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“Working Around the Military” Revisited

Spouse Employment in the
2000 Census Data

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Prepared for the Office of the Secretary of Defense

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Summary

Previous studies have shown that military wives—women married to U.S. military service members—are more likely to be unemployed than their civilian counterparts (Grossman, 1981; Hayghe, 1974; Schwartz, Wood, and Griffith, 1991; Payne Warner, and Little, 1992; Wardynski, 2000; Hosek et al., 2002; and Harrell et al., 2004). Those who are employed earn less on average than do civilian wives. These studies, however, insofar as they are based on large, representative samples, rely on information that is now somewhat dated, and they have little to say about military husbands. The purpose of the current study is to remedy these deficiencies by repeating earlier analyses of military wives using data from the 2000 census and by extending those analyses to military husbands. Specifically, we seek to determine the following:

- Background characteristics of military and civilian spouses that are potentially related to employment and earnings (e.g., race/ethnicity, education, mobility, and location).
- Employment and earnings status of military and civilian spouses, in general and for each service.
- Trends in all of these variables since 1990.
- The impact of individual and contextual characteristics¹ of military and civilian spouses on employment disparities.

¹ We use the phrases “individual and contextual characteristics” and “background characteristics” interchangeably throughout this document.

Background Characteristics of Wives

Civilian and military wives differ in ways that could have implications for their employment status. According to the 2000 census data, military wives are more racially and ethnically diverse and are better educated than civilian wives. They also tend to be younger than civilian wives and are more likely to be rearing young children. Thus, military wives appear to be at different stages in their life cycles than civilian wives. Military life-style demands also appear to set military wives apart from civilian wives. Military wives are much more likely to relocate than their civilian counterparts and to be located near metropolitan areas, contradicting the common perception that military bases are located predominantly in rural and remote areas.

For a few of these factors, trends either have been flat since 1990 or have been changing similarly for both civilian and military wives. However, the probability of locating in metropolitan areas for civilian wives is increasing to resemble the rates for military wives; the age gap between military and civilian wives is wider in 2000 than in 1990; and the likelihood of having a young child at home has decreased for civilian wives while remaining the same for military wives. All of these differential trends suggest the potential for a worsening employment situation for military wives relative to that of civilian ones.

Employment Status and Earnings for Wives

According to 2000 census data, military wives are less likely to be employed than civilian wives and more likely to be unemployed. Military wives also earn less than civilian wives. Of the military wives, Navy wives are the most likely to be in the labor force and also most likely to earn the most. However, with the exception of a substantially lower unemployment rate for Air Force wives than for those married to other servicemen, differences among services are generally small. None of the individual service employment statistics are as favorable as that for civilians.

National earnings comparisons might be biased if military wives tend to live in areas with lower (or higher) wages. We thus compared civilian and military wives according to where they fell across the overall wage-earning distribution for each metropolitan area and aggregated the results.² Military wives are more likely than civilian wives to fall in the bottom 30 percent of the distribution of all wage earners and less likely to be in the top 40 percent. Differences across services are small, but Army wives appear to have a slightly more favorable earnings distribution than wives of other servicemen; Marine Corps wives, a slightly less favorable one.

We repeated the metropolitan-level analysis for different levels of education, from those with no high school diploma to those with a bachelor's degree. Accounting for educational attainment in the metropolitan-level analysis produces more accurate comparisons of military and civilian wives' wages since wages are often positively associated with education. For wives of equivalent education, military wives were again more likely than civilian wives to fall near the lower end of the wage distribution and less likely to fall toward the higher end.

Labor force participation rates are similar between 1990 and 2000 for both civilian and military wives. Unemployment rates, however, are down substantially for all wives, but particularly for Army wives, who have the highest rates. Hourly wages (unadjusted for inflation) are up for civilian wives and for wives across the military services. The wage distribution analysis using 2000 data reveals a slight improvement in the wage distribution of military wives compared with that of a decade ago.

² This analysis is intended to demonstrate the relative earnings of military wives compared to civilian wives within the same metropolitan area and is not part of the propensity score (look-alike) analysis.

Background Characteristics and Employment Measures for Husbands

Because our sample size for military husbands is smaller than that for military wives, we could not obtain reliable results at the level of the individual service, so we report differences between civilian husbands and military husbands as a whole. Like military wives, military husbands are less likely to be white and are more educated than civilian husbands. They are also more likely to have a young child at home and to relocate more often than civilian husbands.

Like military wives, military husbands have less favorable employment status and earnings than civilian husbands: Their labor force participation and employment rates are slightly lower and their unemployment rate is much higher. They have a substantially lower hourly wage rate and yearly income. The national wage-rate result is confirmed by the metropolitan-area analysis:³ Military husbands are more likely than civilian husbands to fall into the bottom 40 percent and less likely to be into the top 30 percent of the wage distribution for all workers.

Impact of Individual and Contextual Characteristics on Employment

Wives

Using the propensity score ("look-alike") analysis,⁴ we assessed the impact of individual and contextual characteristics on employment. The look-alike analysis, as the name suggests, isolates the effect of observable background characteristics on employment conditions of military spouses by comparing them with civilian spouses whose back-

³ Again, this analysis is intended to demonstrate the relative earnings of military husbands compared to civilian husbands within the same metropolitan area and is not part of the propensity score (look-alike) analysis.

⁴ Appendix D of Harrell et al. (2004) explains technical aspects of the propensity score analysis. Readers may also refer to McCaffrey et al. (2004) and Barsky et al. (2002).

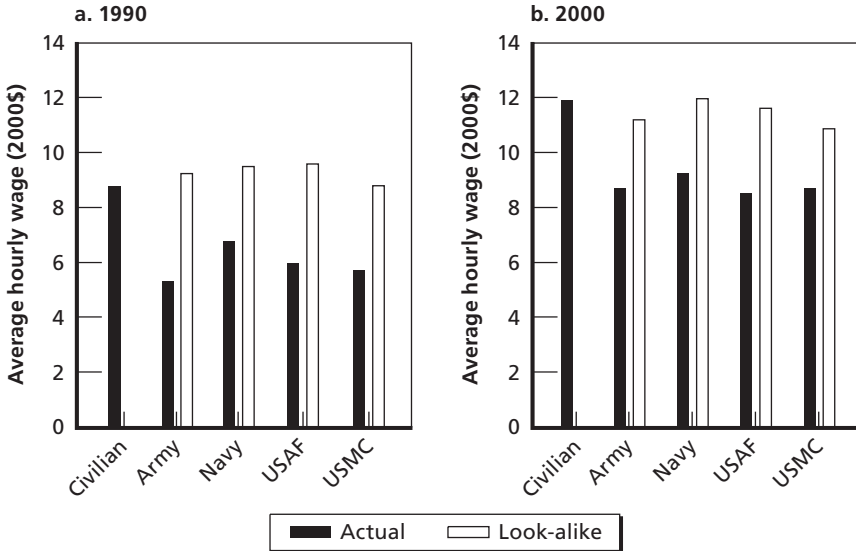
ground characteristics are similar.⁵ The look-alike analysis thus ensures that any remaining differences in employment conditions between “look-alike” civilian spouses and their military spouse counterparts could not be attributable to differences in individual and contextual characteristics that we were able to include in the analysis. The second bar for each military service in Figure S.1 illustrates employment rates for civilian wives who share the same observable characteristics (e.g., age, education, and location) as military wives.

Generally, the look-alike civilian wives have employment outcomes similar to those of civilian wives as a whole. The background factors we considered, therefore, do not explain much of the difference between civilian and military wives; these results suggest that most of the differences in employment rates and hourly wages may be due to unobserved factors, which may include differing tastes for work or possible bias among employers. Regarding hourly wages, for instance, one can see in Figure S.1 that civilian wives earned \$12 on average in 2000 whereas military wives earned around \$9 on average. The bars for look-alikes, however, demonstrate that civilian wives who look like military wives (i.e., who have similar levels of educational attainment, a similar distribution among races, etc.) are earning close to \$12. The actual wage differential, therefore, cannot be explained by the available background variables and may be due to unobserved factors. In other words, even when comparing likes with likes, military wives earn less than their civilian counterparts.

In 1990, the look-alike civilian wives’ average hourly wage was slightly higher than the average hourly wage of civilian wives. In the 2000 census, however, wages of civilian wives and look-alike civilian wives were comparable, suggesting that military wives are no longer more advantaged than civilian wives in terms of what their wages would be if they were not married to military servicemen.

⁵ See Table 1.2 in Chapter One for the list of variables included in the look-alike analysis. Results of the propensity score analysis are in Tables A.1a–A.1d in the appendix.

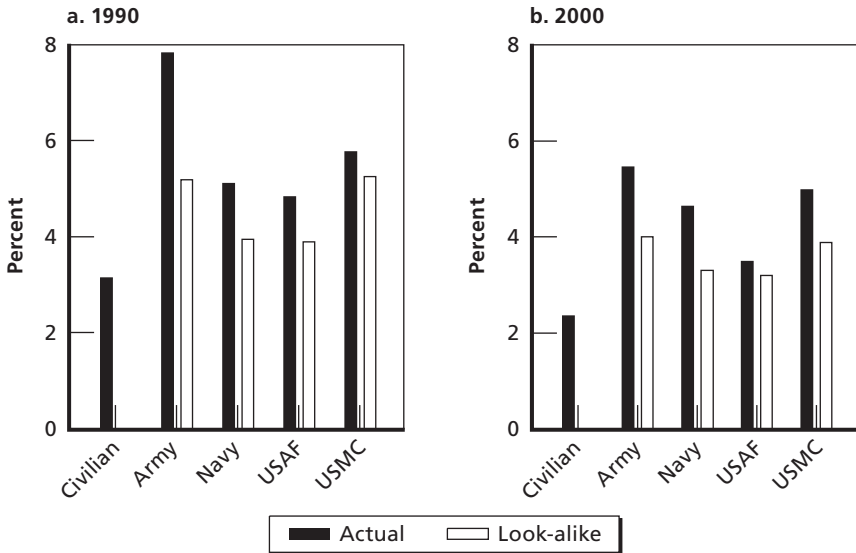
Figure S.1
Hourly Wages Among Civilian, Military, and Civilian Wives Who Look Like Military Wives, 1990 and 2000



RAND MG566-S.1

Regarding unemployment, where higher rates indicate worse conditions, background characteristics explain some of the difference between civilian and military wives (see Figure S.2). In the case of Army wives in 2000, for instance, 4 percent of the civilian look-alike wives in the labor force were unemployed. This is 1.5 percentage points higher than unemployment for the general population of civilian wives. The observed gap between military and civilian wives, however, is about 3 percentage points, which is double the gap between look-alike civilian wives and civilian wives in general. Thus, about half of the observed gap is explained by background characteristics.

Figure S.2
Percentage Unemployed Among Civilian, Military, and Look-Alike Civilian
Wives, 1990 and 2000



RAND MG566-S.2

Husbands

For military husbands, the look-alike analysis revealed that the gap between military and civilian husbands in employment rate is actually smaller than it would be if civilian husbands looked like military ones; the observed gap understates the disparities between civilian husbands and military look-alike husbands. However, background differences explain about half of the difference in yearly income, less than half of the difference in unemployment rate, and most of the difference in the hourly wage rate. In other words, although civilian husbands who look like military husbands are more likely to find jobs than civilian husbands, they tend to be paid less. This trend may be associated with such observable factors as education, race and mobility. Military husbands tend to be more educated than civilian husbands. They are, however, less likely to be white and are more likely to relocate often. Both factors may have an adverse effect on military husbands' wages.

Conclusion

The updated analysis using data from the 2000 census confirms findings previously reported in Harrell et al. (2004). The demographic and employment trends of military and civilian spouses from a decade ago still hold true in general. Military spouses continue to be at a relative disadvantage in the labor market compared with civilian spouses.

The recommendation of Harrell et al. (2004) to address military childcare availability and affordability, as well as that of Hosek et al. (2002) regarding mobility and geographic location of military families, must be recognized as mechanisms designed to reduce the portion of employment disparities that can be explained by observable characteristics. Even if these policies and programs were enacted and were successful at reducing the gap in employment outcomes, they would not affect the portion of the gap that is caused by such unobserved factors as employers' perception of military spouses and the spouses' "taste" for work. For instance, the look-alike analyses on the military wives' unemployment rates (see Figure S.2) suggest that policies and programs aimed at reducing the unemployment rates of military wives may succeed in narrowing the observed gap. However, they would not eliminate the portion of the gap that is attributable to unobserved characteristics, to the extent that they are impractical to modify by policy changes or are resistant to such changes.

An exception would be if observed characteristics are correlated with the unobserved factors. Then any improvements based on an observed characteristic may also affect a correlated unobserved factor, which would further reduce the employment disparities between military and civilian spouses. More data and analysis are needed to better understand what the unobservable factors are, how they may be correlated with other factors, and how they affect employment outcomes. This study also found that certain employment outcomes may be more sensitive to policy interventions that are based on observable characteristics, to the extent that change is desired. One may see larger policy effects on outcomes with military-civilian gaps that are partly or mostly explained by observable characteristics than on outcomes with gaps that cannot be explained with available data. For instance, poli-

cies that target such demographic disparities as mobility, location, and childcare may significantly affect the unemployment rate of military spouses, but the same military spouses' hourly wages may still remain unchanged.