introduced into the final model, including military branch and the control variables (Model #4). It is uncertain as to why previous or current suddenly becomes significant at this point in the models. Subsequent modeling within the deployment sub-samples assists our understanding as to why this is the case. There is a strong and persistent relationship for the military branches, evident in all models, particularly for the Army, Marines, and Navy as compared to the Air Force. However, the Navy and Marines begin to lose some statistical significance by Model #4 (from $p<.001$ to $p<.05$).

These results, combining current deployment into the general deployment measure, make logical sense in that deployment would be relevant given the survey question asking if a person was sexually assaulted in the last 12

Table 5.3 Results for Logistic Regression Models Predicting Sexual Assault with Deployment Generally (Previously Deployed or Currently Deployed) vs. Never Deployed

	Coefficients and Odds ratios (ORs)			
Variables	Model #1	Model #2	Model #3	Model #4
Independent				
Military Branch[x]				
Army	.78*** (2.18)		.79*** (2.20)	.74*** (2.09)
Navy	.52** (1.69)		.54*** (1.71)	.43* (1.53)
Marine Corps	.65*** (1.92)		.66*** (1.93)	.48* (1.63)
Previously or Currently Deployed		-.04 (.95)	-.09 (.91)	.24* (1.27)
Race/Ethnicity				
Minority‡				.04 (1.04)
Hispanic/Latina†				-.03 (0.96)
Age[2]				
19 years and younger				1.73** (5.65)
20-24 years				1.65** (5.20)
25-29 years				1.45** (4.30)
30-34 years				1.37** (3.96)
35-39 years				.94 (2.58)
40-44 years				.92 (2.52)
Rank/Service[3]				
Enlisted Personnel				.61*** (1.85)
Years of Service[o]				
Less than 3 years				.72*** (2.05)
3-6 years				.34 (1.40)
6-10 years				-.06 (0.93)
Atypical Occupation				.18 (1.19)
Gender Uncommon				.13 (1.14)
-2 Log Likelihood	3073.72	3104.90	3072.94	2908.60
Nagelkerke (pseudo R^2)	.01	.01	.01	.07
n	8,059	8,059	8,059	8,059

*** Significance at the p<.001 level.
** Significance at the p<.01 level.
* Significance at the p<.05 level.
[x] Omitted (referent) category is Air Force
‡ Minority category consists of 1997 Federal Register definitions. American Indian or Alaska Native, Asian, Black, Pacific Islander.
† Hispanic or Latina. A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.
[x] Omitted (referent) category is Air Force.
[2] Omitted (referent) category is 45 years or more.
[3] Omitted (referent) category is Officer.
[o] Omitted (referent) category is 10 Years or more service.

months. The results indicating significant relationships between military branch and sexual assault also make sense due to the fact that the Department of Defense utilized these military branches more fully in more recent deployments and military operations (particularly the War in Iraq and the War in Afghanistan) between 2001 – 2006 as compared to the Air Force.

As expected, age and years of experience were significantly related to an increased likelihood of sexual assault in Table 5.3. With the age variables, the results demonstrated that women aged 19 years and younger are 5.65 times more likely to be assaulted as compared to older women ($p<.01$) in which women aged 45 years and older were the referent category. This trend followed the other age groups for 20-24 years, 25-29 years, and 30-34 years (at the $p<.01$ level) in Model #4. The sexual assault rates for the age categories are 10.5 percent for 19 years and younger, 7.7 percent for 20-24 years, 4.7 percent for 25-29 years, and 3.9 percent for 30-34 years. As one can see, the rates of sexual assault drop substantially as a woman ages.

As indicated by the literature the race/ethnicity variables did not prove to be predictors of sexual assault. It could be that the other measures (such as military branch) overcome any additional improvements in the model that could be rendered by these variables and that race/ethnicity is not necessarily a factor for sexual assault victimization of this kind. Race was consistently *not*

significant in *any* model from this point forward. Of the 387 victims, their race/ethnicity was almost evenly split between Whites and minorities.

Even though the prevalence rates were roughly the same for minority and non-minority women, some differences were found by specific racial and ethnic group when the sexual assault behaviors themselves were broken down via a separate measure (specific sexual assault behavior). White women experienced forced sexual intercourse, anal, or oral sex at almost twice the rate of minority women, but minority women experienced slightly higher rates of unwanted sexual touching. Specifically, 62 of the 186 minority victims were women of Hispanic/Latina ethnicity in which the behaviors they experienced was comprised of mostly unwanted sexual touching and attempted sex. With race not playing a relevant role in sexual assault likelihoods, this may be due to the successful integration of minorities within the military branches generally.

This would also seem to indicate that sexual assault offenders do not select their victims based on race/ethnicity, but more on a person's gender. The two measures of gender (apart from sex ratios of workgroups) were "being in an atypical military occupation for one's gender" (such as a mechanic, pilot, etc.) and "not finding other women common in the environment." Neither one of these measures were significant and this finding was persistent through the remainder of the analysis. Another stratifying measure, sex ratios, become the topic of focus in the upcoming hypotheses.

Other control variables in these models were significant in predicting sexual assault likelihoods. A woman's rank (being enlisted) (OR 1.85) and having fewer years of service (less than 3 years) (OR 2.05) were all statistically significant in increasing the likelihood of rape. In this set of models the Nagelkerke value was .01 for the first model and then the value changed in the last model (.07), suggesting there is more than likely a stronger model that exists in explaining the best combination of predictors of sexual assault. The purpose of hypothesis 1 was to determine of a person's deployment generally put them at greater risk for sexual assault or increased their vulnerability. It appears this is true given the results presented in Table 5.3 but only when considering a person's military branch, age, rank, and years of service, therefore confirming this hypothesis but not without qualification.

Previously Deployed versus Never Deployed

Hypothesis 2 posits if a woman's previous deployment puts her at a greater risk for sexual assault as compared to never deployed women. Table 5.4 demonstrates the results of this hypothesis in Models 1, 2, and 3. In Model #1, previous deployment does not have a significant relationship in increasing the likelihood of rape. It appears that this relationship seen in the prior models combining previously and currently deployed women is accounted for entirely by the currently deployed women. In Model #2, the Army, Navy, and Marine

Table 5.4 Results for Logistic Regression Models Predicting Sexual Assault with Women Previously Deployed (but not currently) vs. Women Never Deployed

Coefficients and Odds ratios (ORs)

Variables	Model #1	Model #2	Model #3
Independent			
Previously (but not Currently) Deployed	-.12 (.88)	-.16 (.85)	.27* (1.32)
Military Branch[n]			
Army		.75***(2.12)	.73*** (2.08)
Navy		.55***(1.74)	.44* (1.55)
Marine Corps		.71***(2.05)	.55** (1.73)
Race/Ethnicity			
Minority‡			.10 (1.11)
Hispanic/Latina†			-.11 (.88)
Age[2]			
19 years and younger			1.96** (7.10)
20-24 years			1.90** (6.74)
25-29 years			1.74** (5.72)
30-34 years			1.56** (4.79)
35-39 years			1.24* (3.46)
40-44 years			1.01 (2.74)
Rank/Service[3]			
Enlisted Personnel			.63*** (1.88)
Years of Service[o]			
Less than 3 years			.78** (2.19)
3-6 years			.25 (1.29)
6-10 years			-.12 (.87)
Atypical Occupation			.14 (1.16)
Gender Uncommon			.12 (1.13)
-2 Log Likelihood	2796.25	2768.50	2611.62
Nagelkerke (pseudo R^2)	.01	.01	.07
n	8,059	8,059	8,059

*** Significance at the p<.001 level.
** Significance at the p<.01 level.
* Significance at the p<.05 level.
[n] Omitted (referent) category is Air Force
‡ Minority category consists of 1997 Federal Register definitions. American Indian or Alaska Native, Asian, Black, Pacific Islander.
† Hispanic or Latina. A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.
[n] Omitted (referent) category is Air Force.
[2] Omitted (referent) category is 45 years or more.
[3] Omitted (referent) category is Officer.
[o] Omitted (referent) category is 10 Years or more service.

Corps have strong relationships in the likelihood of rape as seen earlier in Table 5.3, Specifically, being a member of the Army increases the odds of rape by 2.12 times, the Navy 1.55 times, and for the Marines 2.05 times as compared to Air Force service members. In the final model, the significance levels are reduced for the military branches after introducing the other control variables.

Age, enlisted rank, and years of service all continue to remain significant and at stronger levels as seen in the prior models. Two additional age groups become significant, the 30-34 years and 35-39 years age groups, in Model #3. All of the control variables significant in Table 5.3 remained in these models and did not substantially change from the prior models. The most unique finding in Table 5.4 is that previous deployment is significantly related to sexual assault but only when the other variables are added in Model #3, which was the same outcome occurring with previous deployment suddenly becoming significant.

This finding is not easy to interpret or understand, but remains fairly consistent in the deployment models. In the previous models, the *general deployment* measure took into account women who were either deployed currently or had been deployed at some point in the past. These analyses have partially confirmed hypothesis 2 in that being deployed in the past does show a relationship but only in Model #4. For this model, the Nagelkerke value was .07 which did not change from the prior model in providing a better explanation of the predictors of sexual assault.

Currently Deployed versus Never Deployed

The next set of analyses in Table 5.5 test hypothesis 3, that women who are currently deployed have greater likelihoods of sexual assault as compared to those who have never been deployed. This measure of current deployment pulled the group of women out of the sample apart from those who had been deployed in the past and never deployed. This hypothesis is found to be partially supported by the analyses, but statistical significance disappears following the first model and after adding military branch and the control variables. Current deployment alone does increase the likelihood of rape but not after military branch, age, enlisted rank, and years of service are taken into account.

The control variables (with the exception of age) in Table 5.4 continued to be significant indicating that current deployment does account for some of the relationship of the risk of sexual assault but it is interesting to note is that Army remained consistently significant (OR 1.96 P<.001) and the other military branches of Navy and Marines no longer were significant after the control variables were added. The Navy was not significant at all in the current deployment models, and this may be due to the fact that in the current deployments of Iraq and Afghanistan between 2005-2006 the Navy is not utilized in those operations as the Army is. The Marine Corps was significant at first (in Model #2) and did not retain

Table 5.5 Results for Logistic Regression Models Predicting Sexual Assault with Women Currently Deployed vs. Women Never Deployed

	Coefficients and Odds ratios (ORs)		
Variables	Model #1	Model #2	Model #3
Independent			
Currently Deployed	.43* (1.53)	.27 (1.31)	.26 (1.30)
Military Branch[n]			
Army		.72***(2.06)	.67***(1.96)
Navy		.36 (1.43)	.25 (1.29)
Marine Corps		.64* (1.90)	.42 (1.52)
Race/Ethnicity			
Minority‡			-.27 (.76)
Hispanic/Latina†			.21 (1.24)
Age[2]			
19 years and younger			.86 (2.37)
20-24 years			.83 (2.30)
25-29 years			.64 (1.90)
30-34 years			.85 (2.34)
35-39 years			.65 (1.91)
40-44 years			.76 (2.15)
Rank/Service[3]			
Enlisted Personnel			.99***(2.69)
Years of Service[o]			
Less than 3 years			.80* (2.22)
3-6 years			.50 (1.66)
6-10 years			.06 (1.06)
Atypical Occupation			.25 (1.29)
Gender Uncommon			.28 (1.32)
-2 Log Likelihood	1559.34	1544.13	1459.36
Nagelkerke (pseudo R^2)	.01	.01	.08
n	8,059	8,059	8,059

*** Significance at the p<.001 level.
** Significance at the p<.01 level.
* Significance at the p<.05 level.
[n] Omitted (referent) category is Air Force
‡ Minority category consists of 1997 Federal Register definitions. American Indian or Alaska Native, Asian, Black, Pacific Islander.
† Hispanic or Latina. A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.
[n] Omitted (referent) category is Air Force.
[2] Omitted (referent) category is 45 years or more.
[3] Omitted (referent) category is Officer.
[o] Omitted (referent) category is 10 Years or more service.

significance (at the $p < .05$ level) in Model #3. It is uncertain as to why this is so, but may also have something to do with how the Navy and Marine Corps utilize women in their branches.

Years of service was significant indicating that more years of service a woman has the less likely the outcome of sexual assault becomes. In other words, women who have fewer years of experience in the military (less than 3 years) are more than twice as likely to be sexually assaulted as compared to those women with 3 years or more (OR 2.22). Surprisingly age held no significant relationships whatsoever in this model of currently deployed women. Years of service may also stand as a proxy for age. The Nagelkerke value increased slightly to .08 as seen in the prior models.

Previously Deployed versus Currently Deployed

Table 5.6 presents the findings for hypothesis 4 comparing the previously deployed women to currently deployed women and their likelihood of being sexually assaulted. Currently deployed women, when compared to previously deployed women had statistically significant increased likelihoods of experiencing sexual assault that persisted in Models 1 and 2, but then the statistical results were eliminated in Model #3 with the control variables. This result is interesting because the premise behind this hypothesis 4 was to look for areas of increased stress (e.g. PTSD) and vulnerability commonly associated

Table 5.6 Results for Logistic Regression Models Predicting Sexual Assault with Women Currently Deployed vs. Women Previously Deployed

Coefficients and Odds ratios (ORs)

Variables	Model #1	Model #2	Model #3
Independent			
Currently Deployed	.55** (1.74)	.43* (1.54)	.01 (1.01)
Military Branch[n]			
Army		.77*** (2.17)	.78*** (2.18)
Navy		.64** (1.90)	.54* (1.72)
Marine Corps		.56* (1.75)	.40 (1.50)
Race/Ethnicity			
Minority‡			.18 (1.20)
Hispanic/Latina†			-.12 (.87)
Age[2]			
19 years and younger			2.20** (9.06)
20-24 years			1.87** (6.51)
25-29 years			1.61* (5.03)
30-34 years			1.45* (4.29)
35-39 years			.80 (2.22)
40-44 years			.92 (2.51)
Rank/Service[3]			
Enlisted Personnel			.33 (1.39)
Years of Service[o]			
Less than 3 years			.52 (1.69)
3-6 years			.31 (1.36)
6-10 years			-.10 (.90)
Atypical Occupation			.19 (1.21)
Gender Uncommon			.02 (1.02)
-2 Log Likelihood	1836.38	1820.38	1728.76
Nagelkerke (pseudo R^2)	.01	.01	.07
n	8,059	8,059	8,059

*** Significance at the p<.001 level.
** Significance at the p<.01 level.
* Significance at the p<.05 level.
[n] Omitted (referent) category is Air Force
‡ Minority category consists of 1997 Federal Register definitions. American Indian or Alaska Native, Asian, Black, Pacific Islander.
† Hispanic or Latina. A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.
[n] Omitted (referent) category is Air Force.
[2] Omitted (referent) category is 45 years or more.
[3] Omitted (referent) category is Officer.
[o] Omitted (referent) category is 10 Years or more service.

with being currently deployed. I would have expected this variable to persist in significance due to increased exposure to stress in active combat zones. One problem with the currently deployed group of women is that there may be too few of them to be able to conduct adequate statistical analyses (only 42 victims out of 569 currently deployed women). The other categories, never deployed (n=3,209) and previously deployed (n=4,281) yielded sufficient sample sizes for testing, but the results still were not always significant during the analyses. The effects of stress and well-being for women currently deployed is perhaps better examined by a more direct measure than what exists in the dataset or what can be created by combining and splitting the variables.

Also noteworthy was the fact that the Army and Navy remained significant in the first two models, as did age, but enlisted status and years of service were no longer significant as they had been in the earlier models. There may be something inherent in current deployment that accounts for younger soldiers being deployed more often within military operations between 2001-2006.

The two main survey questions on deployment were both significant but in different ways. First, the question asking a female solider, "Have you ever been deployed longer than 30 consecutive days?", known as "previously deployed" in the table, does slightly increase her chances of being assaulted but only after control variables are added. Second, the question, "Are you currently

on a deployment that has lasted longer than 30 consecutive days?" does increase a woman's chances of being assaulted but this effect diminishes after adding the control variables. The true nature of the deployment population still remains to be understood given this unusual finding. Overall, a better model for determining how deployment increases the likelihood of sexual assault exists (i.e. the Nagelkerke value did not significantly change much across the models).

Overall, deployment was significantly related to sexual assault but the nature of this relationship is not as apparent as one might think. These four analyses of deployment indicate that, in absence of other variables of interest to be introduced in the final models, there is a somewhat higher likelihood with experiencing sexual assault in some cases but in other cases there is not. Even when some control variables are introduced (i.e. military branch) a relationship can persist some of the time (See Table 5.6, Model #2). Although my hypothesis predicted increased likelihoods of sexual assault given deployment, the result is tempered by other stronger independent variables prompting further testing.

After uncovering these results from the analyses, additional analyses were conducted to further test my remaining hypotheses but within a pre-defined subset of the existing sample. The result in the next three tables use the sex ratios variables within only the sub-samples of women never/previously

deployed, currently deployed, or never deployed in order to test how sex ratios change before and after deployment is taken into consideration.

Sex Ratios in Military Work Groups

The second major question regarding gender and rape in the military is: does the current gender composition of one's workgroup explain the likelihood of experiencing sexual assault? Military branch may not truly matter if one is a token female within a unit. Workgroups often vary due to a military member's deployment status or assignment. For this reason, it is important to use subsets of the deployment populations so that gender can be more specifically understood in the analyses and after considering both deployment and military branch.

Another important question is: can the military branch effect be explained away via the presence of increased gender disparity via sex ratios with more men in the workplace? The empirical question is if there is a cultural explanation to the relationship between sexual assault and military branch, aside what is posited by the effects of different sex ratios, then the military branch effect should remain. If it becomes a more precise explanation as to what the role of the female is within her unit and overall organization, then the branch effect may go away.

Due to differences in military cultures across the branches, it may be difficult to capture an inclusive overall measure of military culture that describes how women are treated. Occupational roles for women between the branches also differ. Most agree that it means something different to be a female Marine as compared to a female Air Force lieutenant (Herbert 1998; Segal 2001; Solaro 2006). Additionally, women often serve as a token within the workplace where occupations are held by mostly men (Kanter 1977). Some women are more likely to be tokens in their branch (e.g. Navy and Marines) as compared to other branches (Army and Air Force). Furthermore, deployment as a female within these branches include different experiences of inclusion, isolation, supports, resources, cohesion, and obstacles.

Sex Ratios for Those Never Deployed

The first set of analyses tests the relationship between sexual assault and sex ratios for those who have never been deployed. The sex ratios used in the analyses are those workgroups of "all males," an "almost entirely male" workgroup, and workgroups with "more males than females." The most consistent predictors of sexual assault demonstrated, other than those of military branch (Army, Navy, and Marines), are those of majority male sex ratios.

Sex ratios predicted the expected significant relationships with the prevalence of sexual assault (See Table 5.7). The largest odds ratio occurred

Table 5.7 Results for Logistic Regression Models Predicting Sexual Assault with Women Never Deployed and Male Dominated Work Units

	Coefficients and Odds ratios (ORs)							
Variables	Model #1		Model #2		Model #3		Model #4	
Independent								
Military Branch[π]								
Army	.73***	(2.07)			.70***	(2.02)	.63**	(1.88)
Navy	.36	(1.44)			.33	(1.39)	.23	(1.27)
Marine Corps	.76**	(2.15)			.55*	(1.74)	.43	(1.54)
Gender Ratios of Workgroups†††								
All males (token female)			.92*	(2.52)	.90*	(2.46)	.55	(1.73)
Almost entirely male			.90***	(2.47)	.85***	(2.35)	.61*	(1.84)
More males than females			.38	(1.47)	.35	(1.42)	.22	(1.24)
Race/Ethnicity								
Minority‡							-.16	(.84)
Hispanic/Latina†							.10	(1.11)
Age[2]								
19 years and younger							1.13	(3.12)
20-24 years							1.18	(3.28)
25-29 years							1.09	(2.99)
30-34 years							1.13	(3.10)
35-39 years							1.36	(3.92)
40-44 years							.91	(2.50)
Rank/Service[3]								
Enlisted Personnel							1.15***	(3.16)
Years of Service[o]								
Less than 3 years							.91*	(2.48)
3-6 years							.36	(1.43)
6-10 years							-.06	(.94)
Atypical Occupation							.14	(1.15)
Gender Uncommon							.01	(1.01)
-2 Log Likelihood	1244.92		1238.20		1226.25		1159.30	
Nagelkerke (pseudo R^2)	.01		.02		.03		.09	
n	3,209		3,209		3,209		3,209	

*** Significance at the p<.001 level.
** Significance at the p<.01 level.
* Significance at the p<.05 level.
[π] Omitted (referent) category is Air Force
††† Omitted (referent) categories are "Equal Genders Workgroup," "More Females Workgroup," "Almost Entirely Female Workgroup," & "All Female Workgroup."
‡ Minority category consists of 1997 Federal Register definitions. American Indian or Alaska Native, Asian, Black, Pacific Islander.
† Hispanic or Latina. A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.
[π] Omitted (referent) category is Air Force.
[2] Omitted (referent) category is 45 years or more.
[3] Omitted (referent) category is Officer.
[o] Omitted (referent) category is 10 Years or more service.

with “all male units” where a woman was over 2 times as likely to experience sexual assault in a workgroup of all males (OR 2.46). Women in all male units, where they were the “token female” were more likely to be assaulted as compared to women in units where they comprised the majority or all of the members of their work group. Again, there may be a deployment scenario that can better explain how work is organized along gendered lines, perhaps providing both risk and protective factors, once soldiers are deployed in predominantly male or predominantly female units.

The military branch effect persisted for the Army, but not for the other service branches, although the Marine Corps is significant in Models 1 and 3. It appears that a cultural explanation for sexual assault exists for the Army but perhaps not for the other service branches. This may be due to the way the Army integrates women, but it is not clear as to why this is not the case for Marines or Navy. Hypothesis 5 stating that women who are in “all male” or “mostly male” workgroups shall have greater likelihoods of experiencing sexual assault was confirmed, but not in the case of the final model (Model #4) where the “more males than females” workgroup was the only remaining significant workgroup. Women who have never been deployed, are currently outnumbered in their work units, (but not by many men), do not experience greater likelihoods of sexual assault. This suggests a diminishing relationship between sex ratios

and rape as more women are present in the workgroup. The Nagelkerke value does improve, but only slightly so to .09 in the final model.

Moderately strong relationships persist (at the $p<.01$ and $p<.05$ levels) as military branch and other control variables (enlisted and years of service) are added into Models 2, 3, and 4. It appears that mostly male work groups do account for a woman's likelihood of experiencing sexual assault when they are never deployed. This finding is important in how to address the vulnerabilities of sexual victimization even among groups where more women are likely to be present. The other finding is that age no longer accounts for some of the relationship when paired with mostly male workgroups in Model #4.

Again, women who are one of very few women in their work environment are not at an increased likelihood of experiencing sexual assault compared to those women who find others like them more commonly. Persons who are isolated in their military environments may lack proper resources, protective strategies, and coping mechanisms as compared to those who have more women around them. The next set of analyses tests the effect of women never deployed or previously deployed versus women not currently deployed.

Sex Ratios for Those Never or Previously Deployed (but not Currently)

The sex ratios used in the analyses represent majority male workgroups where women find few or no other women around as they perform their work

duties and describe the current workgroup they find themselves within. These sex ratios predicted significant relationships with the likelihood of sexual assault for Model 2 and 3 presented in Table 5.8. In these models, the branch effect returned for predicting the likelihood of rape with previously or never deployed women. Given that the question regarding sex ratios asks about a woman's *current* workgroup, this may be the result of less gender disparity when not currently deployed. Overall, being previously or never deployed does not explain increased likelihoods of rape, but the age, enlisted status, military branch, and years of service for a woman have relationships which are significant (Model #4). The military branch effect exists for never or previously deployed women, suggesting a cultural explanation for the effect of the Army, Navy, and Marines on sexual assault.

Sex Ratios for Those Currently Deployed

The final table represents male dominated workgroups within a currently deployed sub-sample. The results for these last models are the most important within the study because they indicate that none of the variables have a statistically significant relationship that increases the likelihood of experiencing sexual assault for currently deployed women. What this means is that there are clearly other risk factors not identified in the models that explain increased likelihoods of sexual assault for those currently deployed (See Table 5.9).

Table 5.8 Results for Logistic Regression Models Predicting Sexual Assault with Women Never or Previously Deployed (but not Currently) and Male Dominated Work Units

	Coefficients and Odds ratios (ORs)							
Variables	Model #1		Model #2		Model #3		Model #4	
Independent								
Military Branch[n]								
Army	.74***	(2.10)			.73***	(2.09)	.73***	(2.09)
Navy	.53**	(1.70)			.51**	(1.66)	.46**	(1.59)
Marine Corps	.70***	(2.03)			.60**	(1.82)	.51*	(1.68)
Gender Ratios of Workgroups†††								
All males (token female)			.59*	(1.81)	.55*	(1.74)	.31	(1.36)
Almost entirely male			.46***	(1.58)	.43**	(1.54)	.29	(1.33)
More males than females			.23	(1.26)	.19	(1.21)	.11	(1.12)
Race/Ethnicity								
Minority‡							.12	(1.12)
Hispanic/Latina†							-.12	(.88)
Age[2]								
19 years and younger							1.90**	(6.73)
20-24 years							1.88**	(6.60)
25-29 years							1.73**	(5.66)
30-34 years							1.56*	(4.77)
35-39 years							1.24*	(3.47)
40-44 years							1.00	(2.72)
Rank/Service[3]								
Enlisted Personnel							.62	(1.87)
Years of Service[o]								
Less than 3 years							.66***	(1.94)
3-6 years							.22**	(1.24)
6-10 years							-.14	(.86)
Atypical Occupation							.13	(1.14)
Gender Uncommon							.01	(1.00)
-2 Log Likelihood	2770.55		2784.65		2759.33		2613.52	
Nagelkerke (pseudo R^2)	.01		.01		.01		.07	
n	7,490		7,490		7,490		7,490	

*** Significance at the p<.001 level.

** Significance at the p<.01 level.

* Significance at the p<.05 level.

[n] Omitted (referent) category is Air Force

††† Omitted (referent) categories are "Equal Genders Workgroup," "More Females Workgroup," "Almost Entirely Female Workgroup," & "All Female Workgroup."

‡ Minority category consists of 1997 Federal Register definitions. American Indian or Alaska Native, Asian, Black, Pacific Islander.

† Hispanic or Latina. A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.

[n] Omitted (referent) category is Air Force.

[2] Omitted (referent) category is 45 years or more.

[3] Omitted (referent) category is Officer.

[o] Omitted (referent) category is 10 Years or more service.

Table 5.9 Results for Logistic Regression Models Predicting Sexual Assault with Women Currently Deployed and Male Dominated Work Units

	Coefficients and Odds ratios (ORs)							
Variables	Model #1		Model #2		Model #3		Model #4	
Independent								
Military Branch*								
Army	.50	(1.64)			.52	(1.69)	.47	(1.60)
Navy	.17	(1.19)			.18	(1.20)	.09	(1.10)
Marine Corps	-.86	(.42)			-.94	(.38)	-1.16	(0.31)
Gender Ratios of Workgroups††								
All males (token female)			.80	(2.23)	.85	(2.35)	.54	(1.72)
Almost entirely male			.19	(1.21)	.32	(1.38)	-.04	(0.96)
More males than females			.04	(1.04)	.06	(1.06)	.18	(1.20)
Race/Ethnicity								
Minority‡							-.64	(0.52)
Hispanic/Latina†							.62	(1.86)
Age²								
19 years and younger							.34	(1.41)
20-24 years							-.38	(0.68)
25-29 years							-.93	(0.39)
30-34 years							-.10	(0.90)
35-39 years							-18.63	(0.01)
40-44 years							.19	(1.21)
Rank/Service³								
Enlisted Personnel							.53	(1.71)
Years of Service°								
Less than 3 years							.11	(1.12)
3-6 years							.97	(2.64)
6-10 years							.52	(1.68)
Atypical Occupation							.42	(1.53)
Gender Uncommon							.39	(1.49)
-2 Log Likelihood	296.35		298.11		294.28		270.59	
Nagelkerke (pseudo R²)	.01		.01		.02		.12	
n	569		569		569		569	

*** Significance at the p<.001 level.
** Significance at the p<.01 level.
* Significance at the p<.05 level.
* Omitted (referent) category is Air Force
†† Omitted (referent) categories are "Equal Genders Workgroup," "More Females Workgroup," "Almost Entirely Female Workgroup," & "All Female Workgroup."
‡ Minority category consists of 1997 Federal Register definitions. American Indian or Alaska Native, Asian, Black, Pacific Islander.
† Hispanic or Latina. A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.
* Omitted (referent) category is Air Force.
² Omitted (referent) category is 45 years or more.
³ Omitted (referent) category is Officer.
°Omitted (referent) category is 10 Years or more service.

Effects of Military Branch

The final set of questions in my hypotheses posit: do particular military branches (Army, Navy, Air Force, and Marines) have higher rates of assault? Hypothesis 8 states that women who are members of the Air Force shall have the lowest rates of sexual assault while women who are in the Marines and Navy shall have the highest rates of sexual assault. This relationship was tested within all earlier tables. These results have already determined that the Air Force has significantly lower rates and lower likelihoods of experiencing sexual assault as compared to the other service branches. However, the Army demonstrated that it had the largest odds ratios and the most consistent significance throughout the models with the Marine Corps and Navy following closely behind it in some cases.

The Marines and Navy do have higher likelihoods and rates of sexual assault, but not nearly as high or as significant as the Army. This hypothesis then is only partially confirmed. These results suggest that the differing sex ratios of workgroups in the military workplace are related to the occurrence of sexual assault but that they are overcome when considering current deployment. Additionally, there are likely other variables that need to be considered in the model.

Overall, I found that being a member of the Army, being enlisted (versus an officer), being young in age and lacking years of experience had the largest

and/or most persistent odds ratios and nearly always remained significant, while certain military branches (Marines and Navy) occasionally approached the statistical power of these variables. These variables, particularly Army membership, overcame the deployment effects and gender effects in some models to remain as an explanatory variable for increasing the likelihood of sexual assault.

Being a member of the Army is related to the likelihood of sexual assault, but deployment scenarios and years of service must be examined more closely, and specifically by the other branches to determine why sexual assault remains especially problematic for the Army. This finding indicates a need to examine the culture and context of sexual assault in the Army specifically.

CHAPTER 6: DISCUSSION AND CONCLUSION

This study is unique because it focuses on sexual violence for a very specific population of people, women in the military. I was first attracted to this topic years ago because of various media reports about military rapes occurring between 2003 and 2010. The dataset come from the Department of Defense and it included a sample of 8,059 military women and I examined the prevalence of sexual assault and specifically the possible risks associated with deployment.

This topic is salient particularly because of the War in Iraq and War in Afghanistan and people wondering about the dangers women experience there in a new period of insurgent warfare. A deployment effect was tested for increasing the likelihood of sexual assault victimization and a possible further hypothesized explanation of why deployment may matter was the change in sex ratios of the workgroup for women once deployed. Women are already outnumbered in the military as many people already know. This number is even further exaggerated after deployment takes place for women. Being outnumbered in the workgroup for women was assumed to have produced hostile work environments, sexual harassment, deployment-related stress, and pent up sexual tension leading to rape. These issues were suggested as an explanation of what could be increasing the likelihood of sexual assault.

The military in and of itself is a fascinating institution to study. Within its history, it has experienced many types of integration including extending the

boundaries of service member race, gender, and sexual orientation. These integration efforts have been met with mixed success over the last 60 years (Segal and Segal 2004). Overall, the military is an occupation and a total institution that becomes of way of life and identity for its members. For women, the integration process may be argued as "still ongoing" but I find that women are well integrated occupationally but perhaps not as well socially. Almost all military positions (outside of combat) are available to female service members. Women have always been excluded from combat for many reasons, although the exclusion policies are challenged regularly by DoD officials and Congress each year, especially amongst recruitment challenges. What is true about modern warfare today is that women are indeed in combat indirectly and are often killed within the blurred boundaries of a "front line." Terrorism, insurgency, and guerilla warfare know no boundaries and attacks occur in unpredictable and sporadic ways, injuring and killing both male and female service members.

The analysis for this study first examined a deployment effect generally in potentially increasing the likelihood of sexual assault. Three groups were created to examine this idea: women previously deployed, currently deployed, and never deployed. I hypothesized that there were differences between these three groups of women, particularly as it related to the risk factors for sexual assault. Indeed there were differences between these groups. Currently deployed women are much younger, have fewer years of experience, and are

predominantly from the Army, as compared to previously or never deployed women. Sex ratios within those deployment groups were also different for these women as currently deployed women were more likely to be in units that were male-dominated. This study also controlled for race, age, years of experience, rank/status (officer vs. enlisted), also being in an atypical occupation for a women,

Overall, I found that there is a deployment effect for increasing the risks of military rape for active-duty women, but the nature of the effect remains to be understood. Specifically, this study confirmed that it is not necessarily the sex ratios of workgroups that partially explain sexual assault prevalence. My original hypothesized relationship assumed that sex ratios were a key explanation for the risks of sexual victimization. This is simply not the case, as demonstrated by the analyses.

Obviously no research can be truly objective or "value-free" as described by some sociologists due to the mere fact of selecting a topic and facts about it for inclusion in the study requires some subjective judgment. As Donna Dean stated,

> "It cannot be overemphasized or stated often enough: military life is different. Women in the military are unique, and their experiences are inextricably enmeshed in their status as members of an organization that has a completely separate and distinct lifestyle. Their traumas are similar to, but quantitatively and qualitatively different from, those experienced by women living in the civilian world. Therefore, until research is conducted solely within this unique population, extrapolating

> results from empirical research in other populations can only be speculative and theoretical." (Dean 1997).

No other study has ever taken on a quantitative analysis of the risk factors associated with the sexual assault of active duty women in the military. It is exciting for me to be able to undertake this topic and add to the existing military rape literature which is mostly anecdotal, exploratory, and qualitative in nature (Nelson 2002; Harned et al. 2002; Sadler et al. 2003; Dean 1997; Rosen 2007).

The military presents a unique population of people that is more homogenous and does not contain all the typical variation one might find in the general population. Members of the military do have similar cultures are generally healthier and more physically fit than most, but there is some variance in military populations, certainly gender, social class, neighborhood, and others that allow for differences that allowing for strong empirical testing opportunities. It was these traits that attracted me to the project or the potential of examining so serious a violent crime in a setting that employs millions of men and women in such unique roles requiring sacrifice beyond any other type of occupation.

There certainly is no short supply of empirical evidence on the topic, yet formal statistical tests of relevant predictors are difficult to come by. Despite the military's struggle for decades with this problem, hardly any quantitative

studies exist that examine what risk factors are associated with the increased likelihood for sexual assault in any sort of regression-type models.

There is a vast literature examining sexual harassment and sexual assault of women in male-dominated professions where women are the minority (Gutek and Morasch 1982; Gutek 1985; LaFontaine and Tredeau 1986; Kilpatrick et al. 1992; Lach and Gwartney-Gibbs 1993;Fitzgerald et al. 1994; Koss et al. 1994; Baker 1995; Rowe 1996; Hulin et al. 1996; Greenfeld 1997; Fitzgerald et al. 1997; Lancaster 1999; Casey and Rissetto 1999; Kilpatrick 2000; O'Connell and Korabik 2000; Detis 2001; Tjaden and Thoennes 2001; Siegel 2003; Gonzales et al. 2006; Ullman 2010), but very few studies have focused explicitly on the military and assault/rape (Sadler et al. 2001; Nye et al. 2007; Rosen 2007).

I have found support for the ways that deployment and sex ratios influence the prevalence of experiencing sexual assault to a certain degree. This study has shown that deployment was a variable meriting more investigation in that current deployment instead of previous deployment was what truly mattered. This study has also provided evidence that partially explains the likelihoods of sexual assault victimization for women. Furthermore, this study has also concluded that previous deployment experiences do not make a woman more likely to experience military sexual assault.

The results demonstrated that the vast majority of women serving deployments in the past should be considered just as likely to be raped as those

not experiencing deployment at all. Or in other words, a woman's likelihood of rape does not change if she has been to Iraq or Afghanistan four times in the last six years or if she has not been deployed at all. What does change is the fact that women who are currently deployed have some sort of persistent factor that increases their likelihood of sexual assault. What this exact factor is remains to be uncovered.

This study has shown that the branches of Army, Marine Corps, and Navy are significant in predicting an increased likelihood for sexual assault but their explanatory power diminishes when current deployment and sex ratios are taken into account. The most consistent factors for women's rape victimizations in the military is one's membership within the Army. Similarly strong were the sex ratios of women within their workgroups/units with "all or mostly male" workgroups (being the token female in the unit) as significantly related to the increased likelihood of sexual assault.

Being in a mostly male or the token female within one's work unit, despite the military branch a woman was enlisted in, greatly increases the odds of experiencing sexual assault until accounting for current deployment. The control variables also cannot be ignored as they remained very consistent predictors of experiencing sexual misconduct, particularly for young women, and enlisted personnel. This also potentially demonstrates the limited resources for prevention and/or coping available to young females, or that young and

inexperienced females do not know where to find resources when they are deployed in major campaigns. The military branches merit further examination as these results suggest differing contexts and cultures in regards to how women experience deployment and rape in the military.

The results and significance then is viewed with caution in that age is a unique feature of the military where younger populations persist more plentifully than they do in the general population. The effects were most severe for military women under the age of nineteen. The literature has already suggested vulnerability for younger-aged victims and this is confirmed with these models (Kirkpatrick 2000; Belknap 2001; Ullman 2010).

This study suggests that deployment does matter in terms of increasing the likelihood of sexual victimization, but it matters in some surprising ways. One way in which deployment was surprisingly significant was that having *ever* been deployed or deployed in the *past* mattered less than being *currently* deployed, during a period when sexual assault was on a sharp rise between 2005 and 2010. Past deployment periods between 2001 and 2006 did matter for female military members in increasing the likelihood of sexual victimization.

Discussion of the Findings

Sexual assault may actually be less common on deployment than in garrison because of the lack of available alcohol and privacy (Ritchie 2001). It

is no secret that sexual relationships exist between service members even during periods of deployment, but what is often overlooked is the fact that depressing field conditions and an austere environment often make for non-existent eroticism (Moskos 1988).

In prior cases of military sexual assault, alcohol use by either the victim, offender, or both was a noted factor in approximately 35 percent of the reports of assault incidents (DoD FY07 Report). The DoD believes that this number represents an underestimate in the true involvement of alcohol in DoD reports (Department of Defense 2007). Other research has also shown a relationship between deployment and drinking behaviors (Federman et al. 2000). Reserve and National Guard personnel and younger service members who deploy with reported combat exposures are at increased risk of new-onset heavy weekly drinking, binge drinking, and alcohol-related problems (Jacobson et al 2008). Women who were deployed for more than 2 weeks had more than four and one half times the odds of heavy drinking compared to those not deployed (Federman et al. 2000).

Coping Mechanisms and Isolation

Another explanation involves the isolation of the service member as the target victim for more overt sexual misconduct with few resources nearby or coping mechanisms within reach while deployed in a major campaign. While

this explanation assumes that the incident occurred while the person was deployed, it can also be applied in the sense that deployment altered the person's personal coping mechanisms (post-traumatic stress disorder, depression, anxiety, and other adjustment issues experienced as returning veterans) (Kimerling et al 2007).

The prevalence of sexual assault in one's workplace or operation can also lead to issues with a person's psychological well-being, physical health, job satisfaction, and continued employment (Fitzgerald et al. 1997; Sadler et al. 2001; Yaeger et al. 2006). If these concepts are considered with deployed persons (either those who are currently deployed or veterans of recent operations), the outcomes may be quite problematic for military families and the military itself. In fact, a new term has been generated for veterans to be included with the contemporary dialogue on post-traumatic stress disorder (PTSD) known as "MST" or "military sexual trauma." Again, military sexual trauma refers to psychological trauma which impairs functioning due to a recent sexual assault or battery of a sexual nature occurring while the person was on active duty (Yaeger et al. 2006; Kimerling 2007).

Military sexual trauma is the outcome and reality of what has emerged as the prevalence of military rape and is among one of the more frequent diagnoses among female veterans (Sadler et al. 2001; Suris et al. 2004; Yaeger et al. 2006). Cases of MST amongst veterans (both males and females) have been steadily

increasing over the last five years (since 2006) and many victims have begun to come forward with reports of rapes that occurred many years prior to that (Yaeger et al. 2006).

Implications

This study has important implications for the developing field of research into sexual assault behaviors in the military and the social determinants of experiencing rape within the military setting. In the bivariate analyses, when deployment was considered in a nationally representative sample of active duty military adults, it demonstrated important effects for understanding varying sexual misconduct experiences. Using concepts of military culture and sex roles as a basis, hypotheses were developed regarding the likelihood of experiencing sexual assault when considering deployment, sex ratios, and military branch among other controls. Specifically, deployment does matter, but it does not matter as much as a woman's military branch membership.

The intention of this study extended a line of research to more fully explore the impact of deployment on sexual assault experiences. More research on the long-term social and health consequences of rape is needed to better address the needs of victims (Gonzales et al. 2006; Ullman 2010). Future research should also focus on the context of sexual assault victimization to determine other mitigating factors in rape issues, such as the workplace.

Limitations of the Study

As with any study, no examination can possibly exhaust the explanations of a social phenomenon as complicated as sexual assault. While I feel I have eliminated false assumptions of what is not responsible for increasing the likelihood of sexual assault, there is much work to be done in improving any study that attempts to seriously undertake this topic.

First and foremost at issue is the potential for measurement error in the dependent variables, sexual assault and sexual harassment. The fact that an experience reported by the women in the survey involved more than one of the behavior categories, especially as experiences escalated or intensified over time is a very realistic possibility and could contribute to a considerable amount of error. Some of the categories may have had a stronger effect on a person over other categories for other reasons having to do with pressures of advancement, stresses related to job security, and overall group survival in periods of duress or readjustment from recent deployment.

For example, a respondent may have experienced more than one category of a sexual misconduct behavior but one may have been intensified due to factors in a given context (i.e. deployment and/or being away from emotional supports). This question may have lacked some robustness and eliminated the reporting of experiences that were also traumatic but at lesser levels. This was specified by researchers and survey designers to help avoid the potential of

respondents “double counting” their experiences in multiple categories (Lancaster 1999). This question also did not specifically and directly express the category of sexual assault, although it may have been captured/assumed in the “sexual coercion” or “other” category options of other questions on the topic.

There is also the potential that an experience reported by the women in the survey involved more than one of the behavior categories, especially as experiences escalated or intensified over time. Some of the categories may have had a stronger effect on a person over other categories for other reasons having to do with pressures of advancement, stresses related to job security, trauma from the event(s), and overall group survival in periods of duress or readjustment from recent deployment. For example, a respondent may have experienced more than one category of a sexual misconduct behavior but one may have been intensified due to factors in a given context (being away from emotional supports). This question may have lacked some robustness and eliminated the reporting of experiences that were also traumatic but at lesser levels. This was specified by researchers and survey designers to help avoid the potential of respondents “double counting” their experiences in multiple categories (Lancaster 1999).

Another limitation comes ultimately in my inability to establish a true temporal ordering of events. In other words, can I prove that *x* (deployment) comes before *y* (sexual assault). This limitation is contained within the

assumptions underlying the deployment variables. The survey asked about sexually assaultive behaviors in the past 12 months and a woman's exact date of deployment is not given, so it is not known exactly if sexual assault occurred while she was deployed. For example, a woman could have been assaulted in August in the garrisons in the United States but deployed a few months later in December, all of which occurred in the last 12 months. The only two deployment variables that have a more exact prediction would be the previously (not currently) deployed variable and the never deployed variable, given that we know for certain the assault did not occur while a woman was currently deployed, but again, it is uncertain if the assault occurred during or between past deployments for women having ever been deployed.

The deployment variable also did not distinguish among different types of deployment, such as simulated battlefield conditions, peacekeeping missions, or training exercises. There would seem to be a difference among different types of deployments and how stress is managed by women for each type and how this accomplishes potentially hostile work environments and increased likelihoods of sexual assault.

Another weakness of my study was that I could not control for sexual orientation which the literature suggests is an important factor in assault in which certain antagonistic behaviors (such as that of harassment and hostile work environments) can escalate into assault (Herbert 1998). Herbert's study

did take sexual orientation into account, but this item was not available to me from the present survey.

There were also two control variables that were highly correlated: respondent age and years of service in their respective military branch. To test for this problem a Phi correlation and Cramer's V statistic were run which measure the correlation between two categorical variables. The results demonstrated a highly statistically significant result that both age and years or service were tapping into the same measure of a female service member's experience in the military (Phi value = .995, Cramer's V value = .575). In the future, one of these measures could certainly be dropped from the analyses since younger service members tend to have fewer years of experience than older service members.

I also could not control for education or military occupational type. While resistance to female participation in the military cannot be explained simply by looking at sex ratios, a comparison of women's occupational roles may also produce varied results or at least a closer approximation of the female military experience. This was not a possibility for the current study due to the limitations present in the dataset. Direct comparisons of women in military and non-military work are difficult to make because there are currently 92 occupational areas within the military which do not correlate easily to census occupational categories (Lundquist 2008).

It is without a doubt that there are other factors yet to be considered in this study. One major factor that is not contained in the analyses is the circumstance of prior victimization. While this question is found within the survey results, it is kept confidential within the DoD. The literature suggests this item alone can be a major source of understanding future victimization. This is one weakness of the current study in that this cannot be accounted for due to the restriction of the data to protect the victim's identity and privacy.

A question that cannot be directly answered by this study, but nonetheless remains important is: what type of conditions facilitate positive work relationships between men and women in the workplace, specifically the military? Specifically what relationships create settings that reduce the likelihood for sexual assault? Moskos (1988) suggests that high quality female soldiers relative to men will assist in gaining greater acceptance in the unit. Commanders will commonly prefer effective women over ineffective men, but prefer the male over the female if their effectiveness is equally demonstrated. Again, it is important to emphasize that most rapes occur between acquaintances, not the "stranger in the alley" scenario which comes to mind for many people (Belknap 2001; Ullman 2010). Less than 3% of sexual assaults occurring in this sample came at the hands of civilians.

The literature suggested that the trauma between deployment and rape lead into greater likelihoods and more formally MST or *military sexual trauma*

(Kimerling et al. 2007; United States Department of Veterans Affairs 2010). This relationship might be considered difficult to interpret in that we do not know the exact time periods of deployment or when the sexual assault occurred except that they were measured in the past 12 months. A tautological relationship may exist in my hypothesized relationship between deployment and rape in that we do not know for certain if deployment and related stress leads to sexual assault or if sexual assault increases deployment stress. Both assertions may be true, but this does not get us much closer to a determination about deployment in the hypotheses.

Future Research

Some future considerations include matching up the quantitative analyses presented here with the qualitative a nalyses that are currently abundant in this line of research. Many focus groups have already been conducted with men and women across the military branches on topics of rape and harassment. It should be stated that this study did not specifically test for causality. The possibility cannot be ruled out that any of the variables may not be direct measures of the topics of gender and sexual deviance within the military. Other crucial, unmeasured aspects of sexual misconduct experiences in the military such as differing opportunity structures for coping and prevention may be the actual causal factors. Further research into possible causal pathways exploring

the relationship between deployment, gender, and military branch, will help illuminate these issues.

There certainly are questions available in the *2006 WGRA* dataset that discuss reporting of these behaviors, available counseling and treatment, and whether or not the incident was handled to the victim's satisfaction. These items could be added to these preliminary analyses in order to explore coping mechanisms and overall mental and emotional health of veterans and non-veterans alike.

Conclusion

The emphasis in this dissertation is upon military women and identifying risk factors for serious sexual harm. It is not counterproductive to focus on potential difficulties of women in the field, because of the common belief that exists that women should not be in the military or at least limited to non-combat roles. Rather, I support the idea that identification of potential problems and factors as risks (or not) leads to prevention. The problems of sexual assault do not have simple solutions, but an open discussion of them may lead that way.

One cannot write about rape without also seeing some possibilities for addressing the problem and tapping into the literature on prevention and treatment. In the words of several victims when asked about prevention and response training, "The military needs more than a 24-hour hotline and a

PowerPoint presentation to solve this problem." Many military and non-military reports have made recommendations based on interviews with active-duty members which include: (1) enforcing policies to stop degrading references to gender, (2) screen cadre more effectively and train them to curtail abuses of power, (3) ensure strict punishments for false accusations of harassment and abuse (Federal Advisory Committee on Gender-Integrated Training and Related Issues 1997). Other recommendations called for the investigatory responsibilities to fall outside of the DoD and upon an civilian law enforcement agency instead due to the problem of "investigating oneself." The DoD also must collect data on the perpetrators in a timely manner, beyond that which is covered in Defense Incident-Based Reporting databases (Solaro 2006).

Many work organizations outside of the military are actively engaged in the creation of educational programs designed to reduce harassment only, but not sexual assault. Often programs do not know how to approach the topic of something more serious such as sexual assault, especially without addressing sexual boundaries, sexual preferences, and a healthy respect between the genders. It is obvious that these approaches would not be met without great difficulty in the military. In addition to determine how to begin to have what I call "courageous conversations" about sexuality, violence, and gender, institutions such as the military need to pair these offerings with efforts to refine

their internal investigations, reporting policies, and punitive efforts in order to help safeguard the rights of accusers and accused.

Often, complaints about sexual assault result in a "blame the victim" response for her role in the alleged rape. Too many times women are conditioned that they provoke their own rapes by giving men the wrong impression, dressing inappropriately, or refusing to fight back during the assault (Belknap 2001; Nelson 2002). Blaming the victim compounds the problem of rape even further because it distracts people from the actions of the perpetrator and places the responsibility for the event upon the victim (Nelson 2002). These types of destructive ideas about victim responsibility have led to the term "rape myths" which is commonly used throughout the rape literature in regards to attitudes and beliefs that are generally false but widely held that deny and justify sexual aggression against women (Lonsway and Fitzgerald 1994).

While most rape victims are familiar with these issues, women in the military face additional obstacles unique to the military setting including the threat to their own military careers, personal safety, and hurting another soldier's career. Many women reported being denied promotion for the first time in their career after a rape incident was reported leading them to believe that they are being treated differently because of their victimization (Nelson 2002). Other women reported that they were demoted, put on probation, transferred, lost their security clearance, charged with a sexual/fraternization

allegation on the offender, reassigned to a new job, forced to leave the military, or felt compelled to leave (Bastian et al. 1996; Nelson 2002). These women also face what is known as "secondary victimization" via harassment from the command, investigators, and coworkers, which is not uncommon for civilian victims as well (Nelson 2002; Madigan and Gamble 1991).

It follows logic that any organization must establish an investigation system that is at least perceived to be fair and impartial (Casey and Rissetto, 1999). Investigations must begin with a reporting process that protects victims and contains suspected offenders. Now one may think that investigations and reporting processes have been in place for decades within the military, so why would this be a potential problem?

One problem apparent to the Air Force Academy during the sexual assault reports which surfaced in 2002 was that a system of confidential reporting was in place between 1993-2002, but the system was flawed. Some of the problems emergent in the flawed system included inconsistent applications of amnesty for victims for lesser infractions (such as alcohol intoxication), a "problematic cadet subculture" or climate relaxed in discipline and unfavorable to women, and the delay or impediment of military and/or criminal investigations (Lancaster et al. 2005). Other military academies were experiencing similar problems with their systems of addressing soldier rape.

Regardless if one studies military service academies with greater numbers of younger soldiers at higher risk of rape or active duty enlisted personnel in the field, a "culture of rape" is not purely an original contribution of this particular study. A rape culture has been identified by numerous task forces, the Office of the Inspector General, and other researchers since 2003 (Lancaster et al. 2005).

Due to the adversarial nature of sexual assault allegations, it is likely impossible to completely appease or satisfy both the accuser and the accused (Casey and Rissetto, 1999). For the accuser, a "no tolerance" stance taken by the DoD has suggested strong support for victims for years. For the accused, sanctions including probations, discharges, and military court martials are still relatively private affairs kept within the DoD and so it is difficult to know the extent to which an alleged offender receives fair and impartial treatment or how false allegations are handled.

The DoD has approached the resolution of the rape issue through a variety of tactics, task forces, panels, working groups, and policy initiatives. Military leaders need to refocus intervention efforts to include rape prevention training for men, rape resistance training for women, and community-based legal interventions (Rozee and Koss 2001). These actions acknowledged a need to change environments in which sexual assault was more likely to occur, including active combat zones where soldiers are deployed (DoD 2010).

Some of the more recent campaigns utilized throughout all military branches, academies, and organizations include a call for soldiers to intervene, confront, and correct behaviors that disrespect standards of dignity or create hostile sexualized situations of rape and/or harassment. Amongst these challenges, I agree wholeheartedly with these recommendations based upon my findings. With continuous data collection and the refinement of measures, perhaps more specific explanations of why sexual assault persists in the military will be unveiled.

Significant efforts over the past two decades have been made to improve the treatment and rehabilitation for rape victims both within and outside of the military. During the 1970s, the first rape crisis center was established (Kilpatrick 2000). The treatment of victims in the criminal justice system was questioned, and hundreds of laws were passed to protect rape victims in the courts (Kilpatrick 2000). Medical protocols have been developed and widely accepted (Kilpatrick 2000). The mental health impact of rape is well documented in the literature, and the practices of mental health professionals have improved. Although the treatment of rape victims today is vastly different from three decades ago, many victims still do not receive the assistance and treatment they need. More recent efforts include the application of legal reforms defining rape and assault, the establishment of extensive prevention and

awareness campaigns, the removal of barriers to reporting, and the increase of resources to mental health services.

Although the treatment of rape victims today is vastly different from the 1970s, many victims still do not receive the assistance and treatment they need (Kilpatrick 2000) which often affects the reporting of this violent crime. At present, the DoD has a "no tolerance policy" toward sexual assault as it harms the victim, destabilizes the workplace, and threatens national security (Gates 2010).

However, there is still progress to be made in understanding the circumstances of rape and the likelihood of becoming a victim, especially for military women. Women in the military are faced with daily challenges about their right to be there, their ability to do their jobs, and often their sexuality (Herbert 1998; Segal 2001). Socially, men and women are still determining how to behave as sexualized beings even after the 2010 repeal of the "Don't Ask, Don't Tell" policy, ending a 17-year ban on gays serving openly in the military.

What a person should take away from this study is that while the Department of Defense is taking positive and correct steps to alleviate the problems with military sexual assault, these steps can now be guided with clearer direction and focus upon what does matter (deployment) and what does not matter as much (sex ratios). The Department of Defense acknowledges that deployment in "combat areas of interest" is a factor for sexual assault (DoD

2010), but the specific reasons are still undergoing examination. Rape in the workplace is indeed a problem, but when that workplace is an environment of ongoing combat and conflict for years at a time, it creates a climate of sexual violence.

This study gives the DoD the empirical evidence it needs to justify and legitimate the strategies it is using to confront this problem today. This study provides a firm ground to stand upon for the DoD and can assist them in further identifying the climate that occurs when a person is deployed (especially in the Army) and it is important to be cognizant of that both for victims and offenders.

One of the most challenging parts of a service member's deployment is the remoteness of the physical area itself, including isolation from reports, limited victim assistance available, and few personnel trained to handle sexual violence trauma. At times, even a simple matter of getting rape kits to remote areas can be difficult for the DoD. As I stated in the beginning of this study, a woman's experience in deployment is entirely different from a man's experience. Military women are far more likely to be raped than killed in combat while deployed (Ellison 2011). One would suppose that most parents of soldiers fear for their son or daughters life or injury while deployed, but the evidence suggests that fears for female soldiers should be more concerned with sexual victimization and trauma. What accompanies this trauma is the need for

specialized treatment and care both from the services available at Veteran's Administration Hospitals and in other public and private health care facilities.

This dissertation research provides a clearer direction for sexual assault victimization research on women in a unique occupational setting such as the military. It is difficult to know whether or not the effects of sexual victimization are occurring due to the institutional nature of the military or what would normally persist in daily work settings among men and women, supervisors and subordinates in male dominated institutions. It may not make much of a difference, since pressure and risk in their own rights are noteworthy of study. Taking any one concrete position on the matter makes it difficult to apply the findings into one concrete protocol for reducing the prevalence of rape in the military. The chapters within this study do not give absolute or concrete answers to the problems of rape within the military, but they do seek to better inform those positioned to come up with their own answers – military leadership, soldiers, social scientists, and the citizens being served. The cultural force occurring in the military in regards to rape and deployment has yet to be addressed. It is my hope that this study has demonstrated a useful lens for examining a modern military culture of rape that can be addressed and changed.

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APPENDIX A: UNIFORM CODE OF MILITARY JUSTICE

Members of the military are conduct themselves under a military rule of law, the Uniform Code of Military Justice (UCMJ), which covers the major offenses found in civilian law. This rule of law also applies to reserve and guard members (Titles 10, 14, & 32) (UCMJ 2010, Article 120).

BACKGROUND

Historically, the military has always had articles prescribed to govern its conduct, starting with the Second Continental Congress and the Articles of War. The U.S. Constitution provided Congress the power to enact further Articles of War which stood for over a century. The military justice system operated under these articles until President Truman signed the UCMJ into law in 1950. The word "uniform" implies the intent of Congress to make military justice consistent among the armed service branches. The current version of the UCMJ is contained in the 2008 version of the *Manual for Court-Martial*.

In the 1950s a legal reform began and greatly narrowed the purview of military jurisdiction. The benchmark case in this trend was *O'Callahan v. Parker* in 1969 where the Supreme Court struck down a court-martial jurisdiction for non-service-connected offenses (Jacobs 1986). In other words, "service connection" was required before a court-martial could exercise jurisdiction. The major significance of the *O'Callahan* case was that military

personnel off-duty or off-base were expected to be treated like any other citizen and subject to the law of the citizenry.

In the years to follow, the *O'Callahan* standard was pushed in the opposite direction in a case presented to the Court of Military Appeals. *U.S. v. Lockwood* broadened the idea of off-base jurisdiction previously defined in *O'Callahan*. In 1983, *Chappell v. Wallace* protected supervisors from lawsuits by their subordinates for violating constitutional rights and that civil courts must rethink and pause before attempting to intervene with the heart of the unique structure of the military establishment (Moskos 1988). *O'Callahan* was officially overthrown in *Solorio v. U.S.*, a case of sexual abuse, where the Supreme Court ruled that military personnel could be court-martialed for crimes regardless of whether the offense had military connections or not (Jacobs 1986). The same is the case with sexual assault offenses.

APPENDIX B: BRIEF CHRONOLOGY OF ENDURING FREEDOM AND IRAQI FREEDOM MILITARY OPERATIONS (2001-2006)

Operation Enduring Freedom

September 11, 2001	After the attack on World Trade Center and on the Pentagon, the U.S. military waged war against terrorism worldwide.
September 28, 2001	U.S. troops were deployed to the Persian Gulf.
October 7, 2001	Under Operation Enduring Freedom, the U. S. wages an air campaign against the Taliban and the Al Qaeda terrorist organization in Afghanistan.
October 15, 2001	Approximately 25 aircraft, including about 15 carrier-based tactical aircraft and about eight to 10 long-range bombers, struck seven planned target areas that included military training facilities, surface-to-air missile storage sites, garrison areas, troop staging areas, and al Qaeda infrastructure.
November 10, 2001	U.S. forces worked with the Northern Alliance to seize control of the Taliban stronghold of the city of Mazar-e Sharif and north of Kabul. Northern Alliance groups are making gains south of Kabul and around the western city of Herat.
January 11, 2002	More than 1,000 U.S. service members are en route to the U.S. Naval Base at Guantanamo Bay, Cuba, to provide security for the Al Queda detainees under U.S. control.
March 1, 2002	Operation Anaconda was carried out by a force of about 2,000 soldiers whose mission was to destroy all Al Qaeda and Taliban fighters in and around the ShahiKhot region. This operation concluded successfully on March 18, 2002.

BACKGROUND

After the September 11, 2001 attack on World Trade Center and on the Pentagon, the U.S. military waged war against terrorism worldwide. On October 7, 2001, under Operation Enduring Freedom the air campaign was begun to root out Osama bin Laden, the Al Qaeda network of terrorists and Taliban supporters from Afghanistan. As part of a humanitarian effort, the U.S. dropped humanitarian rations daily to Afghan refugees. Over 700,000 rations have been dropped over Afghanistan since the beginning of the operation. To protect the United States and its shores against further terrorist attacks, Homeland Security, a new agency was created to work jointly with other government agencies and with U.S. military forces deployed in the U.S. under Operation Noble Eagle.

Operation Iraqi Freedom

DATES OF CONFLICT

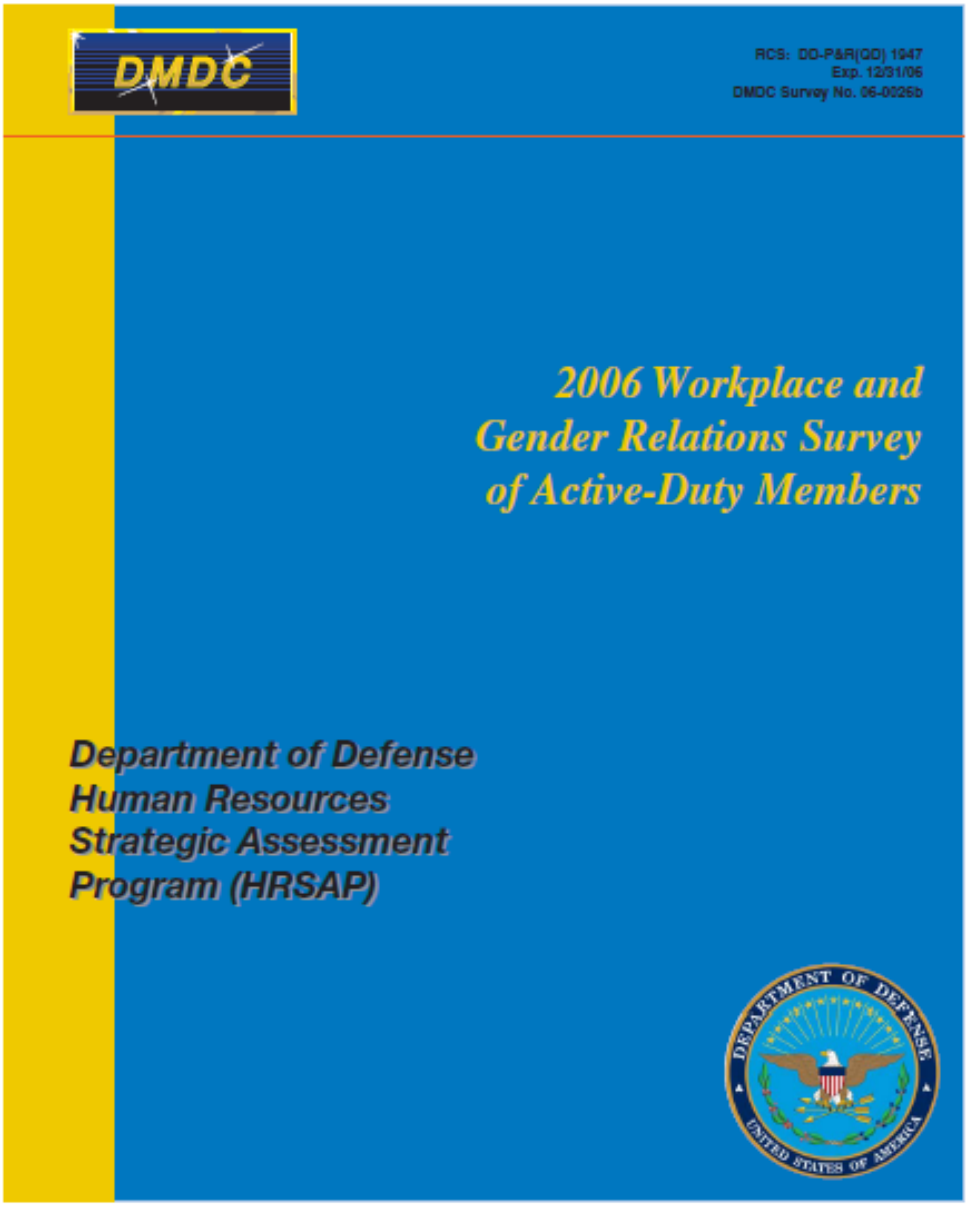
BEGAN: MARCH 19, 2003 -COALITION BOMBING OF IRAQ
ENDED: CONTINUING

BACKGROUND

The United Nations Security Council (UNSC) required Iraq to scrap all weapons of mass destruction and long-range missiles and to allow UN verification inspections. Continued Iraqi noncompliance with UNSC resolutions

during the past 12 years resulted in the US-led invasion of Iraq in March 19, 2003. Under Operation Iraqi Freedom, U.S. military operations are focused on achieving several specific objectives: to end the regime of Saddam Hussein, eliminate Iraq's weapons of mass destruction, and to capture and drive out terrorists from Iraq. Coalition forces remain in Iraq: to help restore Iraq's degraded infrastructure, deliver humanitarian support, and to create conditions for a transition to a representative self-government for the Iraqi people.

APPENDIX C: SURVEY INSTRUMENT



Please return your completed survey in the business reply envelope through a U.S. government mail room or post office.

DEFENSE MANPOWER DATA CENTER
ATTN: SURVEY PROCESSING CENTER
DATA RECOGNITION CORPORATION
P.O. BOX 5720
HOPKINS, MN 55343

COMPLETION INSTRUCTIONS

- Use a blue or black pen.
- Place an "X" in the appropriate box or boxes.

RIGHT ☒ WRONG ☑ ○

- To change an answer, black out the wrong answer and put an "X" in the correct box as shown below.

CORRECT ANSWER ☒ INCORRECT ANSWER ■

PRIVACY ACT & INFORMED CONSENT

In accordance with the Privacy Act, this notice informs you of the purpose of the HRSAP Surveys and how the findings of these surveys will be used. It also provides information about the Privacy Act and about informed consent. Please read it carefully.

Returning this survey indicates your agreement to participate in this research.

AUTHORITY: 10 USC Sections 136, 481, 1785, and 2358. 14 USC Section 1.

PRINCIPAL PURPOSE: Information collected in this survey will be used to research attitudes and perceptions about gender-related issues, estimate the level of sexual harassment and unwanted sexual contact, and identify areas where improvements are needed. This information will assist in the formulation of policies which may be needed to improve the working environment. Reports will be provided to the Office of the Secretary of Defense, each Military Department, and the Joint Chiefs of Staff. Findings will be used in reports and testimony provided to Congress. Some findings may be published by the Defense Manpower Data Center (DMDC) or in professional journals, or presented at conferences, symposia, and scientific meetings. Datasets without any identifying information may be analyzed by researchers outside of DMDC. Briefings and reports on results from these surveys will be posted on the following Web site: http://www.dmdc.osd.mil/surveys/. In no case will your individual identifiable survey responses be reported.

ROUTINE USES: None.

DISCLOSURE: Providing information on this survey is voluntary. Most people take 16-30 minutes to complete the survey. There is no penalty if you choose not to respond. However, maximum participation is encouraged so that the data will be complete and representative. Your survey responses will be treated as confidential. Identifying information will be used by government and contractor staff engaged in, and for purposes of, the survey research. For example, the research oversight office of the Office of the Under Secretary of Defense (Personnel and Readiness) and representatives of the U.S. Army Medical Research and Material Command are eligible to review research records as a part of their responsibility to protect human subjects in research. This survey is being conducted for research purposes. If you answer any items and indicate distress or being upset, etc., you will not be contacted for follow-up purposes. However, if a direct threat to harm yourself or others is found in survey comments or communications about the survey, DMDC is legally required to forward information about that threat to an office in your area for appropriate action.

SURVEY ELIGIBILITY AND POTENTIAL BENEFITS: DMDC uses well-established, scientific procedures to select a sample that represents the Defense community. This sampling procedure sets up clusters of people based on combinations of demographic characteristics (e.g., location, gender). You were selected at random from one of these clusters of people. This is your chance to be heard on issues that directly affect you. While there is no benefit just for you for your individual participation, your answers on a survey *make a difference*. For example, results from previous surveys have played an important role in evaluating and developing policies and practices regarding general workplace respect issues as well as sexual assault, sexual harassment, and other gender-related issues.

STATEMENT OF RISK: The data collection procedures are not expected to involve risk or discomfort to you. The only risk to you is accidental or unintentional disclosure of the data you provide. However, the government and its contractors have a number of policies and procedures to ensure that survey data are safe and protected. For example, identifying information (name, address) is not stored in the same file as answers to survey questions. Surveys are kept in a secure facility during data entry. Within six months of the end of the data collection, surveys are shredded in a secure recycling facility. Answers to survey questions may be shared with organizations doing research on DoD personnel but only after minimizing detailed demographic data (for example, paygrade and detailed location information) that could possibly be used to identify an individual. A confidentiality analysis is performed to reduce the risk of there being a combination of demographic variables that can single out an individual. To further minimize this risk, some variables are randomly set to missing. Government and contractor staff members have been trained to protect client identity and are subject to civil penalties for violating your confidentiality. A respondent who experienced sexual harassment or unwanted sexual contact may experience discomfort and/or other emotions while completing the survey. Contact information is provided below for those who experience such discomfort.

- If you are a victim of sexual assault, or a person who wishes to prevent or respond to this crime, you may want to contact your Service's local Sexual Assault Response Coordinator (SARC) or Victim Advocate (VA).
  - To reach Military One Source 24/7 for restricted/unrestricted reporting and established DoD Sexual Assault Services, call a hotline number:
    Stateside: 1-800-342-9647 *Overseas:* 00-800-3429-6477 or call collect 1-484-530-5908
    Worldwide: www.militaryonesource.com or www.sapr.mil
  - Coast Guard members may want to call Employee Assistance Program Counseling Services (1-800-222-0364)
- If you are a victim of sexual harassment, or a person who wishes to prevent or respond to it, you may want to contact your Service's local sexual harassment or equal opportunity office.
  - To reach a hotline for your Service call:
    Army: 1-800-267-9964 *Marine Corps:* 703-784-9971 *Coast Guard:* 1-800-222-0364
    Navy: 1-800-253-0931 *Air Force:* 1-800-616-3775
- If you have questions about the survey, please e-mail HRSurvey@osd.pentagon.mil or leave a message any time, toll-free, at 1-800-881-5307.
- If you have concerns about your rights as a research participant, please contact Ms. Caroline Meyer, Human Subjects Protections Specialist, Deployment Health Support Division, 5113 Leesburg Pike, Skyline 4, Suite 403, Falls Church, VA 22041, humansubjects@deploymenthealth.osd.mil, (703) 575-2677, Fax (703) 824-4216.

BACKGROUND INFORMATION

1. In what Service were you on active duty on June 26, 2006?

- ☒ Army
- ☒ Navy
- ☒ Marine Corps
- ☒ Air Force
- ☒ Coast Guard
- ☒ None, you were separated or retired - stop here and return the survey

2. Are you . . . ?

- ☒ Male
- ☒ Female

3. What is your current paygrade? *Mark one.*

☒ E-1	☒ E-6	☒ W-1	☒ O-1/O-1E
☒ E-2	☒ E-7	☒ W-2	☒ O-2/O-2E
☒ E-3	☒ E-8	☒ W-3	☒ O-3/O-3E
☒ E-4	☒ E-9	☒ W-4	☒ O-4
☒ E-5		☒ W-5	☒ O-5
			☒ O-6 or above

4. Are you Spanish/Hispanic/Latino?

- ☒ No, not Spanish/Hispanic/Latino
- ☒ Yes, Mexican, Mexican-American, Chicano, Puerto Rican, Cuban, or other Spanish/ Hispanic/Latino

5. What is your race? *Mark one or more races to indicate what you consider yourself to be.*

- ☒ White
- ☒ Black or African American
- ☒ American Indian or Alaska Native
- ☒ Asian (e.g., Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese)
- ☒ Native Hawaiian or other Pacific Islander (e.g., Samoan, Guamanian or Chamorro)

6. Where is your permanent duty station located? *Mark one.*

- ☒ In one of the U.S. 50 states, D.C., Puerto Rico, or a U.S. territory or possession
- ☒ Europe (e.g., Bosnia-Herzegovina, Germany, Italy, Serbia, United Kingdom)
- ☒ Former Soviet Union (e.g., Russia, Tajikistan, Uzbekistan)
- ☒ East Asia and Pacific (e.g., Australia, Japan, Korea)
- ☒ North Africa, Near East or South Asia (e.g., Bahrain, Diego Garcia, Kuwait, Saudi Arabia)
- ☒ Sub-Saharan Africa (e.g., Kenya, South Africa)
- ☒ Western Hemisphere outside of the U.S. (e.g., Cuba, Honduras, Peru)
- ☒ Other or not sure

CAREER INTENTION

7. How many years of active-duty service have you completed (including enlisted, warrant officer, and commissioned officer time)? ***To indicate less than 1 year, enter "0". To indicate 35 years or more, enter "35".***

☐☐ Years

8. Suppose that you have to decide whether to stay on active duty. Assuming you could stay, how likely is it that you would choose to do so?

- ☒ Very likely
- ☒ Likely
- ☒ Neither likely nor unlikely
- ☒ Unlikely
- ☒ Very unlikely

9. How much do you agree or disagree with each of the following statements? ***Mark one answer for each statement.***

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
a. I enjoy serving in the military.	☒	☒	☒	☒	☒
b. Serving in the military is consistent with my personal goals.	☒	☒	☒	☒	☒
c. If I left the military, I would feel like I'm starting all over again.	☒	☒	☒	☒	☒
d. I would feel guilty if I left the military.	☒	☒	☒	☒	☒
e. Generally, on a day-to-day basis, I am happy with my life in the military.	☒	☒	☒	☒	☒
f. It would be difficult for me to leave the military and give up the benefits that are available in the Service.	☒	☒	☒	☒	☒
g. I would not leave the military right now because I have a sense of obligation to the people in it.	☒	☒	☒	☒	☒
h. I really feel as if the military's values are my own.	☒	☒	☒	☒	☒
i. I would have difficulty finding a job if I left the military.	☒	☒	☒	☒	☒
j. Generally, on a day-to-day basis, I am proud to be in the military.	☒	☒	☒	☒	☒
k. If I left the military, I would feel like I had let my country down.	☒	☒	☒	☒	☒
l. I continue to serve in the military because leaving would require considerable sacrifice.	☒	☒	☒	☒	☒
m. I feel like being a member of the military can help me achieve what I want in life.	☒	☒	☒	☒	☒
n. One of the problems with leaving the military would be the lack of available alternatives.	☒	☒	☒	☒	☒
o. I am committed to making the military my career.	☒	☒	☒	☒	☒

MILITARY LIFE

In this survey, the definition of "military duties" includes deployments, TDYs/TADs, training, military education, time at sea, and field exercises/alerts.

10. In the past 12 months, how many nights have you been away from your permanent duty station because of your military duties? ***To indicate none, enter "0".***

☐☐☐ Nights

11. Have you ever been deployed longer than 30 consecutive days?

- ☒ Yes, but not in the past 12 months
- ☒ Yes, in the past 12 months
- ☒ No ⇨ GO TO QUESTION 17

12. Since September 11, 2001, how many times have you been deployed for any of the following operations? ***Mark one answer in each row. To indicate none, select "0 times".***

	3 or more times	2 times	1 time	0 times
a. Operation Noble Eagle	☒	☒	☒	☒
b. Operation Enduring Freedom	☒	☒	☒	☒
c. Operation Iraqi Freedom	☒	☒	☒	☒
d. Other	☒	☒	☒	☒

13. Are you currently on a deployment that has lasted longer than 30 consecutive days?

- ☒ Yes
- ☒ No

14. In the past 12 months, have you been deployed for any of the following operations? ***Mark one answer in each row.***

	No	Yes, but I am no longer deployed for this operation	Yes, and I am still deployed for this operation
a. Operation Noble Eagle	☒	☒	☒
b. Operation Enduring Freedom	☒	☒	☒
c. Operation Iraqi Freedom	☒	☒	☒
d. Other	☒	☒	☒

15. To what extent do/would you feel safe during deployments from being sexually harassed at the following times and locations? *Mark one answer in each row.*

	Not at all	Small extent	Moderate extent	Large extent	Very large extent
a. ON base/installation/ship, during the day	☒	☒	☒	☒	☒
b. ON base/installation/ship, during the evening	☒	☒	☒	☒	☒
c. ON base/installation/ship, after lights out	☒	☒	☒	☒	☒
d. ON base/installation/ship, during the weekend	☒	☒	☒	☒	☒
e. ON base/installation/ship, in your barracks/housing area	☒	☒	☒	☒	☒
f. ON base/installation/ship, not in your barracks/housing area	☒	☒	☒	☒	☒
g. ON DUTY away from your base/ installation/ship (e.g., on patrol or being a part of a convoy)	☒	☒	☒	☒	☒
h. OFF DUTY away from your base/ installation/ship, during the day	☒	☒	☒	☒	☒
i. OFF DUTY away from your base/ installation/ship, during the evening	☒	☒	☒	☒	☒

16. To what extent do/would you feel safe during deployments from being sexually assaulted at the following times and locations? *Mark one answer in each row.*

	Not at all	Small extent	Moderate extent	Large extent	Very large extent
a. ON base/installation/ship, during the day	☒	☒	☒	☒	☒
b. ON base/installation/ship, during the evening	☒	☒	☒	☒	☒
c. ON base/installation/ship, after lights out	☒	☒	☒	☒	☒
d. ON base/installation/ship, during the weekend	☒	☒	☒	☒	☒
e. ON base/installation/ship, in your barracks/housing area	☒	☒	☒	☒	☒
f. ON base/installation/ship, not in your barracks/housing area	☒	☒	☒	☒	☒
g. ON DUTY away from your base/ installation/ship (e.g., on patrol or being a part of a convoy)	☒	☒	☒	☒	☒
h. OFF DUTY away from your base/ installation/ship, during the day	☒	☒	☒	☒	☒
i. OFF DUTY away from your base/ installation/ship, during the evening	☒	☒	☒	☒	☒

17. To what extent . . . *Mark one answer in each row.*

	Not at all	Small extent	Moderate extent	Large extent	Very large extent
a. Do people in the military who sexually harass others get away with it?	☒	☒	☒	☒	☒
b. Do people in the military feel comfortable reporting sensitive issues to authorities, such as discrimination, harassment, or sexual assault?	☒	☒	☒	☒	☒
c. Would you feel responsible for stopping another Service member from having sex with someone who seems too intoxicated to consent?	☒	☒	☒	☒	☒
d. Would you feel responsible for stopping another Service member who is sexually harassing other(s)?	☒	☒	☒	☒	☒
e. Would you feel responsible to get help (e.g., medical, psychological) for another Service member who had been sexually assaulted?	☒	☒	☒	☒	☒

YOUR MILITARY WORKPLACE

18. Are you currently . . . *Mark "Yes" or "No" for each item.*

	No	Yes
a. In a military occupational specialty (MOS/D/R/AFSC) not usually held by persons of your gender?	☒	☒
b. In a work environment where members of your gender are uncommon?	☒	☒

19. Which of the following statements best describes the gender mix of your current work group, that is, the people with whom you work on a day-to-day basis? *Mark one.*

- ☒ All men
- ☒ Almost entirely men
- ☒ More men than women
- ☒ About equal numbers of men and women
- ☒ More women than men
- ☒ Almost entirely women
- ☒ All women

20. What is the gender of your immediate supervisor? *Mark one.*

- ☒ Male military
- ☒ Male civilian
- ☒ Female military
- ☒ Female civilian

21. How much do you agree or disagree with the following statements about your supervisor? *Mark one answer for each statement.*

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
a. You trust your supervisor.	☒	☒	☒	☒	☒
b. Your supervisor ensures that all assigned personnel are treated fairly.	☒	☒	☒	☒	☒
c. There is very little conflict between your supervisor and the people who report to him/her.	☒	☒	☒	☒	☒
d. Your supervisor evaluates your work performance fairly.	☒	☒	☒	☒	☒
e. Your supervisor assigns work fairly in your work group.	☒	☒	☒	☒	☒
f. You are satisfied with the direction/ supervision you receive.	☒	☒	☒	☒	☒

22. To what extent do you agree or disagree with the following statements about your work group? *Mark one answer for each statement.*

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
a. If you make a request through channels in your work group, you know somebody will listen.	☒	☒	☒	☒	☒
b. The leaders in your work group are more interested in looking good than being good.	☒	☒	☒	☒	☒
c. You would go for help with a personal problem to people in your chain-of-command.	☒	☒	☒	☒	☒
d. The leaders in your work group are not concerned with the way Service members treat each other as long as the job gets done.	☒	☒	☒	☒	☒
e. You are impressed with the quality of leadership in your work group.	☒	☒	☒	☒	☒
f. The leaders in your work group are more interested in furthering their careers than in the well-being of their Service members.	☒	☒	☒	☒	☒

23. In your opinion, have you had a mentor while in the military? *Mark one.*

- ☒ Yes, you have one now
- ☒ Yes, you had one, but you don't have one now
- ☒ No, but you would have liked one
- ☒ No, and you never wanted one
- ☒ Not sure or you do not know what a mentor is

24. How much do you agree or disagree with the following statements about the people you work with at your workplace? *Mark one answer for each statement.*

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
a. There is very little conflict among your coworkers.	☒	☒	☒	☒	☒
b. Your coworkers put in the effort required for their jobs.	☒	☒	☒	☒	☒
c. The people in your work group tend to get along.	☒	☒	☒	☒	☒
d. The people in your work group are willing to help each other.	☒	☒	☒	☒	☒
e. You are satisfied with the relationships you have with your coworkers.	☒	☒	☒	☒	☒
f. You put more effort into your job than your coworkers do.	☒	☒	☒	☒	☒

25. How much do you agree or disagree with the following statements about your workplace? *Mark one answer for each statement.*

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
a. I know what is expected of me at work	☒	☒	☒	☒	☒
b. I have the materials and equipment I need to do my work right	☒	☒	☒	☒	☒
c. At work, I have the opportunity to do what I do best every day.	☒	☒	☒	☒	☒
d. In the last 7 days, I have received recognition or praise for doing good work	☒	☒	☒	☒	☒
e. My supervisor, or someone at work, seems to care about me as a person	☒	☒	☒	☒	☒
f. There is someone at work who encourages my development	☒	☒	☒	☒	☒
g. At work, my opinions seem to count	☒	☒	☒	☒	☒
h. The mission/purpose of my Service makes me feel my job is important	☒	☒	☒	☒	☒
i. My coworkers are committed to doing quality work	☒	☒	☒	☒	☒
j. I have a best friend at work	☒	☒	☒	☒	☒

25. Continued.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
k. In the last 6 months, someone at work has talked to me about my progress					
l. This last year, I have had opportunities at work to learn and to grow					
m. At my workplace, a person's job opportunities and promotions are based only on work-related characteristics					
n. My supervisor helps everyone in my work group feel included					
o. I trust my supervisor to deal fairly with issues of equal treatment at my workplace					
p. At my workplace, all employees are kept well informed about issues and decisions that affect them					

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26. How much do you agree or disagree with the following statements about the work you do at your workplace? ***Mark one answer for each statement.***

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
a. Your work provides you with a sense of pride					
b. Your work makes good use of your skills					
c. You like the kind of work you do					
d. Your job gives you the chance to acquire valuable skills					
e. You are satisfied with your job as a whole					
f. Your day-to-day work is directly tied to your wartime job					

27. Overall, how well prepared . . . ***Mark one answer for each item.***

	Very poorly prepared	Poorly prepared	Neither well nor poorly prepared	Well prepared	Very well prepared
a. Are you to perform your wartime job?					
b. Is your unit to perform its wartime mission?					

28. Overall, how would you rate . . . ***Mark one answer for each item.***

	Very low	Low	Moderate	High	Very high
a. Your current level of morale?					
b. The current level of morale in your unit?					

29. How much do you agree or disagree with the following statements about your unit? ***Mark one answer for each statement.***

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
a. Service members in your unit really care about each other					
b. Service members in your unit work well as a team					
c. Service members in your unit pull together to get the job done					
d. Service members in your unit trust each other					

STRESS, HEALTH, AND WELL-BEING

30. In the past month, how often have you . . . ***Mark one answer for each item.***

	Very often	Fairly often	Sometimes	Almost never	Never
a. Been upset because of something that happened unexpectedly?					
b. Felt that you were unable to control the important things in your life?					
c. Felt nervous and stressed?					
d. Felt confident about your ability to handle your personal problems?					
e. Felt that things were going your way?					
f. Found that you could not cope with all of the things you had to do?					
g. Been able to control irritations in your life?					
h. Felt that you were on top of things?					
i. Been angered because of things that were outside of your control?					
j. Felt difficulties were piling up so high that you could not overcome them?					

31. How true or false is each of the following statements for you? *Mark one answer for each statement.*

	Definitely true	Mostly true	Mostly false	Definitely false
a. I am as healthy as anybody I know	☒	☒	☒	☒
b. I seem to get sick a little easier than other people	☒	☒	☒	☒
c. I expect my health to get worse	☒	☒	☒	☒
d. My health is excellent	☒	☒	☒	☒

32. Overall, how would you rate the current level of stress in your . . . *Mark one answer for each item.*

	Much more than usual	More than usual	About the same as usual	Less than usual	Much less than usual
a. Work life?	☒	☒	☒	☒	☒
b. Personal life?	☒	☒	☒	☒	☒

GENDER-RELATED EXPERIENCES IN THE MILITARY IN THE PAST 12 MONTHS

33. During the past 12 months, did any of the following happen to you? If it did, do you believe your gender was a factor? *Mark one answer for each statement.*

	Yes, and your gender was a factor	Yes, but your gender was NOT a factor	No, or does not apply
a. You were rated lower than you deserved on your last evaluation.	☒	☒	☒
b. Your last evaluation contained unjustified negative comments.	☒	☒	☒
c. You were held to a higher performance standard than others.	☒	☒	☒
d. You did not get an award or decoration given to others in similar circumstances.	☒	☒	☒
e. Your current assignment has not made use of your job skills.	☒	☒	☒
f. Your current assignment is not good for your career if you continue in the military.	☒	☒	☒
g. You did not receive day-to-day, short-term tasks that would have helped you prepare for advancement.	☒	☒	☒
h. You did not have a professional relationship with someone who advised (mentored) you on career development or advancement.	☒	☒	☒

33. Continued.

	Yes, and your gender was a factor	Yes, but your gender was NOT a factor	No, or does not apply
i. You did not learn until it was too late of opportunities that would have helped your career.	☒	☒	☒
j. You were unable to get straight answers about your promotion possibilities.	☒	☒	☒
k. You were excluded from social events important to career development and being kept informed.	☒	☒	☒
l. You did not get a job assignment that you wanted and for which you were qualified.	☒	☒	☒

m. If you answered "Yes, and your gender was a factor" to "l" above, was this assignment legally open to women? ☒ Yes ☒ No

	Yes, and your gender was a factor	Yes, but your gender was NOT a factor	No, or does not apply
n. Have you had other adverse personnel actions in the past 12 months? (If yes, please specify).	☒	☒	☒

34. Do you consider ANY of the behaviors (a through n) which you marked as happening to you in Question 33 to have been . . . *Mark one answer for each item.*

☒ Does not apply. I marked "No, or does not apply" to every item.

	All	Some	None
a. Sex discrimination?	☒	☒	☒
b. Racial/ethnic discrimination?	☒	☒	☒
c. Age discrimination?	☒	☒	☒
d. Religious discrimination?	☒	☒	☒
e. Other? (Please specify)	☒	☒	☒

35. In this question you are asked about sex/gender related talk and/or behavior that was unwanted, uninvited, and in which you did not participate willingly.

How often during the past 12 months have you been in situations involving

- **Military Personnel (Active Duty or Reserve)**
  - **on- or off-duty**
  - **on- or off-installation or ship; and/or**
- **DoD/Service Civilian Employees and/or Contractors**
  - **in your workplace or on your installation/ship**

where one or more of these individuals (of either gender) . . . *Mark one answer for each item.*

	Never	Once or twice	Sometimes	Often	Very often
a. Repeatedly told sexual stories or jokes that were offensive to you?	☒	☒	☒	☒	☒
b. Referred to people of your gender in insulting or offensive terms?	☒	☒	☒	☒	☒
c. Made unwelcome attempts to draw you into a discussion of sexual matters (e.g., attempted to discuss or comment on your sex life)?	☒	☒	☒	☒	☒
d. Treated you "differently" because of your gender (e.g., mistreated, slighted, or ignored you)?	☒	☒	☒	☒	☒
e. Made offensive remarks about your appearance, body, or sexual activities?	☒	☒	☒	☒	☒
f. Made gestures or used body language of a sexual nature that embarrassed or offended you?	☒	☒	☒	☒	☒
g. Made offensive sexist remarks (e.g., suggesting that people of your gender are not suited for the kind of work you do)?	☒	☒	☒	☒	☒
h. Made unwanted attempts to establish a romantic sexual relationship with you despite your efforts to discourage it?	☒	☒	☒	☒	☒
i. Put you down or was condescending to you because of your gender?	☒	☒	☒	☒	☒
j. Continued to ask you for dates, drinks, dinner, etc., even though you said "No"?	☒	☒	☒	☒	☒
k. Made you feel like you were being bribed with some sort of reward or special treatment to engage in sexual behavior?	☒	☒	☒	☒	☒

35. Continued.

	Never	Once or twice	Sometimes	Often	Very often
l. Made you feel threatened with some sort of retaliation for not being sexually cooperative (e.g., by mentioning an upcoming review)?	☒	☒	☒	☒	☒
m. Touched you in a way that made you feel uncomfortable?	☒	☒	☒	☒	☒
n. Intentionally cornered you or leaned over you in a sexual way?	☒	☒	☒	☒	☒
o. Treated you badly for refusing to have sex?	☒	☒	☒	☒	☒
p. Implied faster promotions or better treatment if you were sexually cooperative?	☒	☒	☒	☒	☒
q. Made sexually suggestive comments, gestures, or looks (e.g., stared at your body)?	☒	☒	☒	☒	☒
r. Attempted to have sex with you without your consent or against your will, but was not successful?	☒	☒	☒	☒	☒
s. Had sex with you without your consent or against your will?	☒	☒	☒	☒	☒
t. Other unwanted gender-related behavior? (Unless you mark "Never", please describe below)	☒	☒	☒	☒	☒

36. How many of these behaviors that you marked as happening to you, do you consider to have been sexual harassment?

- ☒ None were sexual harassment
- ☒ Some were sexual harassment; some were not sexual harassment
- ☒ All were sexual harassment
- ☒ Does not apply, I marked "Never" to every item
  ⇨ GO TO QUESTION 56

ONE SITUATION OF GENDER-RELATED EXPERIENCES

37. Think about the situation(s) you experienced in the past 12 months that involved the behaviors you marked in Question 35A-Q.

Now pick the one situation that had the greatest effect on you. Which of the following categories best describe(s) the behavior(s) in the situation? *Mark "Yes" or "No" for each item below that describes the situation.*

	No	Yes
a. Sexist Behavior (e.g., mistreated you because of your gender or exposed you to language/behaviors that conveyed offensive or condescending gender-based attitudes)	☒	☒
b. Crude/Offensive Behavior (e.g., exposed you to language/behaviors/jokes of a sexual nature that were offensive or embarrassing to you)	☒	☒
c. Unwanted Sexual Attention (e.g., someone attempted to establish a sexual/romantic relationship with you, even though you objected)	☒	☒
d. Sexual Coercion (e.g., someone implied preferential treatment in exchange for your sexual cooperation)	☒	☒
e. Other (Please specify)	☒	☒

38. To what extent was the situation . . . *Mark one answer for each item.*

	Not at all	Small extent	Moderate extent	Large extent	Very large extent
a. Annoying?	☒	☒	☒	☒	☒
b. Threatening?	☒	☒	☒	☒	☒
c. Offensive?	☒	☒	☒	☒	☒
d. Distracting?	☒	☒	☒	☒	☒
e. Stressful?	☒	☒	☒	☒	☒
f. Intimidating?	☒	☒	☒	☒	☒

39. How many of the behaviors you experienced in the situation do you consider to have been sexual harassment?

- ☒ None were sexual harassment
- ☒ Some were sexual harassment; some were not sexual harassment
- ☒ All were sexual harassment

40. Where and when did the situation occur? *Mark one answer for each item.*

	None of it	Some of it	Most of it	All of it
a. At a military installation	☒	☒	☒	☒
b. At work (the place where you perform your military duties)	☒	☒	☒	☒
c. During duty hours	☒	☒	☒	☒
d. In living quarters/barracks	☒	☒	☒	☒
e. In a work environment where members of your gender are uncommon	☒	☒	☒	☒
f. While you were deployed	☒	☒	☒	☒
g. In the local community around an installation	☒	☒	☒	☒
h. At your current permanent duty station	☒	☒	☒	☒
i. While you were on TDY/TAD, at sea, or during field exercises/alerts	☒	☒	☒	☒

41. Was the offender(s) . . . ? *Mark one.*

- ☒ One person (male)
- ☒ One person (female)
- ☒ More than one person (all males)
- ☒ More than one person (all females)
- ☒ More than one person (both males and females)
- ☒ Not sure

42. Was the offender(s) . . . *Mark "Yes" or "No" for each.*

	No	Yes
a. Someone in your chain-of-command?	☒	☒
b. Other military person(s) of higher rank/grade than you?	☒	☒
c. Your military coworker(s)?	☒	☒
d. Your military subordinate(s)?	☒	☒
e. Other military person(s)?	☒	☒
f. DoD/Service civilian employee(s)?	☒	☒
g. DoD/Service civilian contractor(s)?	☒	☒
h. Person(s) in the local community?	☒	☒
i. Unknown person(s)?	☒	☒

43. During the course of the situation you have in mind, how often did the event(s) occur?

- ☒ Once
- ☒ Occasionally
- ☒ Frequently

44. How long did the situation last, or if continuing, how long has it been going on?

- ☒ Less than 1 week
- ☒ 1 week to less than 1 month
- ☒ 1 month to less than 3 months
- ☒ 3 months to less than 6 months
- ☒ 6 months or more

45. As a result of the situation, did you . . . *Mark "Yes" or "No" for each item.*

	Yes	No
a. Ignore the behavior?	☒	☒
b. Avoid the person(s) who bothered you?	☒	☒
c. Tell the offender(s) to stop?	☒	☒
d. Ask someone else to speak to the offender(s) for you?	☒	☒
e. Blame yourself for what happened?	☒	☒
f. Act as though it did not bother you?	☒	☒
g. Call a hotline for advice/information (not to file a complaint)?	☒	☒
h. Request a transfer?	☒	☒
i. Think about getting out of your Service?	☒	☒
j. Accomplish less than you normally would at work?	☒	☒
k. Other? (Please specify)	☒	☒

46. Did you talk about the situation with . . . *Mark "Yes," "No," or "Does not apply" for each.*

	Yes	No	Does not apply
a. Your spouse/significant other?	☒	☒	☒
b. A friend?	☒	☒	☒
c. A family member (e.g., parent, brother/sister)?	☒	☒	☒
d. A chaplain, counselor, ombudsman, or health care provider?	☒	☒	☒

47. Did you discuss/report the situation to any installation/Service/DoD individuals or organizations?

☒ Yes
☒ No ⇨ GO TO QUESTION 55

48. Did you discuss/report the situation with/to any of the following installation/Service/DoD individuals or organizations? *Mark one answer for each.*

	Yes, and it made things better	Yes, but it made no difference	Yes, and it made things worse	Yes, but it is too soon to tell if it will make things better or worse	No, I did not discuss/report it to this person/office
a. Someone in your chain-of-command.	☒	☒	☒	☒	☒
b. Someone in the chain-of-command of the person(s) who did it	☒	☒	☒	☒	☒
c. Special military office responsible for handling these kinds of complaints (e.g., Military Equal Opportunity or Civil Rights Office)	☒	☒	☒	☒	☒
d. Other person or office with responsibility for follow-up	☒	☒	☒	☒	☒

49. What actions were taken in response to your discussing/reporting the situation? *Mark "Yes," "No," or "Don't know" for each item.*

	Yes	No	Don't know
a. Person(s) who bothered you was/were talked to about the behavior.	☒	☒	☒
b. Your complaint was/is being investigated.	☒	☒	☒
c. The situation was resolved informally	☒	☒	☒
d. You were encouraged to drop the complaint	☒	☒	☒
e. Your complaint was discounted or not taken seriously.	☒	☒	☒
f. The rules on harassment were explained to everyone in the unit/office/place where the problem had occurred.	☒	☒	☒
g. The situation was/is being corrected	☒	☒	☒
h. Some action was/is being taken against the person(s) who bothered you	☒	☒	☒
i. Some action was/is being taken against you	☒	☒	☒

50. Did you formally report the situation?

☒ Yes
☒ No ⇨ GO TO QUESTION 56

51. Was your complaint found to be true?

☒ Yes
☒ No
☒ They were unable to determine whether your complaint was true or not.
☒ Does not apply, the action is still being processed. ⇨ GO TO QUESTION 53

52. How satisfied were you with the outcome of your complaint?

☒ Very satisfied
☒ Satisfied
☒ Neither satisfied nor dissatisfied
☒ Dissatisfied
☒ Very dissatisfied

53. How satisfied were/are you with the following aspects of the reporting process? *Mark one answer for each item.*

	Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied
a. Availability of information about how to file a complaint	☒	☒	☒	☒	☒
b. Treatment by personnel handling your complaint	☒	☒	☒	☒	☒
c. Amount of time it took/is taking to resolve your complaint	☒	☒	☒	☒	☒
d. How well you were/are kept informed about the progress of your complaint	☒	☒	☒	☒	☒
e. The complaint process overall	☒	☒	☒	☒	☒

54. As a result of reporting the situation, did you experience any . . . *Mark "Yes," "No," or "Don't know" for each item.*

	Yes	No	Don't know
a. Professional retaliation (e.g., loss of privileges, denied promotion/training, transferred to less favorable job)?	☒	☒	☒
b. Social retaliation (e.g., ignored by coworkers, being blamed for the situation)?	☒	☒	☒

If you formally or informally reported the situation, GO TO QUESTION 56.

55. What were your reasons for not reporting the situation to any of the Installation/Service/DoD individuals or organizations? *Mark "Yes" or "No" for each statement.*

	Yes	No
a. You thought it was not important enough to report	☒	☒
b. You did not know how to report	☒	☒
c. You felt uncomfortable making a report	☒	☒
d. You took care of the problem yourself	☒	☒
e. You did not think anything would be done	☒	☒
f. You thought you would not be believed	☒	☒
g. You thought reporting would take too much time and effort	☒	☒
h. You were afraid of retaliation/reprisals from the person(s) who did it or from their friends.	☒	☒
i. You were afraid of negative professional outcomes	☒	☒
j. You thought you would be labeled a troublemaker	☒	☒
k. Other (Please specify)	☒	☒

UNWANTED SEXUAL CONTACT

56. In the past 12 months, have you experienced any of the following sexual contacts that were against your will or occurred when you did not or could not consent where someone . . .

- **Sexually touched you (e.g., intentional touching of genitalia, breasts, or buttocks) or made you sexually touch them?**
- **Attempted to make you have sexual intercourse, but was not successful?**
- **Made you have sexual intercourse?**
- **Attempted to make you perform or receive oral sex, anal sex, or penetration by a finger or object, but was not successful?**
- **Made you perform or receive oral sex, anal sex, or penetration by a finger or object?**

☒ Yes, once
☒ Yes, multiple times
☒ No ⇨ GO TO QUESTION 77

ONE SITUATION OF UNWANTED SEXUAL CONTACT

57. Think about the situation(s) you experienced in the past 12 months that involved the behaviors in the previous question. Tell us about the one event that had the greatest effect on you.

What did the person(s) do during the situation? *Mark one answer for each behavior.*

	Did not do this	Did this
a. Sexually touched you (e.g., intentional touching of genitalia, breasts, or buttocks) or made you sexually touch them	☒	☒
b. Attempted to make you have sexual intercourse, but was not successful	☒	☒
c. Made you have sexual intercourse	☒	☒
d. Attempted to make you perform or receive oral sex, anal sex, or penetration by a finger or object, but was not successful	☒	☒
e. Made you perform or receive oral sex, anal sex, or penetration by a finger or object	☒	☒

58. Did the situation occur . . . *Mark "Yes" or "No" for each item.*

	Yes	No
a. At a military installation?	☒	☒
b. While you were deployed?	☒	☒
c. At your current permanent duty station?	☒	☒
d. During your work day/duty hours?	☒	☒
e. While you were on TDY/TAD, at sea, or during field exercises/alerts?	☒	☒

59. When did the situation occur . . . *Mark "Yes" or "No" for each.*

	No	Yes
a. Between 6 a.m. and 6 p.m.?	☒	☒
b. After 6 p.m. but before midnight?	☒	☒
c. After midnight but before 6 a.m.?	☒	☒

60. Where did the situation occur? *Mark one.*

- ☒ In your home/living quarters
- ☒ In the home/living quarters of the offender
- ☒ In the home/living quarters of someone else
- ☒ At a bar/nightclub
- ☒ At work
- ☒ In a vehicle
- ☒ Other (Please specify)

61. Was the offender(s) . . . ? *Mark one.*

- ☒ One person (male)
- ☒ One person (female)
- ☒ More than one person (all males)
- ☒ More than one person (all females)
- ☒ More than one person (both males and females)
- ☒ Not sure

62. Was the offender(s) . . . *Mark "Yes" or "No" for each.*

	No	Yes
a. Someone in your chain-of-command?	☒	☒
b. Other military person(s) of higher rank/grade than you?	☒	☒
c. Your military coworker(s)?	☒	☒
d. Your military subordinate(s)?	☒	☒
e. Other military person(s)?	☒	☒
f. DoD/Service civilian employee(s)?	☒	☒
g. DoD/Service civilian contractor(s)?	☒	☒
h. Person(s) in the local community?	☒	☒
i. Unknown person(s)?	☒	☒

63. Did the situation occur . . . *Mark "Yes" or "No" for each item.*

	No	Yes
a. When your judgment was impaired due to alcohol?	☒	☒
b. When you were so intoxicated that you were unable to consent?	☒	☒
c. When the offender(s) was intoxicated?	☒	☒
d. After the offender(s) used drugs to knock you out (e.g., date rape drugs, sedatives, etc.)?	☒	☒

64. Did the offender(s) . . . *Mark "Yes" or "No" for each item.*

	No	Yes
a. Threaten to ruin your reputation if you did not consent?	☒	☒
b. Threaten to physically harm you if you did not consent?	☒	☒
c. Threaten to physically harm a member of your family if you did not consent?	☒	☒
d. Use some degree of physical force (e.g., holding you down)?	☒	☒
e. Use their authority for a search (e.g., body/personal search)?	☒	☒
f. Use their authority for a medical or dental exam/procedure?	☒	☒
g. Use their authority as a military/civilian supervisor?	☒	☒

65. Prior to the situation, did any of the offender(s) . . . *Mark "Yes" or "No" for each item.*

	No	Yes
a. Sexually harass you?	☒	☒
b. Stalk you?	☒	☒

66. Did you talk about the situation with . . . *Mark "Yes," "No," or "Does not apply" for each.*

	Does not apply	No	Yes
a. Your spouse/significant other?	☒	☒	☒
b. A friend?	☒	☒	☒
c. A family member (e.g., parent, brother/sister)?	☒	☒	☒
d. A chaplain, counselor, ombudsman, or health care provider?	☒	☒	☒
e. A civilian hotline or crisis center?	☒	☒	☒
f. A military hotline or Military OneSource?	☒	☒	☒

67. Did you seek professional help/treatment or use other support services following the situation?

- ☒ Yes, from military/DoD-related service providers only
- ☒ Yes, from civilian service providers only
- ☒ Yes, from both civilian and military service providers
- ☒ No ⇨ GO TO QUESTION 69

68. How satisfied are you with the professional help/treatment you received?

- ☒ Very satisfied
- ☒ Satisfied
- ☒ Neither satisfied nor dissatisfied
- ☒ Dissatisfied
- ☒ Very dissatisfied

69. Did you discuss/report the situation with/to any authority or organization? *Mark one.*

- ☒ No ⇨ GO TO QUESTION 76
- ☒ Yes, I made a restricted report ⇨ GO TO QUESTION 74
- ☒ Yes, I made an unrestricted report
- ☒ Yes, but I am not sure whether it was unrestricted or restricted reporting

70. Did you discuss/report the situation with/to any of the following authorities or organizations? *Mark "Yes" or "No" for each item.*

	Yes	No
a. Your immediate supervisor	☒	☒
b. Someone else in your chain-of-command	☒	☒
c. Sexual Assault Response Coordinator (SARC)/Victim Advocate	☒	☒
d. Chaplain or counselor	☒	☒
e. Health care provider	☒	☒
f. Legal services or criminal investigators	☒	☒
g. Other	☒	☒

71. What actions were taken in response to your report? *Mark "Yes," "No," or "Don't know" for each item.*

	Yes	No	Don't know
a. Your report was/is being investigated	☒	☒	☒
b. You were/are being kept informed of the status of the investigation	☒	☒	☒
c. Action was/is being taken against the offender	☒	☒	☒
d. You were encouraged to drop the complaint/withdraw your report	☒	☒	☒
e. Action was/is being taken against you	☒	☒	☒
f. Some other action was/is being taken	☒	☒	☒

72. How satisfied have you been with . . . *Mark one answer in each row.*

	Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied	Does not apply
a. The quality of sexual assault advocacy services you received?	☒	☒	☒	☒	☒	☒
b. The quality of counseling services you received?	☒	☒	☒	☒	☒	☒
c. The quality of medical care you received?	☒	☒	☒	☒	☒	☒
d. Your treatment by the Sexual Assault Victim Advocate assigned to you?	☒	☒	☒	☒	☒	☒
e. Your treatment by the Sexual Assault Response Coordinator (SARC) handling your report?	☒	☒	☒	☒	☒	☒
f. Your treatment by the Commander handling your report?	☒	☒	☒	☒	☒	☒
g. Your treatment by the criminal investigator handling your report?	☒	☒	☒	☒	☒	☒
h. Your treatment by the Trial Defense Office personnel?	☒	☒	☒	☒	☒	☒
i. Your treatment by the Legal Office personnel (prosecution)?	☒	☒	☒	☒	☒	☒
j. The amount of time investigation process took/is taking?	☒	☒	☒	☒	☒	☒
k. How well you were/are kept informed about the progress of your case?	☒	☒	☒	☒	☒	☒
l. The availability of information about how to file a restricted report?	☒	☒	☒	☒	☒	☒
m. The availability of information about how to file an unrestricted report?	☒	☒	☒	☒	☒	☒
n. The reporting process overall?	☒	☒	☒	☒	☒	☒

73. As a result of reporting the situation, did you . . . *Mark "Yes," "No," or "Don't know" for each item.*

	Yes	No	Don't know
a. Experience any professional retaliation (e.g., loss of privileges, denied promotion/training, transferred to less favorable job)?	☒	☒	☒
b. Experience any social retaliation (e.g., ignored by coworkers, being blamed for the situation)?	☒	☒	☒
c. Get placed on a medical hold?	☒	☒	☒
d. Get placed on a legal hold?	☒	☒	☒
e. Get an involuntary transfer to a different assignment?	☒	☒	☒
f. Get a requested transfer to a different assignment?	☒	☒	☒
g. Feel you were overprotected (e.g., smothered or treated like a child)?	☒	☒	☒

74. When you reported the situation were you offered . . . *Mark "Yes" or "No" for each.*

	No	Yes
a. Sexual assault advocacy services (e.g., referrals or offers to accompany/transport you to appointments)?	☒	☒
b. Counseling services?	☒	☒
c. Medical or forensic services?	☒	☒
d. Legal services?	☒	☒

75. How soon after the situation occurred did you report (restricted or unrestricted) your experience to any authority or organization? *Mark one.*

- ☒ Within 24 hours
- ☒ Within 2-3 days
- ☒ Within 4-14 days
- ☒ Within 15-30 days
- ☒ Within 2 months to less than 1 year
- ☒ Within 1 to 3 years of the situation
- ☒ Over 3 years after the situation

If you made a restricted or unrestricted report of the situation to an authority or organization, GO TO QUESTION 77.

76. What were your reasons for not reporting the situation to any of the Installation/Service/DoD individuals or organizations? *Mark "Yes" or "No" for each statement.*

	No	Yes
a. You thought it was not important enough to report	☒	☒
b. You did not know how to report	☒	☒
c. You felt uncomfortable making a report	☒	☒
d. You did not think anything would be done	☒	☒
e. You thought you would not be believed	☒	☒
f. You thought reporting would take too much time and effort	☒	☒
g. You were afraid of retaliation/reprisals from the person(s) who did it or from their friends.	☒	☒
h. You thought your performance evaluation or chance for promotion would suffer	☒	☒
i. You thought you would be labeled a troublemaker	☒	☒
j. You did not want anyone to know	☒	☒
k. You feared you or others would be punished for infractions/violations, such as underage drinking or fraternization	☒	☒
l. Other (Please specify)	☒	☒

PERSONNEL POLICY AND PRACTICES

77. Please give your opinion about whether the persons below make honest and reasonable efforts to stop sexual harassment, regardless of what is said officially. *Mark "Yes," "No," or "Don't know" for each.*

	Don't know	No	Yes
a. Senior leadership of your Service	☒	☒	☒
b. Senior leadership of your installation/ship	☒	☒	☒
c. Your immediate supervisor	☒	☒	☒

78. In your work group, to what extent . . . *Mark one answer in each row.*

	Not at all	Small extent	Moderate extent	Large extent	Very large extent
a. Would members of your work group feel free to report sexual harassment without fear of reprisals?	☒	☒	☒	☒	☒
b. Would members of your work group feel free to report sexual assault without fear of reprisals?	☒	☒	☒	☒	☒
c. Would complaints about sexual harassment be taken seriously no matter who files them?	☒	☒	☒	☒	☒
d. Would people be able to get away with sexual harassment if it was reported?	☒	☒	☒	☒	☒
e. Would people be able to get away with sexual assault if it was reported?	☒	☒	☒	☒	☒

79. At your installation/ship, to what extent . . . *Mark one answer in each row.*

	Not at all	Small extent	Moderate extent	Large extent	Very large extent
a. Are policies forbidding sexual harassment publicized?	☒	☒	☒	☒	☒
b. Are complaint procedures related to sexual harassment publicized?	☒	☒	☒	☒	☒
c. Are reports of sexual harassment taken seriously?	☒	☒	☒	☒	☒
d. Are sexual assault reporting procedures publicized?	☒	☒	☒	☒	☒
e. Are reports of sexual assault taken seriously?	☒	☒	☒	☒	☒

SEXUAL HARASSMENT TRAINING

80. Have you had any military training during the past 12 months on topics related to *sexual harassment*?

- ☒ Yes
- ☒ No ⇨ GO TO QUESTION 84

81. In the past 12 months, how many times have you had military training on topics related to *sexual harassment*? *To indicate nine or more, enter "9".*

☐ Times

82. My Service's *sexual harassment* training . . . *Mark one answer in each row.*

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
a. Provides a good understanding of what words and actions are considered sexual harassment.	☒	☒	☒	☒	☒
b. Teaches that sexual harassment reduces the cohesion and effectiveness of my Service as a whole.	☒	☒	☒	☒	☒
c. Identifies behaviors that are offensive to others and should not be tolerated.	☒	☒	☒	☒	☒
d. Gives useful tools for dealing with sexual harassment.	☒	☒	☒	☒	☒
e. Explains the process for reporting sexual harassment.	☒	☒	☒	☒	☒
f. Makes me feel it is safe to complain about unwanted sex-related attention.	☒	☒	☒	☒	☒
g. Provides information about policies, procedures, and consequences of sexual harassment.	☒	☒	☒	☒	☒

83. In your opinion, how effective was the training you received in actually reducing/preventing behaviors that might be seen as *sexual harassment*?

- ☒ Very effective
- ☒ Moderately effective
- ☒ Slightly effective
- ☒ Not at all effective

SEXUAL ASSAULT TRAINING

84. Have you had any military training during the past 12 months on topics related to *sexual assault*?

- ☒ Yes
- ☒ No ⇨ GO TO QUESTION 88

85. In the past 12 months, how many times have you had military training on topics related to *sexual assault*? *To indicate nine or more, enter "9".*

☐ Times

86. My Service's *sexual assault* training . . . *Mark one answer in each row.*

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
a. Provides a good understanding of what actions are considered sexual assault.	☒	☒	☒	☒	☒
b. Teaches how to avoid situations that might increase the risk of sexual assault.	☒	☒	☒	☒	☒
c. Teaches how to obtain medical care following a sexual assault.	☒	☒	☒	☒	☒
d. Explains the role of the chain-of-command in handling sexual assaults.	☒	☒	☒	☒	☒
e. Explains the reporting options available if a sexual assault occurs.	☒	☒	☒	☒	☒
f. Identifies the points of contact for reporting sexual assault (e.g., SARC, Victim Advocate).	☒	☒	☒	☒	☒
g. Explains how sexual assault is a mission readiness problem.	☒	☒	☒	☒	☒

87. In your opinion, how effective was the training you received in . . . *Mark one answer in each row.*

	Not at all effective	Slightly effective	Moderately effective	Very effective
a. Actually reducing/preventing sexual assault or behaviors related to sexual assault?	☒	☒	☒	☒
b. Explaining the difference between restricted and unrestricted reporting of sexual assault?	☒	☒	☒	☒

88. At your installation/ship, is there a . . . *Mark one answer in each row.*

	Don't know	No	Yes
a. Specific office with the authority to investigate sexual harassment?	☒	☒	☒
b. Sexual Assault Response Coordinator (SARC) to help those who experience sexual assault?	☒	☒	☒
c. Sexual Assault Victim Advocate to help those who experience sexual assault?	☒	☒	☒

PRIOR EXPERIENCES

89. Prior to your entry into the military, were you ever . . . *Mark "Yes" or "No" for each item.*

	No	Yes
a. Sexually harassed?	☒	☒
b. Sexually assaulted?	☒	☒

HOW ARE WE DOING?

90. In your opinion, has *sexual harassment* in our nation become more or less of a problem over the last 4 years?

- ☒ Less of a problem today
- ☒ About the same as 4 years ago
- ☒ More of a problem today

91. In your opinion, has *sexual assault* in our nation become more or less of a problem over the last 4 years?

- ☒ Less of a problem today
- ☒ About the same as 4 years ago
- ☒ More of a problem today

92. In your opinion, has *sexual harassment* in the military become more or less of a problem over the last 4 years?

- ☒ Don't know, you have been in the military less than 4 years
- ☒ Less of a problem today
- ☒ About the same as 4 years ago
- ☒ More of a problem today

93. In your opinion, has *sexual assault* in the military become more or less of a problem over the last 4 years?

- ☒ Don't know, you have been in the military less than 4 years
- ☒ Less of a problem today
- ☒ About the same as 4 years ago
- ☒ More of a problem today

94. In your opinion, how often does *sexual harassment* occur in the military now, as compared with a few years ago?

- ☒ Don't know, you have been in the military less than 4 years
- ☒ Much less often
- ☒ Less often
- ☒ About the same
- ☒ More often
- ☒ Much more often

95. In your opinion, how often does *sexual assault* occur in the military now, as compared with a few years ago?

- ☒ Don't know, you have been in the military less than 4 years
- ☒ Much less often
- ☒ Less often
- ☒ About the same
- ☒ More often
- ☒ Much more often

TAKING THE SURVEY

96. If you have comments or concerns that you were not able to express in answering this survey, please enter them in the space provided. Please do not use identifying names or information. Your feedback is useful and appreciated.

APPENDIX D: LETTER OF INSTRUCTIONS TO SURVEY RESPONDENTS

UNDER SECRETARY OF DEFENSE
4000 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-4000

PERSONNEL AND READINESS

July 19, 2006

**********AUTO** 5-DIGIT 09012
SGT DANIEL J SAMPLE USAF 04000065
PSC 2 BOX 9999
APO AE 09000-9999

Dear Sergeant Sample:

Recently, you were asked to participate in the *2006 Workplace and Gender Relations Survey of Active-Duty Members*. If you have already completed the survey, thank you for taking the time to do so.

If you have not had a chance to complete the survey, I encourage you to do so. If you are thinking about not participating, please reconsider. Your participation is crucial and I appreciate your taking the time to complete the survey—this really is your chance to express your views on gender-related policies and programs and to identify areas where improvements are needed. While your participation is desired, it is entirely voluntary.

Please take the survey by logging on to the following Web site: **https://dodsurvey.osd.mil/** At the Web site, you will need to enter your **Ticket Number: GXXXXXXX**

If you cannot take the survey now, please take it soon. The survey should take approximately 30 minutes to complete. Since these surveys are *Official Business*, you can use the computer at your duty station to complete the survey, or you can complete it at home or elsewhere. If you have any questions, please e-mail HRSurvey@osd.pentagon.mil or leave a message anytime, toll -free at 1-800-881-5307. If you do not wish to participate or to receive reminders about this survey, you may remove yourself from the mailing list by contacting the Survey Processing Center. Be sure to include your Ticket Number in all communications.

Your time and cooperation in this very important effort are greatly appreciated.

Sincerely,

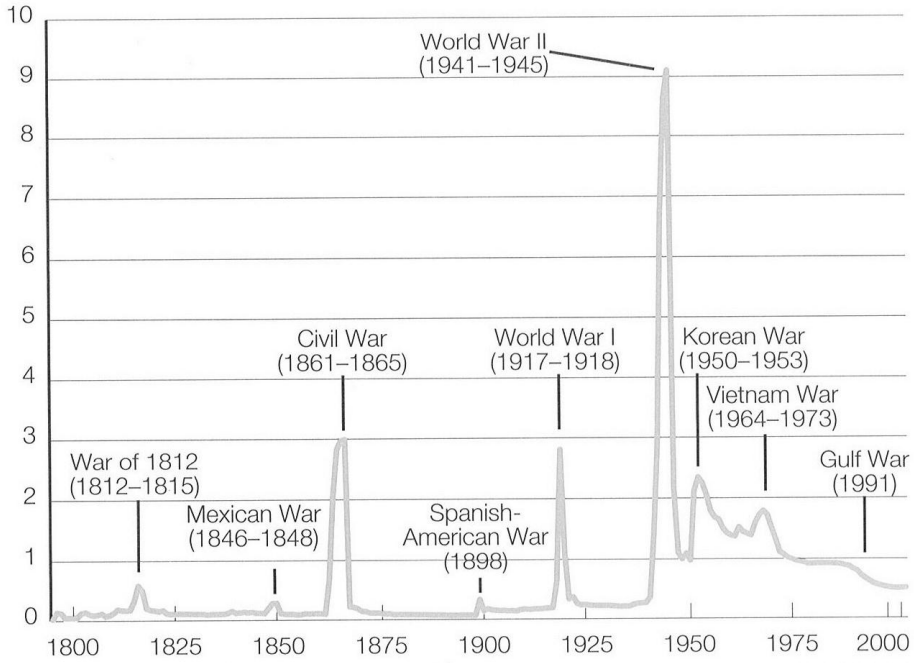
David S. C. Chu
Under Secretary of Defense
(Personnel and Readiness)

17 **P.S. for families:** We need to hear from all members, even those who are deployed or away for other reasons. If possible, please forward this message to your military family member. 04000065

APPENDIX E: MILITARY PARTICIPATION FROM 1793 - 2002

Participation in the U.S. Armed Forces, 1793–2002

Percent of population



Source: DoD, *Selected Manpower Statistics, Fiscal Year 2002* (www.dior.whs.mil/mmid/M01/fy02/m01fy02.pdf, accessed Oct. 6, 2004): table 2-11; and these U.S. Census Bureau publications: *Historical Statistics of the United States: Colonial Times to 1957* (1960); "Historical National Population Estimates: July 1, 1900 to July 1, 1999" (revised June 28, 2000; www.census.gov/popest/archives/1990s/popclockest.txt, accessed Dec. 6, 2004); and "Annual Estimates of the Population for the United States and States, and for Puerto Rico: April 1, 2000 to July 1, 2003" (revised May 11, 2004; www.census.gov/popest/states/NST-EST2003-ann-est.html, accessed Dec. 6, 2004).

APPENDIX F: TABLES 5.3A – 5.9A SEXUAL HARASSMENT MULTIVARIATE ANALYSES

Table 5.3A Results for Logistic Regression Models Predicting Sexual Harassment with Deployment Generally (Previously Deployed or Currently Deployed) vs. Never Deployed

Coefficients and Odds ratios (ORs)

Variables	Model #1	Model #2	Model #3	Model #4
Independent				
Military Branch[x]				
Army	.63*** (1.89)		.62*** (1.87)	.65*** (1.92)
Navy	.45*** (1.58)		.44*** (1.55)	.41*** (1.51)
Marine Corps	.71*** (2.04)		.70*** (2.03)	.54*** (1.72)
Previously or Currently Deployed		.16*** (1.18)	.12* (1.13)	.25*** (1.28)
Race/Ethnicity				
Minority‡				-.13* (.87)
Hispanic/Latina†				.11 (1.12)
Age[z]				
19 years and younger				.56** (1.76)
20-24 years				.62*** (1.87)
25-29 years				.65*** (1.92)
30-34 years				.60** (1.82)
35-39 years				.34* (1.40)
40-44 years				.23 (1.26)
Rank/Service[y]				
Enlisted Personnel				.25*** (1.28)
Years of Service[o]				
Less than 3 years				.47*** (1.61)
3-6 years				.30** (1.35)
6-10 years				.13 (1.14)
Atypical Occupation				.21** (1.23)
Gender Uncommon				.49*** (1.64)
-2 Log Likelihood	9450.64	9555.00	9444.72	9075.04
Nagelkerke (pseudo R^2)	.02	.00	.02	.08
n	8,059	8,059	8,059	8,059

*** Significance at the p<.001 level.
** Significance at the p<.01 level.
* Significance at the p<.05 level.
[x] Omitted (referent) category is Air Force
‡ Minority category consists of 1997 Federal Register definitions. American Indian or Alaska Native, Asian, Black, Pacific Islander.
† Hispanic or Latina. A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.
[x] Omitted (referent) category is Air Force.
[z] Omitted (referent) category is 45 years or more.
[y] Omitted (referent) category is Officer.
[o] Omitted (referent) category is 10 Years or more service.

Table 5.4A Results for Logistic Regression Models Predicting Sexual Harassment with Women Previously Deployed (but not currently) vs. Women Never Deployed

Coefficients and Odds ratios (ORs)

Variables	Model #1	Model #2	Model #3
Independent			
Previously (but not Currently) Deployed	.10* (1.10)	.07 (1.07)	.23*** (1.26)
Military Branch[x]			
Army		.60***(1.83)	.65*** (1.92)
Navy		.42***(1.53)	.40*** (1.49)
Marine Corps		.70***(2.02)	.54*** (1.72)
Race/Ethnicity			
Minority‡			-.12 (0.88)
Hispanic/Latina†			.09 (1.09)
Age[2]			
19 years and younger			.55** (1.74)
20-24 years			.61*** (1.84)
25-29 years			.63*** (1.87)
30-34 years			.58*** (1.79)
35-39 years			.30* (1.35)
40-44 years			.21 (1.23)
Rank/Service[3]			
Enlisted Personnel			.26*** (1.30)
Years of Service[o]			
Less than 3 years			.48** (1.61)
3-6 years			.31** (1.37)
6-10 years			.14 (1.15)
Atypical Occupation			.23** (1.26)
Gender Uncommon			.48*** (1.62)
-2 Log Likelihood	8766.35	8666.69	8323.04
Nagelkerke (pseudo R^2)	.00	.02	.08
n	8,059	8,059	8,059

*** Significance at the p<.001 level.
** Significance at the p<.01 level.
* Significance at the p<.05 level.
[x] Omitted (referent) category is Air Force
‡ Minority category consists of 1997 Federal Register definitions. American Indian or Alaska Native, Asian, Black, Pacific Islander.
† Hispanic or Latina. A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.
[x] Omitted (referent) category is Air Force.
[2] Omitted (referent) category is 45 years or more.
[3] Omitted (referent) category is Officer.
[o] Omitted (referent) category is 10 Years or more service.

Table 5.5A Results for Logistic Regression Models Predicting Sexual Harassment with Women Currently Deployed vs. Women Never Deployed

Variables	Coefficients and Odds ratios (ORs) Model #1	Model #2	Model #3
Independent			
Currently Deployed	.59***(1.81)	.46*** (1.58)	.41*** (1.51)
Military Branch[x]			
Army		.63***(1.87)	.61*** (1.84)
Navy		.36***(1.44)	.33** (1.39)
Marine Corps		.72***(2.06)	.52*** (1.69)
Race/Ethnicity			
Minority‡			-.12 (.88)
Hispanic/Latina†			.14 (1.15)
Age[z]			
19 years and younger			.44 (1.55)
20-24 years			.54* (1.71)
25-29 years			.58* (1.79)
30-34 years			.49* (1.63)
35-39 years			.35 (1.42)
40-44 years			.18 (1.20)
Rank/Service[3]			
Enlisted Personnel			.38*** (1.47)
Years of Service[o]			
Less than 3 years			.46** (1.58)
3-6 years			.31 (1.37)
6-10 years			.27 (1.31)
Atypical Occupation			.14 (1.15)
Gender Uncommon			.54*** (1.72)
-2 Log Likelihood	4442.46	4388.27	4211.07
Nagelkerke (pseudo R^2)	.01	.03	.09
n	8,059	8,059	8,059

*** Significance at the p<.001 level.
** Significance at the p<.01 level.
* Significance at the p<.05 level.
[x] Omitted (referent) category is Air Force
‡ Minority category consists of 1997 Federal Register definitions. American Indian or Alaska Native, Asian, Black, Pacific Islander.
† Hispanic or Latina. A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.
[x] Omitted (referent) category is Air Force.
[z] Omitted (referent) category is 45 years or more.
[3] Omitted (referent) category is Officer.
[o] Omitted (referent) category is 10 Years or more service.

Table 5.6A Results for Logistic Regression Models Predicting Sexual Harassment with Women Currently Deployed vs. Women Previously Deployed

Coefficients and Odds ratios (ORs)

Variables	Model # 1	Model #2	Model #3
Independent			
Currently Deployed	.49*** (1.63)	.41*** (1.52)	.20* (1.22)
Military Branch[x]			
Army		.53*** (1.70)	.62*** (1.87)
Navy		.48*** (1.62)	.47*** (1.60)
Marine Corps		.68*** (1.97)	.53*** (1.70)
Race/Ethnicity			
Minority‡			-.16* (0.84)
Hispanic/Latina†			.10 (1.11)
Age[z]			
19 years and younger			.63* (1.87)
20-24 years			.66*** (1.94)
25-29 years			.72*** (2.06)
30-34 years			.67*** (1.96)
35-39 years			.39* (1.48)
40-44 years			.28 (1.32)
Rank/Service[3]			
Enlisted Personnel			.14 (1.15)
Years of Service[o]			
Less than 3 years			.47** (1.61)
3-6 years			.26* (1.29)
6-10 years			.04 (1.04)
Atypical Occupation			.24** (1.27)
Gender Uncommon			.46*** (1.59)
-2 Log Likelihood	5846.12	5796.09	5596.77
Nagelkerke (pseudo R^2)	.00	.02	.07
n	8,059	8,059	8,059

*** Significance at the p<.001 level.

** Significance at the p<.01 level.

* Significance at the p<.05 level.

[x] Omitted (referent) category is Air Force

‡ Minority category consists of 1997 Federal Register definitions. American Indian or Alaska Native, Asian, Black, Pacific Islander.

† Hispanic or Latina. A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.

[x] Omitted (referent) category is Air Force.

[z] Omitted (referent) category is 45 years or more.

[3] Omitted (referent) category is Officer.

[o] Omitted (referent) category is 10 Years or more service.

Table 5.7A Results for Logistic Regression Models Predicting Sexual Harassment with Women Never Deployed and Male Dominated Work Units

	Coefficients and Odds ratios (ORs)							
Variables	Model #1		Model #2		Model #3		Model #4	
Independent								
Military Branch*								
Army	.67***	(1.96)			.66***	(1.93)	.62***	(1.86)
Navy	.32**	(1.37)			.29*	(1.34)	.26*	(1.30)
Marine Corps	.73***	(2.07)			.53***	(1.70)	.44**	(1.55)
Gender Ratios of Workgroups††								
All males (token female)			1.18***	(3.28)	1.17***	(3.23)	.65**	(1.93)
Almost entirely male			.77***	(2.16)	.73***	(2.07)	.36**	(1.43)
More males than females			.40***	(1.50)	.37***	(1.46)	.27**	(1.31)
Race/Ethnicity								
Minority‡							-.05	(.94)
Hispanic/Latina†							.10	(1.11)
Age[2]								
19 years and younger							.28	(1.33)
20-24 years							.41	(1.51)
25-29 years							.42	(1.53)
30-34 years							.35	(1.42)
35-39 years							.16	(1.17)
40-44 years							.08	(1.08)
Rank/Service[3]								
Enlisted Personnel							.43***	(1.54)
Years of Service[c]								
Less than 3 years							.55**	(1.73)
3-6 years							.42*	(1.53)
6-10 years							.38*	(1.46)
Atypical Occupation							.11	(1.11)
Gender Uncommon							.36**	(1.43)
-2 Log Likelihood	3626.01		3605.84		3559.92		3446.24	
Nagelkerke (pseudo R^2)	.02		.03		.05		.10	
n	3,209		3,209		3,209		3,209	

*** Significance at the p<.001 level.
** Significance at the p<.01 level.
* Significance at the p<.05 level.
* Omitted (referent) category is Air Force
†† Omitted (referent) categories are "Equal Genders Workgroup," "More Females Workgroup," "Almost Entirely Female Workgroup," & "All Female Workgroup."
‡ Minority category consists of 1997 Federal Register definitions. American Indian or Alaska Native, Asian, Black, Pacific Islander.
† Hispanic or Latina. A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.
* Omitted (referent) category is Air Force.
[2] Omitted (referent) category is 45 years or more.
[3] Omitted (referent) category is Officer.
[c]Omitted (referent) category is 10 Years or more service.

Table 5.8A Results for Logistic Regression Models Predicting Sexual Harassment with Women Never or Previously Deployed (but not currently) and Male Dominated Work Units

	Coefficients and Odds ratios (ORs)							
Variables	Model #1		Model #2		Model #3		Model #4	
Independent								
***Military Branch**[x]*								
Army	.61***	(1.84)			.61***	(1.85)	.65***	(1.92)
Navy	.43***	(1.54)			.40***	(1.49)	.40***	(1.50)
Marine Corps	.71***	(2.03)			.53***	(1.70)	.48***	(1.62)
Gender Ratios of Workgroups†††								
All males (token female)			.98***	(2.66)	.94***	(2.58)	.51***	(1.68)
Almost entirely male			.77***	(2.16)	.75***	(2.11)	.42***	(1.53)
More males than females			.40***	(1.49)	.37***	(1.45)	.28***	(1.33)
Race/Ethnicity								
Minority‡							-.10	(0.89)
Hispanic/Latina†							.09	(1.09)
Age[z]								
19 years and younger							.49*	(1.63)
20-24 years							.58***	(1.78)
25-29 years							.60***	(1.83)
30-34 years							.56***	(1.76)
35-39 years							.29*	(1.34)
40-44 years							.19	(1.21)
Rank/Service[3]								
Enlisted Personnel							.26***	(1.29)
Years of Service[o]								
Less than 3 years							.38**	(1.46)
3-6 years							.28**	(1.33)
6-10 years							.14	(1.15)
Atypical Occupation							.20**	(1.22)
Gender Uncommon							.31***	(1.37)
-2 Log Likelihood	8668.72		8611.50		8524.98		8306.58	
Nagelkerke (pseudo R^2)	.02		.03		.04		.08	
n	7,490		7,490		7,490		7,490	

*** Significance at the p<.001 level.
** Significance at the p<.01 level.
* Significance at the p<.05 level.
[x] Omitted (referent) category is Air Force
††† Omitted (referent) categories are "Equal Genders Workgroup," "More Females Workgroup," "Almost Entirely Female Workgroup," & "All Female Workgroup."
‡ Minority category consists of 1997 Federal Register definitions. American Indian or Alaska Native, Asian, Black, Pacific Islander.
† Hispanic or Latina. A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.
[x] Omitted (referent) category is Air Force.
[z] Omitted (referent) category is 45 years or more.
[3] Omitted (referent) category is Officer.
[o] Omitted (referent) category is 10 Years or more service.

Table 5.9A Results for Logistic Regression Models Predicting Sexual Harassment with Women Currently Deployed and Male Dominated Work Units

	Coefficients and Odds ratios (ORs)							
Variables	Model #1		Model #2		Model #3		Model #4	
Independent								
Military Branch*								
Army	.38	(1.46)			.45	(1.58)	.49	(1.64)
Navy	.51	(1.66)			.47	(1.60)	.47	(1.61)
Marine Corps	.59	(1.81)			.45	(1.57)	.41	(1.51)
Gender Ratios of Workgroups†††								
All males (token female)			.30	(1.35)	.30	(1.35)	-.09	(0.91)
Almost entirely male			.77***	(2.17)	.78***	(2.18)	.49	(1.63)
More males than females			.23	(1.26)	.23	(1.25)	.19	(1.21)
Race/Ethnicity								
Minority‡							-.29	(0.74)
Hispanic/Latina†							.35	(1.43)
Age[2]								
19 years and younger							.66	(1.93)
20-24 years							.77	(2.16)
25-29 years							.86	(2.37)
30-34 years							.77	(2.17)
35-39 years							.85	(2.36)
40-44 years							.51	(1.66)
Rank/Service[3]								
Enlisted Personnel							.09	(1.10)
Years of Service°								
Less than 3 years							.18	(1.20)
3-6 years							-.02	(0.97)
6-10 years							-.08	(0.91)
Atypical Occupation							.05	(1.05)
Gender Uncommon							.38	(1.47)
-2 Log Likelihood	758.43		747.38		745.05		732.89	
Nagelkerke (pseudo R²)	.01		.03		.03		.06	
n	569		569		569		569	

*** Significance at the p<.001 level.
** Significance at the p<.01 level.
* Significance at the p<.05 level.
* Omitted (referent) category is Air Force
††† Omitted (referent) categories are "Equal Genders Workgroup," "More Females Workgroup," "Almost Entirely Female Workgroup," & "All Female Workgroup."
‡ Minority category consists of 1997 Federal Register definitions. American Indian or Alaska Native, Asian, Black, Pacific Islander.
† Hispanic or Latina. A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.
* Omitted (referent) category is Air Force.
[2] Omitted (referent) category is 45 years or more.
[3] Omitted (referent) category is Officer.
°Omitted (referent) category is 10 Years or more service.