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# The changing profile of disability in the U.S. Army: 1981-2005

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# Background

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- Disability increasing in military and civilian populations
- FY 2005 DoD paid \$1.25 billion to disability-retired service members
- Downsizing reduces effective person-power for military

# Objectives

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- Describe soldiers discharged from the Army with a permanent disability
- Clarify whether changes in Army demographics explain the increase in disability discharge rates occurring in the same time period
- Describe temporal changes in the demographic profile of those who are disabled

# Methods: The Data

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## Total Army Injury and Health Outcomes Database (TAIHOD)

- US Army Physical Disability Agency
- DMDC (personnel files)

# Methods: Variables for Analyses

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- Disability Outcome Measure
  - Discharge from the Army with a permanent disability
  
- Type of Disability
  - Veterans Administration Schedule for Rating Disabilities (VASRD) codes
  
- Demographic Covariates
  - Gender, age, race, time in service, marital status, education

# Methods: Variables for Analyses

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- VASRD codes categorized into 15 body/organ systems

Musculoskeletal

Neurological

Mental health

Endocrine

Ear/other sensory organs

Infectious/immune/nutritional

Gynecological

Dental and oral

Respiratory

Cardiovascular

Digestive

Hemic/lymphatic

Eye

Skin

Genitourinary

# Methods: Analyses

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- Descriptive techniques: frequency distributions, percentages, univariate logistic regression analysis
- Unadjusted and adjusted annual rates
- Autoregressive time-series analysis

# Results

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- 108,119 permanent disability discharges between 1981-2005
- Annual rate per 100,000 increased by over 600% from 178 per 100,000 to 1,262 per 100,000



# Results: Risk factors for disability

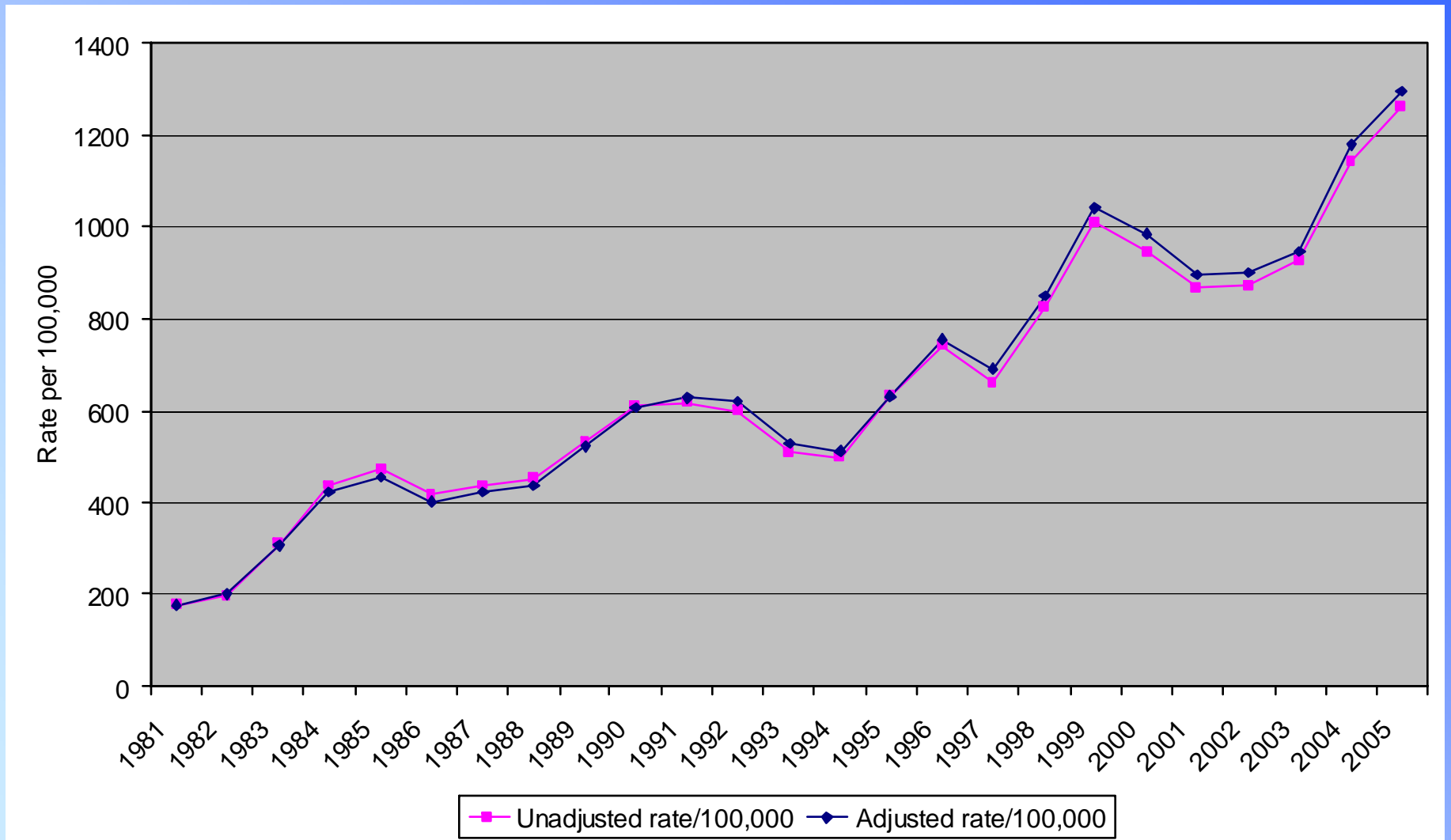
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## ➤ Unadjusted Logistic Regression Models

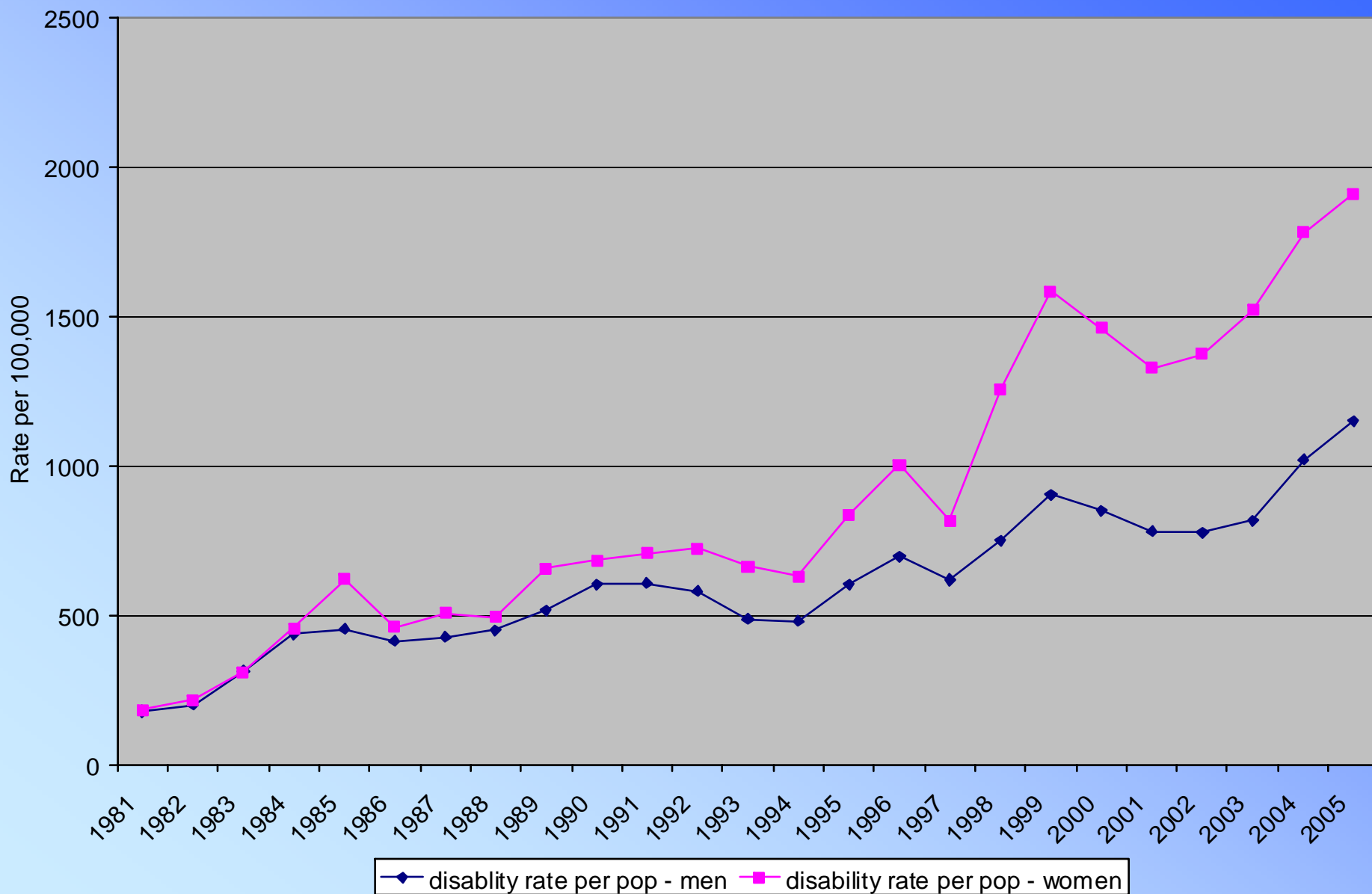
- Female gender
- >21 but less than 40
- Married or previously married
- Junior enlisted rank
- No college education

Figure 1. Adjusted and unadjusted disability per 100,000 active-duty Army population rates, 1981-2005. Rates standardized (adjusted for age, gender, time in service, race/ethnicity) to 1981 demographic composition.



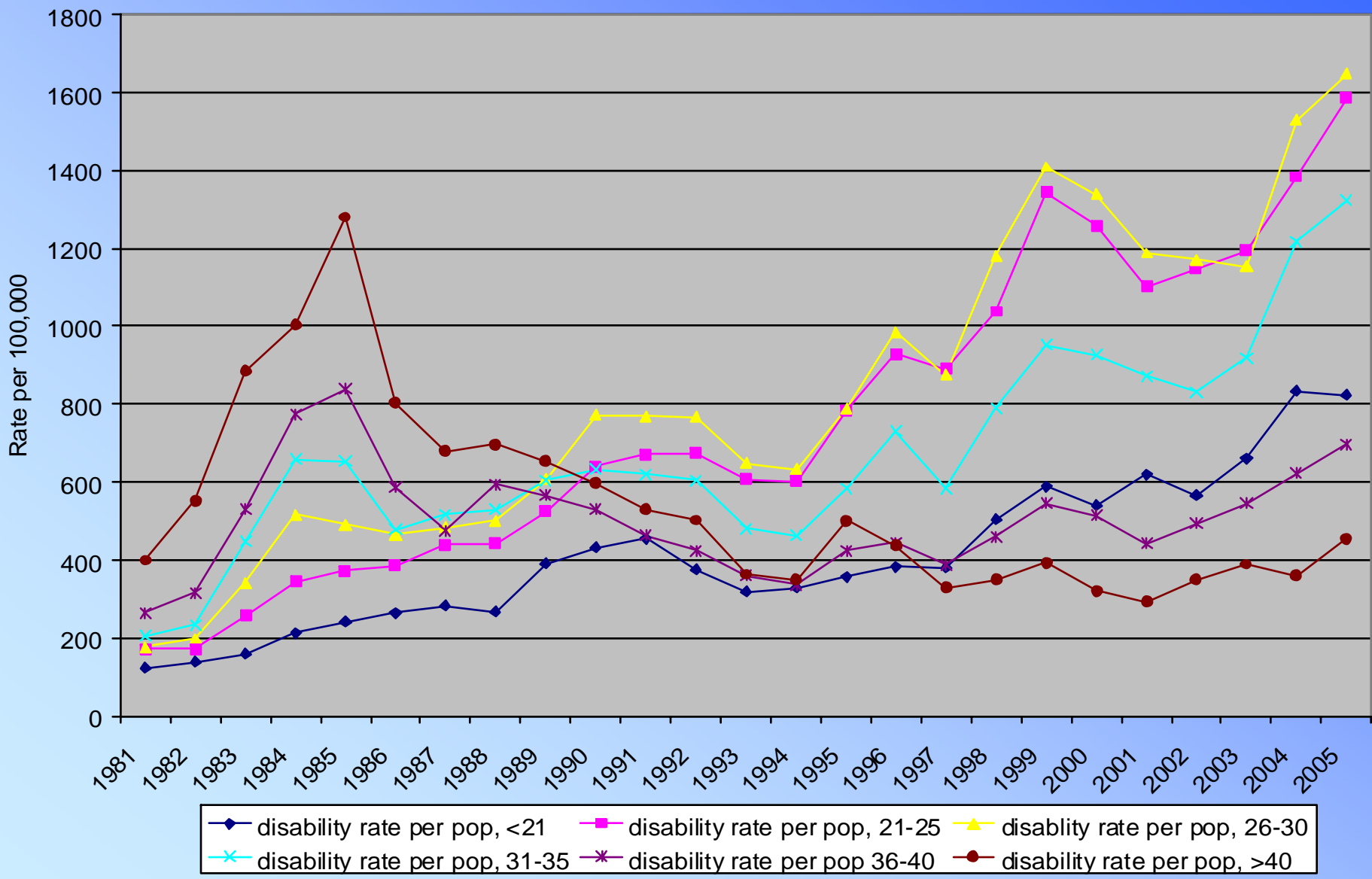
Source: Bell et al.(2007) The changing profile of disability in the U.S. Army soldiers: 1981 – 2005, manuscript under review

Figure 2. Gender-specific disability rates per 100,000 population, 1981-2005



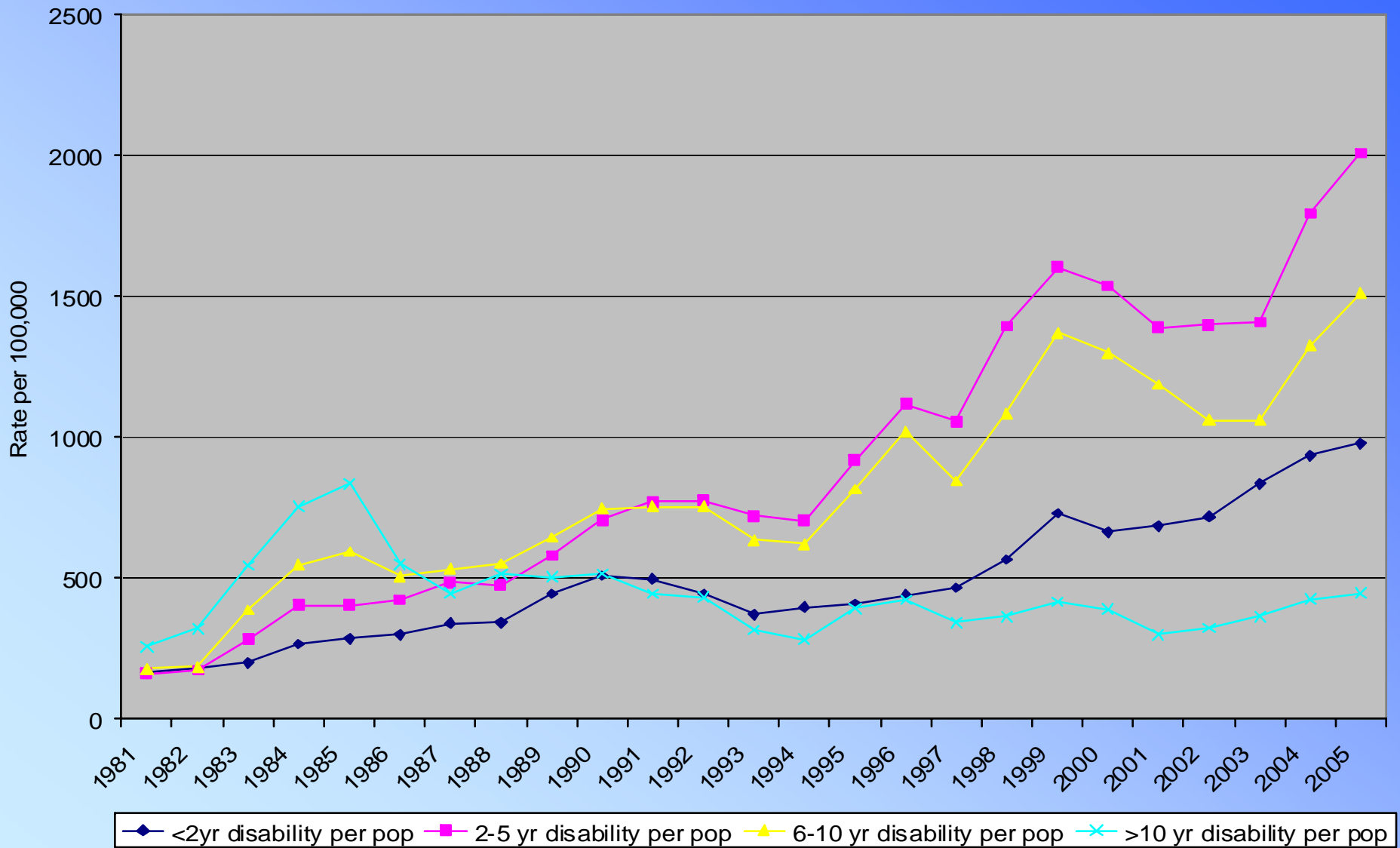
Source: Bell et al.(2007) The changing profile of disability in the U.S. Army soldiers: 1981 – 2005, manuscript under review

### Figure 3. Age-specific disability rate per 100,000 population, 1981-2005



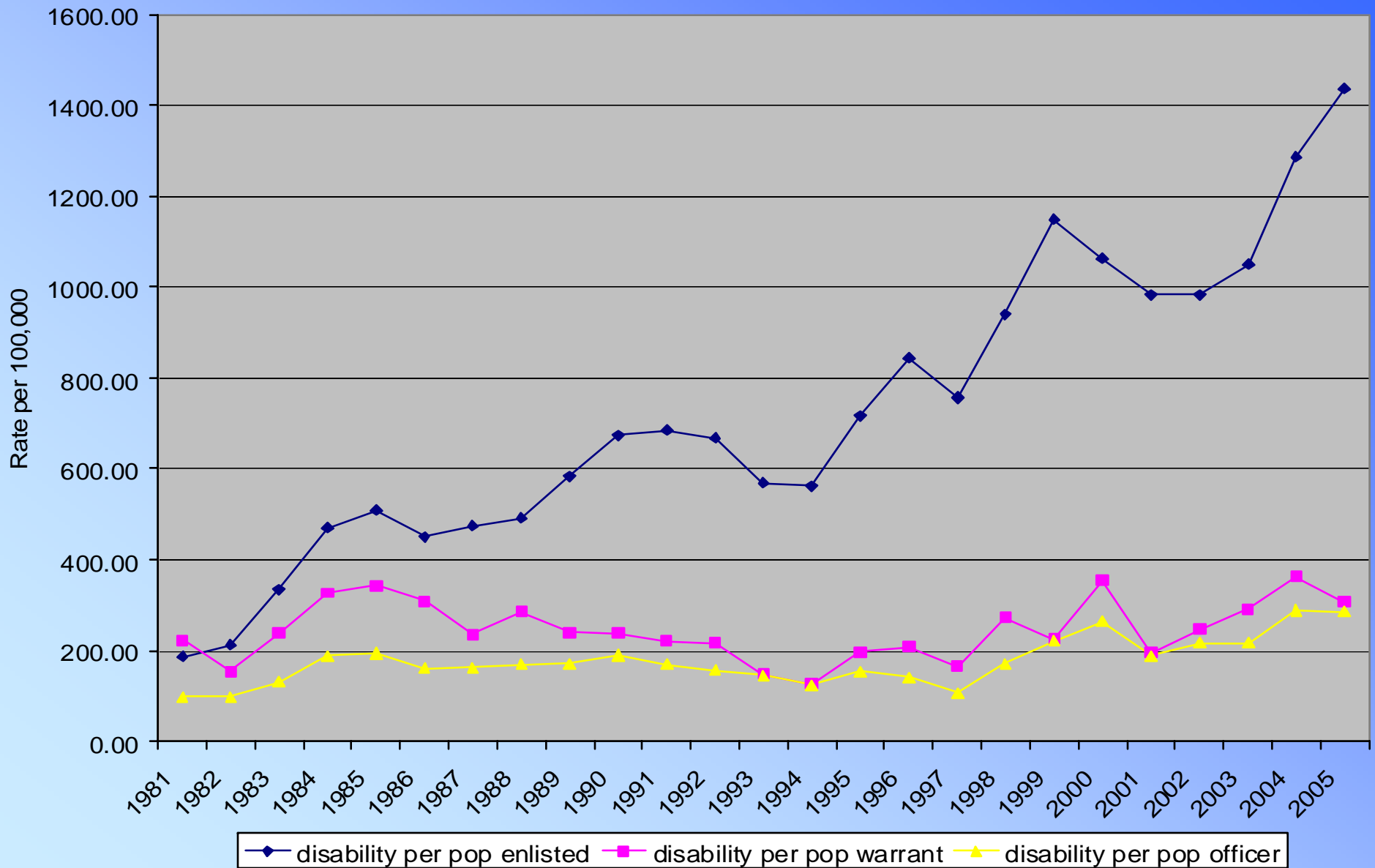
Source: Bell et al.(2007) The changing profile of disability in the U.S. Army soldiers: 1981 – 2005, manuscript under review

Figure 4. Total time in active military service disability rates per 100,000, 1981-2005



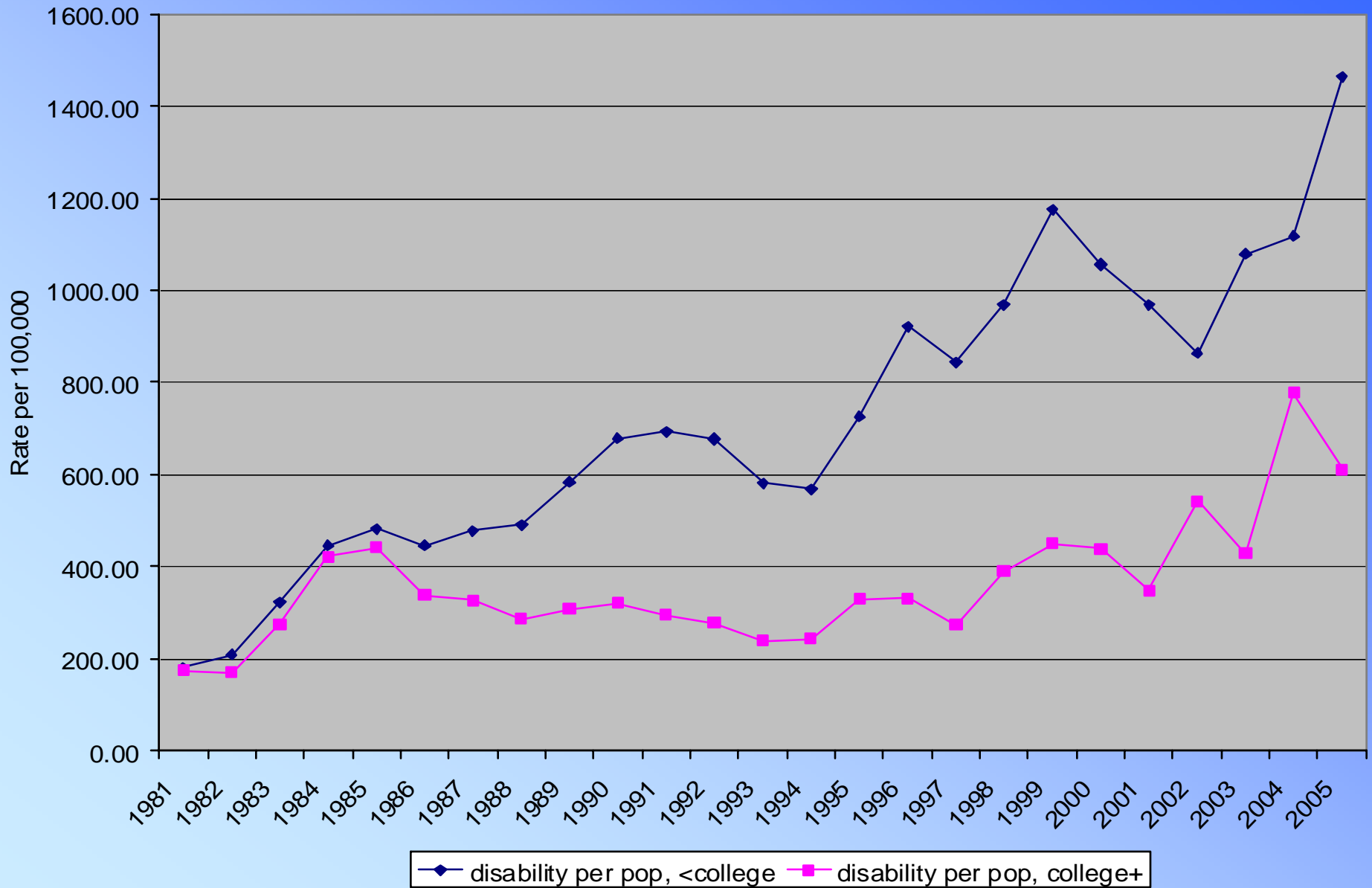
Source: Bell et al.(2007) The changing profile of disability in the U.S. Army soldiers: 1981 – 2005, manuscript under review

Figure 5. Rank specific disability rates per 100,000 population, 1981-2005



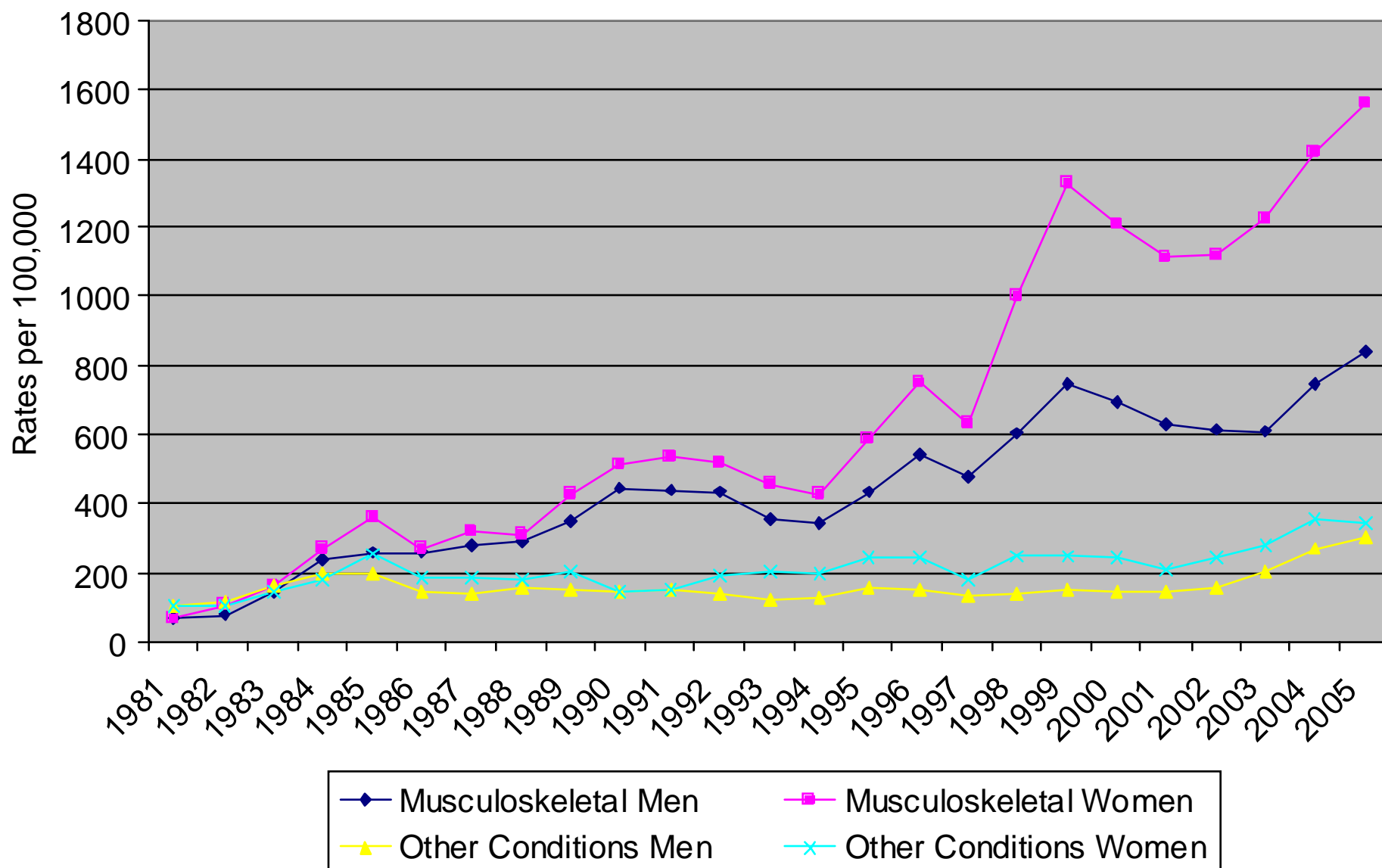
Source: Bell et al.(2007) The changing profile of disability in the U.S. Army soldiers: 1981 – 2005, manuscript under review

Figure 6. Education-specific disability rate per 100,000 population, 1981-2005



Source: Bell et al.(2007) The changing profile of disability in the U.S. Army soldiers: 1981 – 2005, manuscript under review

Figure 7. Musculoskeletal versus all other causes of disability (1981-2005) by gender: rates per 100,000 gender-specific population denominators



Source: Bell et al.(2007) The changing profile of disability in the U.S. Army soldiers: 1981 – 2005, manuscript under review



# Conclusions

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- Disability rates now 7 times higher today than they were 25 years ago
- Demographic shifts in Army do not explain increase
- Most dramatic increases occurring among soldiers who are female, no college education, lower enlisted rank, 2-10 years active service and age 21-35
- Musculoskeletal disability primary type of disability that is increasing, particularly for high-risk subpopulations