The Causal Relationship between Measures of Career Salience and the Probability of Having Children: Comparing Commissioned Officers and Enlisted Personnel in the United States Military

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ABSTRACT: This study examines the childbearing patterns of women in the military, specifically, examining the differences between women in two different career tracks, commissioned officers and enlisted personnel. The study investigates not only the differences in childbearing between these two career tracks but also the effect of career salience on the decision to have or not have children. The author argues that, as career salience increases, women are less likely to have children. While this holds for both commissioned officers and enlisted personnel, the mechanism of career salience is more pronounced for officers than those enlisted personnel. After introducing the topic, the paper provides a comprehensive review of the literature on women and motherhood in the military, presents the research study, discusses findings and results, and offers recommendations for policy reform.

KEYWORDS: women, military, career, children, policy reform

Introduction

Women's service in the United States military extends back to the country's inception, ebbing and flowing with the military demands of the times. Historically women who served endured restrictions, however the change to an all-volunteer force in 1973 stimulated expansions in opportunities available to women (Murdoch et al. 2006; Snyder 2003). With the end of conscription, the military faced shortfalls unless it loosened previous restrictions. The 20th century ended with all but direct combat fields open to women, and women's military participation increased dramatically. The 21st century saw women becoming more integrated into all roles in the military. The Duncan Hunter National Defense Authorization Act for Fiscal Year 2009 established the Military Leadership Diversity Commission (MLDC 2011). The Commission found that in order to establish and maintain fair promotion and command opportunities, the Department of Defense (DoD) should do away with combat exclusion policies (Burrelli 2013; Kamarack 2016). To this end, in December 2015, then-Secretary of Defense, Ash Carter, directed all branches of the military to open all combat positions to women. Even as the military shrinks, the percentage of women serving increases. Today, over 15% of active duty service members are women. Among the service academies, women's enrollment is presently 22-38% of the student body (DoD 2015).

Literature review

Choices in Having Children

The second demographic transition saw an explosion in family forms with children no longer central to the family. The center shifted to the couple (Osiewalska 2015). Motherhood is no longer an obligation but a choice, and we have experienced a reduction in social sanctions for

women who do not reproduce (Tanturri and Mencarini 2008). However, Vinson et al. (2010) found that women who chose to be childfree were perceived as selfish, unwomanly and cold, while Morrell (2000) and Blackstone and Stewart (2012) found them to be perceived as deficient, unfulfilled as measured by the idealized mother standard.

Today, many women are childfree. Stobert and Kemeny (2003) found that 7% of Canadian women are childfree by choice. Blackstone (2014) characterized women without children as one of two forms: articulators, or those who knew early they did not want children, and postponers, who keep putting off having children until it's too late. Additionally, Blair-Loy (2001) saw articulators as a response to the irreconcilable competition between two demanding realms. Professional and managerial women tend to opt out in order to pursue meaningful careers, likewise those with more education are more likely to have fewer or no children (Osiewalska 2015; Tanturri and Mencarini 2008). Less religious women are also more likely to choose being childfree than more religious women (Osiewalska 2015; Tanturri and Mencarini 2008).

With the lessening strength of institutions to shape fertility, women are choosing to cohabitate and remain childfree rather than marry and bear children (Tanturri and Mencarini 2008). Relatedly, Blackstone (2014) found that young adults are delaying the transition from their parents' homes to adult independent homes. With increases in education and urbanization, and a decrease in religiosity, women are more likely to choose to be childfree.

Macro-Level Influences in Childbearing

In examining the differences in childbearing choices for women in the military, it is important to study the macro-level influences that shape these decisions. Officers and enlisted personnel inhabit different socio-economic positions, with disparities in education and income (Sheehan et al. 2015). Women's fertility was thought to be negatively correlated with women's education; however, Osiewalska (2015) found that this relationship is curvilinear, with women at the lowest and highest levels of education having the highest fertility rates, while women at medium levels seem most likely to postpone childbirth. Moreover, women in more family-oriented educational fields, such as teaching or nursing, tend to have higher fertility rates than their counterparts (Begall and Mills 2012; Osiewalska 2015; Solera and Martin-Garcia 2017).

The difference in fertility rates by occupational field may reflect feelings about balancing work and family, or it may be influenced by socialization within particular fields (Begall and Mills 2012). Conversely, women could be self-selecting into these more family friendly occupations. In either case, education is seen as the reason for family postponement. More education affords women more opportunities and alternatives to the traditional mother/wife role.

Policy measures influence parental choice, as Bernardi and White (2009) found, with more traditional cultures experiencing declines in childbearing, while Nordic social democratic countries see higher fertility rates. Traditional cultures tend to have a stronger belief in self-reliance, whereas Nordic countries offer more state support of the family (Bernardi and White 2009; Billari 2004; Osiewalska 2015). More progressive countries embrace policies to reduce the burden of having children in order to encourage fertility (Shreffler and Johnson 2013).

Lalive and Zweimuller (2009) found differences in public policy incentives for having children between high and low wage workers. Monetary assistance was more effective for low income moms, while job protections were more encouraging to higher wage women. In Sweden, Ohlsson-Wijk (2015) demonstrated that job security and family-friendly policies make women more likely to have children. Additionally,

Ohlsson-Wijk (2015a) found that work environment matters: the public sector and caring fields having higher fertility rates than private sector and more competitive fields.

Micro-Level Influences on Childbearing

While policy is generated at the macro-level, it is experienced most saliently at the micro-level, influencing decisions and choices women make in terms of family formation. Almquist and Angrist (1970) discovered that women with high levels of career salience and those in atypical occupations tend to have more commitment to career than those in traditional female jobs (Burgard 2003). Additionally, these women tend to have strong female mentors, building the foundation for Ohlsson-Wijk's (2015) assertion that women experience gender role socialization in the workplace. Hagan and Kay (2007; Walsh 2012) found conflicts in women professionals' career progression and childbearing. The authors noted a paradox for female executives: the time to make partner was also the most common age for childbearing. Adding to the discussion of job satisfaction and childbearing, Hull (1999) and Hagan and Kay (2007) suggest that career salience is the predictor of having children, rather than an outcome. Moreover, high skilled women must manage misperceptions that arise in the workplace due to childbearing. Women are perceived more negatively for having children than men in high skilled fields (Berdahl and Moon 2013; England et al., 2016).

Adair (2013) examined women's adaptations of fertility decisions to careers. Highly skilled professional women without children were viewed as having better marriages and operated more freely in nontraditional gender roles. These women tended to have strong work identities, which Gash (2009) attributes to decisions to postpone or forego childbearing. Additionally, both Adair (2013) and Mason and Goulden (2003) attribute more negative feelings toward babies to women's work commitment. In Mason and Goulden's (2003) examination of female professors, the authors found that 1/3 of fast-track women never have children, while women who receive tenure are twice as likely to be single and childfree 12 years post-PhD. Iskra (2010) found that female officers in the military face similar choices in career progression and family formation.

Bulanda and Lippmann (2012), in examining highly motivated female workers, found women timed children around career milestones, such as putting off a baby until one made partner or earned a promotion. Women learn they need to accommodate work in their timing of fertility, otherwise fertility negatively affects work outcomes (Bulanda and Lippmann 2012; Taniguchi 1999). The younger a woman is when she has her first child, the greater the penalty.

Greedy Institutions

The military and the family are greedy institutions (Segal 1986). They elicit competing devotions and demand complete dedication. While this phenomenon is not unique to military personnel, the intensity and complexity of the demands encompass the lives of female members more than other workers. Little research exists regarding how women in the military negotiate the competing demands of work and family. While women in the military comprise only 15% (DOD 2015) of the services, their navigation between two greedy institutions is similar to many civilian working women today.

Institutions place demands on individuals for their time, energy and devotion. Segal (1986) drew on Coser (1974) in terming both the family and the military as greedy institutions. These institutions compete with each other for loyalty and commitment. "Greedy institutions are characterized by the fact that they exercise pressures on component individuals to weaken their ties, or not to form any ties, with other institutions or persons that might make claims that conflict with their own demands" (Coser 1974). Segal (1974) found that the military assumes adaption by the family; however, the family is becoming more greedy, especially for women (Vuga and Juvan 2013). While many

aspects of military demands are found in the civilian sector, Segal (1986) argues that it is unique in the constellation of demands placed on the soldier.

In the civilian world, women who become mothers may have the options of reducing work hours, moving to less demanding work, or leaving the job. These options are not readily available to military women (Sinclair 2004). Harris (2009) found female military officers were more inclined to leave their career for family responsibilities than males. Mothers tended to lack access to informal networks, and faced barriers to promotion. Because the military requires unwavering commitment, women with families felt pulled in disparate directions, with career and social mothering incongruent (Vuga and Juvan 2013). Women experience more conflict in the two loyalties than men (Harris 2009, Sinclair 2004).

The status of mother, when viewed through the work lens, is seen as lower than non-mothers. According to Harris (2009), because a mother is of lower status, she is seen as less successful than non-mothers. Female officers were much less likely to complete a military career than their male counterparts; however, as a woman rises through the ranks, she is less likely to have children (Harris 2009; Sinclair 2004). Harris (2009) found that female officers "hide pregnancies or time them to prevent causing disruption or sabotage them to avoid perceptions of weakness or that one has less commitment to one's career than male peers." To be perceived as a mother is to be seen as not having the full commitment expected of military officers.

Pregnancy in the Military

Unintended pregnancy for women in the military is quite high when compared to civilian counterparts, with a rate of 72/1000 versus 45/1000 (Grindlay and Grossman 2015). Nearly thirteen percent of women in the military, as opposed to five percent of the general population, experience an unintended pregnancy each year (Finer 2010; Grindlay and Grossman 2013; Grindlay and Grossman 2015; Lindberg 2011). Women experiencing unintended pregnancies cannot deploy and if deployed at the time of the pregnancy, must be returned stateside within two weeks of the discovery of the pregnancy (Grindlay and Grossman 2015; Goyal et al., 2012; Grindlay et al., 2011; Holt et al., 2011; Jacobson and Jensen 2011). Unintended pregnancy directly and adversely affects mission readiness, the military's bottom line.

Enlisted members have higher rates of unintended pregnancy than officers, with 92% of unintended pregnancies in the military being enlisted members while the remaining 8% are officers (Grindlay and Grossman 2015). Grindlay and Grossman (2013) argue that unintended pregnancy is most common among enlisted members due to lack of education but also note that married service members have the highest rates of unintended pregnancy, with an odds ratio of 1.3 to unmarrieds. This is in contrast to the civilian world, where married women have the lowest rates of unintended pregnancy. The authors also argue that this may be because women who are married in the military want children but they face work pressures and conformity demands to not get pregnant. Additionally, women in the military face much higher rates of sexual assault than in the civilian world, which contributes to unintended pregnancy.

Women in the military feel pressure to have children in cycle with deployments and school attendance. Officers feel this pressure and constraint more strongly than enlisted members due to the inflexibility of their career progression (Iskra 2010). Pregnancies can elicit negative reactions from coworkers because a pregnancy is perceived as shirking one's duties. Coupling in general is difficult for women in the military, primarily because of frequent moves (Iskra 2010). Women civilians, traditionally, follow their military member more readily than civilian men follow military women (Iskra 2010). Additionally, military couples experience frequent separations, which are stressful.

Coupled with long work hours, women find it difficult to start and maintain relationships at the highest levels of rank (Iskra 2010; Wadsworth 2010). For a woman to succeed in the masculine world of the military, she needs to enact the ideal worker trope and delay, if not deny, childbearing (Iskra 2010; Williams 1991). Women officers are more likely to forgo marriage and remain childless if they plan to make a career of the military; at the highest ranks, women are 13 times more likely to be single than men (Iskra 2010).

When women do marry, it is less often than men of similar ranks. Almost half of women who are married in the military are married to another military member, whereas only seven percent of men are (DoD 2015). 51% of female officers have no children and 47.6% of enlisted members have none (Iskra 2010). Women in the military have had fewer children over the last two decades (Iskra 2010). Single moms are stigmatized as not as committed to the military. Officers in particular have to plan family formation around their career. Female officers face at least two points in their career where they are expected to make a decision between career and family: The first is between 4-8 years of active duty. Women are typically 26-30 years old at this point, and 95% of officers decide to stay, most putting off having children (Iskra 2010; Evertson and Nesbit 2004). The second point in their career comes 8-10 years after that. Women are approximately 34-40 years old at this point, and it is here that most women decide to leave the service in order to form a family (Bissonette 2012). If she remains, the next decision point in her career would most likely be past fecundity.

Research Questions

As officers and enlisted personnel take different vocational paths, they experience different employment demands that shape family formation and childbearing choices. Officers invest in growing human capital for their career in terms of education and training, while also experiencing more stringent career demands than enlisted members. I develop a model and compare the likelihood of having children for women who are officers and those who are enlisted. I suggest that family formation is affected by a woman's career trajectory in the military.

Hypothesis one: Controlling for basic demographic variables, commissioned officers are less likely to have children than enlisted members.

Building on the first model, I explore how career salience, or job importance. helps to shape women's choices in childbearing. I believe that as the level of career salience increases, the probability of having a child decreases for all women. However, I believe this to be most significant for officers due to the level of self-commitment they are required to give the military in terms of time and dedication.

Hypothesis two: Controlling for basic demographic variables, as women's level of career salience increases, the likelihood of having a child decreases.

Finally, building on the models above, I believe there is an interaction between career salience and military category of rank. In particular, I believe that different levels of career salience function differently for officers and enlisted. It is not a linear relationship.

Hypothesis three: Controlling for basic demographic variables, there is an interaction between career salience and military category of rank. Specifically, I expect to find that career salience negatively affects probability of having a child differently for officers as compared to enlisted.

The relationship between career salience and military category of rank is not linear.

Data and methods

Sampling Issues

This project began in 2012 with a series of unstructured interviews with women on active duty in the United States military. Through this contact, I developed basic questions concerning how women navigate work and family while dealing with such a demanding career. These general questions became the basis for this project.

In order to reach as broad an audience as possible, I contacted the Department of Human Research for the DoD. However, I was informed that the DoD would require complete ownership of all data if I utilized their assistance. One concern brought up in preliminary interviews repeatedly was the uneasiness military members felt when completing surveys they received from the DoD at work. The women voiced concerns that if I utilized the same methods I might not receive honest answers.

Because of the concerns women voiced in allowing DoD involvement, I chose to use the nonprobability strategies of convenience and snowball sampling. I arranged to become the administrator of a social media group that informally served military members in the ROK. Members were vetted to make sure they fit the criteria of being females on active duty in the U.S. military in Korea. While not all women in the population of interest may have social media, I felt confident that this method would produce more honest responses than utilizing a random sample administered by the DoD. Additionally, I weighed the possibility that I would not achieve a random sample through the DoD because they could not guarantee that women serving in more remote locations would receive DoD emails. To compensate for this issue, I travelled to remote bases along the Demilitarized Zone in order to afford as many women as possible the opportunity to participate. Data collection commenced in May of 2015 and concluded in November 2016. In total, 564 women participated in the online survey, with 95% completing the instrument. Approximately 208,000 women serve in the United States Military on active duty, with 3986 serving in the Republic of Korea during data collection (DoD 2015). Due to the anonymity of the instrument, there is a possible issue that someone not fitting my sampling criteria could participate, but I accept that possibility, as reaching participants via social media improved my ability to obtain responses.

In order to keep respondents not only anonymous, but also comfortable that they had complete anonymity, I utilized the option to not track IP addresses on Qualtrics and allowed for undisclosed submissions through a web page I designed, http://www.chelliplummer.com. I printed business cards and travelled throughout the Republic of Korea, distributing the cards to women in military uniforms and asking them to participate. I enabled the mobile survey optimization on Qualtrics so women could take the survey on their cellphones.

Survey Construction

The survey instrument was constructed under the guidance of work done by Czaja and Blair (2005). As Lareau's (2003) findings demonstrated, there are different cultural logics of child rearing across two broad class categories, middle class versus working class. Using these categories, I focus on the differences between officer and enlisted experiences. In addition, and to capture Weber's (1947) aspects of social and cultural class, I categorize households not only on income, but also on rank and job type. This takes into account such factors as education and credentials, authority over others in addition to income. I refer to the military's ranking of critical occupational specialties (MOS—Army and Marines, AFSC—Air Force, NES—Navy) in order to ascertain whether or not a woman is in a occupation that is more commonly occupied by women (Military Ranks 2016). I refer to this as MOS saturation. I also asked basic demographic questions.

Nearly two-thirds of the women in the military are not mothers (DoD 2015). The percentage of women in the military who have children over the course of their lifetime is significantly lower than that of civilian women, leading me to believe that there are cultural as well as structural reasons for these differences. I posit that many women made the choice not to have a child and/or family due to the expectations of a military career. Based on the hierarchal nature of the military, past interviews I conducted, and previous literature on women in professional careers, I contend that women officers experience the motherhood penalty/motherhood track similar to their counterparts in the civilian world. I examine the differences between officers and enlisted women in regard to this penalty, as I believe the environment for female officers makes performing familial roles more difficult than it does for enlisted women. Based on the research of England et al. (2014) and Wilde et al. (2010), we expect that women in positions that require more education would face a greater motherhood penalty than those in positions requiring less education. In investigating the difference between female officers and female enlisted members, I believe that women who are officers have to plan more carefully for a family, as the benchmarks of their careers have more hard deadlines.

In order to examine differences in family formation these different career paths take, I ask a series of questions based on the Career Salience and Work Salience Questionnaires (Allen and Ortlepp 2000; Greenhaus 1971; Carlson, Kacmar, and Williams 2000; Duxbury, Higgins and Mills 1992). These questions look at the importance of career and a woman's priorities when negotiating work and family, as well as the satisfaction she derives from her employment. Additionally, this section of the survey scrutinizes the gives and takes that occur when women navigate these greedy institutions. I constructed my survey using the online platform Qualtrics, through an existing North Carolina State University contract. Qualtrics is a simple, web-based survey tool to conduct survey research evaluations and other data collection activities (Snow and Mann 2013). The software enables users to perform online data collection and basic analysis. Qualtrics allowed me to build skip logic in to the instrument. Skip logic is a feature that changes what question or page a respondent sees next based on how they answer the current question. It is also known as conditional branching and creates a custom path through a survey instrument based on the respondent's answers.

Dependent Variable of Interest

The dependent variable of interest for this research is whether the respondent has or does not have a child at the time of the survey. The question was asked as follows: Do you have a child or children? A no answer was coded zero and a yes answer was coded one. 223 respondents did not have children, 315 did have children, and 26 respondents did not answer this question.

Independent Variables of Interest

In the first model, the predictor variable of interest is military category of rank (milcat1). The distinction here is whether the respondent is a commissioned officer or an enlisted member. According to Moskos (1977), "the multi-tiered military educational system for career officers—as typified by the command schools and war colleges—is as much institutional reinforcement as it is narrow professional training." Officers are the white collar managers of the military, tasked with making decisions under stress and entrusted with the safety of the members in their command. Enlisted members are the blue-collar backbone of the military and carry out the orders missions that officers plan. Distinctions between officers and enlisted occur in the following areas: education, salary, responsibility and duties. Officers can be seen as the office managers; enlisted members are more likely to complete more manual tasks in the field. Because of these indicators, there is a strong socioeconomic difference in the category of ranks.

Additionally, I look at the predictor variable of career salience. Career salience is a measure I adopted to indicate the importance and dedication the respondent has toward her career, with a range in scores of 0-40 (Allen and Ortlepp 2002; DiStefano et al., 2009; Greenhaus 1971). It is an index made up of eight statements, with a 5-point Likert scaling, common in the career salience literature such as my friends and family know that my career is very important in my life, I am willing to make sacrifices in my personal life to succeed in my career, even if I had enough money so that I didn't need to work, I would still choose to continue working. The Cronbach's alpha for the measure in this project is .8912. This is in line with Greenhaus (1971), who had an alpha of .85, and Allen and Ortlepp's (2002) of .84. The career salience index came from a larger factor analysis of work and family conflict variables.

Factor Analysis

Factor analysis operates on the premise that calculable and discernable variables will reduce to fewer latent variables that share a common variance and are unobservable, which is known as reducing dimensionality (Bartholomew, Knott, and Moustaki, 2011). These unobservable factors are not directly measured but are essentially hypothetical constructs that are used to represent variables (Cattell, 1973). An exploratory factor analysis was performed on the current results in order to determine the factor structure. Initially several factors loaded on the work and family conflict variables, with three major factors. The first was gendered work and family conflict, the second sexual abuse, the third career salience. From these factor based scales were calculated.

The Kaiser-Meyer-Olkin is the measure of sampling adequacy, which varies between 0 and 1. The values closer to 1 are better and the value of 0.6 is the suggested minimum. The Bartlett's Test of Sphericity is the test for null hypothesis that the correlation matrix has an identity matrix. Taking this into consideration, these tests provide the minimum standard to proceed for factor analysis. The Kaiser-Meyer Olkin (KMO) and Bartlett's Test measure of sampling adequacy was used to examine the appropriateness of Factor Analysis. The approximate Chi-square is 3036.52 with 136 degrees of freedom, which is significant at 0.05 level. The KMO statistic of 0.8511 is also large (greater than 0.50). Hence Factor Analysis is considered as an appropriate technique for further analysis of the data.

Control Variables

In order to examine the predictor and outcome variables, I controlled for several demographic variables. The first such variable was amount of time in service, meaning how long the respondent had been on active duty in the military. The second variable was the military occupational specialty. While there are hundreds of jobs in the military, looking at gender composition seemed most prudent. Jobs were coded dichotomously, with zero coding those jobs that do not have many women and one coding those jobs with higher than average concentrations of women. Third, the respondent was asked if she had plans to retire. The fourth control was race, followed by highest education level attained, relationship status, branch of service, rank and age.

Analysis

When a multivariate analysis involves a dichotomous dependent variable, logistic regression is the best form of analysis (Agresti et al.,1990). Although linear models accommodate dichotomous predictors, they do not work for dichotomous dependent variables as several OLS assumptions are violated (Menard 1995). According to Trusty (2000), while logistic regression is similar to discriminant analysis equations, models with independent variables

of the nominal or ordinal scaling are not easily accommodated by discriminant analysis. Assumptions of linearity and normality are more stringent for discriminant analysis. Additionally, logistic regression displays results in terms of odds, making interpretation more straight forward than discriminant analysis.

For the first hypothesis, I constructed a logistic regression model in order to predict the relationship between military category of rank and the probability of having a child:

$\ln(havechild) = \alpha + \beta_1 milcat1 + \beta_2 timeserv + \beta_3 mos1 + \beta_4 retire + \beta_5 race + \beta_6 educ + \beta_7 relation + \beta_8 branch + \beta_9 rank + \beta_{10} age3 + \varepsilon_i$

For the second hypothesis, I constructed a logistic regression model to examine the effect career salience has on the probability of having children for officers and enlisted military members:

$\ln(havechild) = \alpha + \beta_1 milcat1 + \beta_2 timeserv + \beta_3 mos1 + \beta_4 retire + \beta_5 race + \beta_6 educ + \beta_7 relation + \beta_8 branch + \beta_9 rank + \beta_{10} age3 + \beta_{11} carsal + \varepsilon_i$

For the third hypothesis, I constructed a logistic regression equation that introduced an interaction term between military category of rank and career salience. I did this in order to assess how career salience affects the relationship between military category of rank and the probability of having a child:

$\ln(havechild) = \alpha + \beta_1 milcat1 + \beta_2 timeserv + \beta_3 mos1 + \beta_4 retire + \beta_5 race + \beta_6 educ + \beta_7 relation + \beta_8 branch + \beta_9 rank + \beta_{10} age3 + \beta_{11} carsal + \beta_{12} milcat1 * carsal + \varepsilon_i$

We compare these two equations, the interaction in one and absence in the other, in order to obtain hierarchically well-formulated models.

Results

In all, 564 women began the survey, 538 completed to the end while one woman did not respond to two questions in the demographic portion (see Tables 2.1 and 2.2). Over one-half of the women have a child, while the majority of them are enlisted members. Most of the women occupy more traditionally female work positions. Time in service is fairly split between the four categories, whereas the majority of respondents plan to retire from the military. Equal numbers of White and Black women completed the survey and education seems to be evenly distributed among the categories. The majority are married while singles are the least represented. One-half of the women are in the Army while approximately one-fifth are in the Air Force and Navy and the remained in the other two branches. The proportion of officers not having a child was .60, while the proportion of enlisted members was .31. The difference in proportions is significant, $\chi^2(1, N=538) =44.69$, p<.000.

Table 1. 1 Descriptive Statistics for Continuous Variables
in Models Predicting Having a Child

Variable	N	Mean	SD	Range
Age	563	32.7	6.9	22-46
Career salience	538	28.7	7.8	0-40

Table 1. 2 Sample Characteristics for Models Predicting Having a Child

Variable	N	Do not have a child		Have a child	
		Officer	Enlisted	Officer	Enlisted
Time in service	564				
$X \leq 5\ years$		32	67	11	45
$5 < X \leq 10\ years$		21	16	13	59
$10 < X \leq 15\ years$		27	7	16	42
$15\ years < X$		38	15	38	91
Plans to retire	563				
Yes		74	53	50	141
No		6	15	7	25
Not sure		38	36	21	71
Race	564				
White		50	28	23	82
Black		31	40	27	69
Hispanic		17	18	9	41
Other		11	13	10	23
Mixed		9	6	9	22
Education level	564				
HS or GED		1	45	0	94
Some College		3	26	2	70
BA/BS		51	33	31	71
Grad. Degree		63	1	45	2
Relationship status	564				
Married		37	31	43	88
Single		28	27	2	33
Divorced		31	12	13	70
Committed Relationship		22	35	20	46
Branch	564				
Army		72	45	31	124
Air Force		22	27	21	48
Navy		14	31	20	49
Marines		10	1	6	25
Coast Guard		0	1	0	1
Rank	538				
Junior		56	64	27	38
Midgrade		60	31	44	93
Senior		2	10	7	103

To examine this relationship further, I estimated four logistic regression models in Table 2.3, with the predictor of military category of rank. In the first two models, enlisted members are much more likely to have a child than officers. However, when the variable measuring career salience is put in the model, this relationship is not significant any longer. Career salience seems to operate as a moderating variable, while predicting a decrease in the likelihood of having children. The full model, however, with the measure of career salience and the interaction between career salience and military category of rank sees enlisted members' likelihood of having a child drop to .004 times as likely as officers. The likelihood ratio test yields a χ^2 of 8.19, with a p of .036 which indicates that the full model is an improvement over the restricted model. Goodness of fit is .67 with a p value of .7349.

Table 1. 3 Logistic Regression Models for the Effects of Military Category of Rank and Career Salience on the Probability of Having a Child N=538

		Model 1	Model 2	Model 3	Model 4
Military category of rank	enlisted	3.415* (.639)	13.294* (12.407)	1.493 (1.523)	.005* (.011)
Plans to retire	no retire		2.911* (1.179)	2.650* (1.159)	2.551* (1.121)
	not sure retire		2.043* (.577)	1.884* (.572)	1.865* (.568)
Marital status	single		.320* (.103)	.180* (.069)	.226* (.086)
	divorce		.645 (.188)	.613 (.195)	.710 (.231)
	committed relationship		.419* (.124)	.424* (.133)	.432* (.136)
Branch of Service	Air Force			1.800* (.541)	1.595 (.488)
	Navy			2.170* (.724)	2.00* (.680)
	Marines			1.347 (.700)	1.155 (0.607)
	Coast Guard			1.155 (2.114)	.776 1.429)
Rank	mid-career		2.647* (.965)	5.068* (2.051)	4.844* (1.965)
	senior		15.667* (9.026)	27.738* (17.272)	24.627* (15.225)
Career Salience				.834* (.012)	.725* (.043)
Interaction of career salience and military category of rank					1.195* (.0773)
	Constant	.661* (.096)	.000†† (.000)†††	.085 (.444)	10.744 (59.882)
	Observations	538	536	536	536
Log Likelihood		-342.656	-275.217	-241.274	-237.180

†The table entries represent the effect of the independent variable on the likelihood of having a child and, in parentheses, the ratio of the coefficient to the standard error
†† Rounded to three decimals. Actual odds ratio is .0005
†††Rounded to three decimals. Actual standard error is .00002
* $p < 0.05$

In order to examine the relationships in the logistic model with interactions, I examine the marginal effects. There is a statistically significant relationship between plans to retire and whether the respondent has a child, as well as for relationship status. Approximately one-half of those who plan to retire have children, whereas almost two-thirds of those who do not plan on retiring have children, while 60% of those who are unsure have children. Two-thirds of married women have a child compared to 61% of divorced women. Fifty-four percent of those in a committed relationship report having a

child, compared to 44% of singles. When examining rank, approximately one-third of junior service members have a child, whereas nearly two-thirds of mid-career and 85% of senior members do. Additionally, the predicted coefficients for the effect of military category of rank on having a child, net of career salience, is -.06 for officers and -.03 for enlisted.

$$e^{-.06}=.94$$
$$e^{-.03}=.97$$

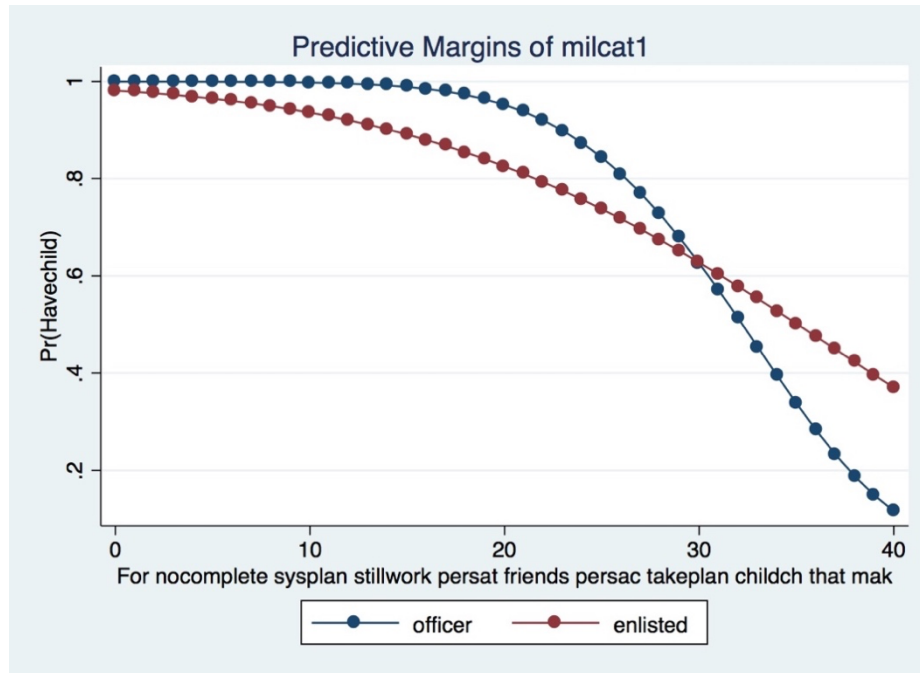The odds ratio for officers is .94 while the odds ratio for enlisted is .97.

Figure 1. 1 Predictive Margins of Military Category of Rank

Discussion and Conclusion

There is a difference in the probability of having a child for officers and for enlisted members, however it is not a straightforward linear relationship. Upon initial examination of the raw data, it is apparent that enlisted members have children more often than officers; the logistic regression model containing only these two variables confirms that enlisted are more likely to have a child than officers. Enlisted members are 3.41 times more likely to have a child than officers. Additionally, this relationship holds when we input the control variables into the model, with the probability of enlisted members having children much greater than officers. Enlisted members are 8.79 times as likely to have a child as officers.

However, once the moderating variable of career salience is introduced, the relationship is no longer straightforward. The predictor military category of rank, while still holding that enlisted members are more likely by a factor of 1.32 to have a child than officers, is no longer statistically significant once career salience is introduced into the model. Career salience predicts a decrease in the probability of having a child in our third model, net the effects of the other variables in the model. For each increase in a respondent's career salience score, the model predicts a decrease in the odds ratio of having a child of .83, net the other variables in the model. Introducing the interaction between military category of rank and career salience obscures our relationship even more. The full model predicts that enlisted members will be .004 times as likely to have a child as officers, net the effects of the other variables in the model. In the full model, a

one unit increase in career salience predicts a .72 decrease in the odds ratio of having a child for enlisted and officers, net the effects of the other variables in the model. The interaction term of career salience by military category of rank has an odds ratio of 1.2, meaning that each increase in the interaction sees an increase in the odds of having a child for enlisted by 1.2.

For the lowest levels of career salience, officers are more likely to have children than enlisted members. This relationship is not constant, however. While both officers and enlisted members see a decrease in the probability of having a child as their levels of career salience increases, this relationship reverses at a score of 31 for career salience. At this point, officers become much less likely to have a child than enlisted members, net the effects of the other variables in the model.

This is the first study to closely look at childbearing choices for different career trajectories in the military. While initial assumptions that officers must plan their families more carefully to accommodate "mile markers" in their careers, this relationship is more complicated. Common knowledge asserts that officers will be less likely to have children than enlisted members due to the demands of their career paths; however, this study demonstrates that this "common knowledge" is not entirely accurate. The importance of one's career is a stronger predictor of a woman's probability of having a child. Even so, career salience is not linear, and its effects are felt differently at different levels of satisfaction.

While this research has contributed to the knowledge on women in the military, this is a snapshot of the bigger picture. A longitudinal study would be useful in order to follow these women over time. By undertaking a longitudinal study, researchers will gain a fuller picture of career trajectories and the timing of childbearing. Additionally, a longitudinal study would allow for the exploration of career success. Further research should examine links between career salience and a woman's desire to stay in the military until retirement as this could aid in retention problems. This research can help inform Department of Defense policy toward higher retention for female members. As women's retention rates are much lower than men's, the DoD needs a multi-faceted approach. Additionally, female officers are more likely to exit the military than enlisted members, so this may help to shed some light in that area as well.

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