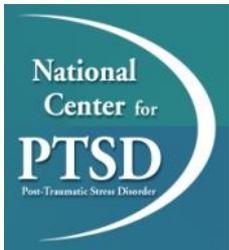
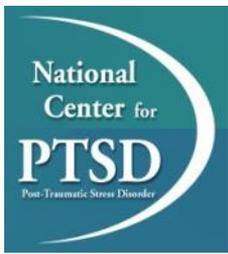


Impact of PTSD on Employment- and Family-Related Quality of Life among Female and Male Afghanistan and Iraq War Veterans

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Poll Question #1

- What is your primary role in VA?
 - Student, trainee, or fellow
 - Clinician
 - Researcher
 - Manager or Policy-Maker
 - Other

Poll Question #2

- How often do issues related to the work and family of Afghanistan and Iraq War Veterans come up in your work?
 - Not at all
 - Occasionally
 - Often
 - All of the time

Background

- Increased attention to readjustment and reintegration of Afghanistan and Iraq War Veterans who have left military service.
- Over the past 14 years, over 2.4 million service members have left military service¹ and over one million service members are expected to separate from service over the next 6 years.²
- Most research focused on documenting health status of this population and examining factors that contribute to health problems.



¹Flournoy, 2014

²Bertoni et al, 2014

Background

- Less attention to other important aspects of readjustment, including employment outcomes and family reintegration, or interplay between health and these factors.^{1,2,3}
- Employment important because can provide financial security and fundamental sense of purpose and meaning.
- Family relationships crucial to successful reintegration and critical source of social support.

¹Adler et al., 2011

²Institute of Medicine, 2010

³Kleykamp, 2013

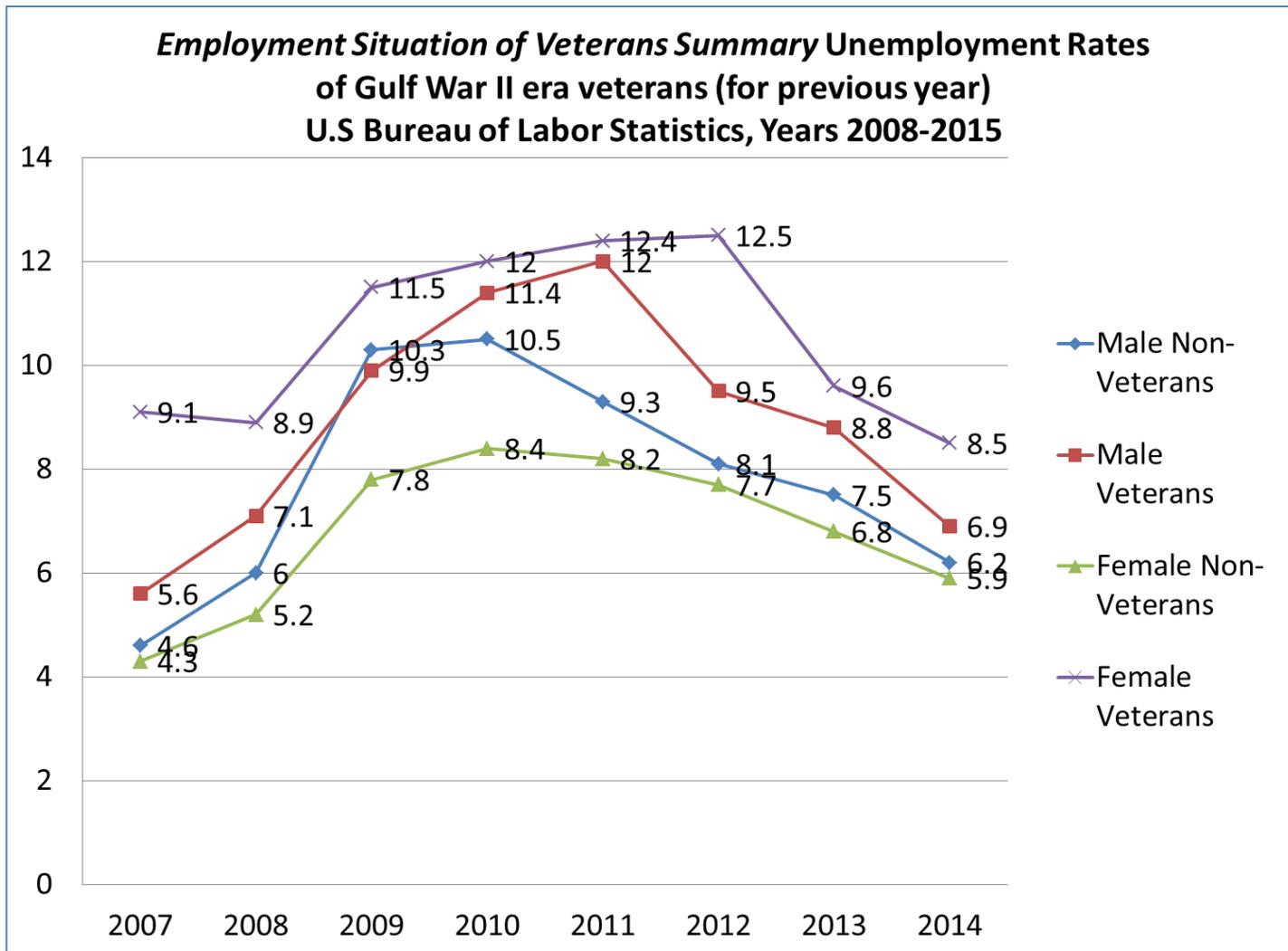
Background

- DoL findings indicate that recently separated Veterans experience greater difficulty securing and maintaining employment than their civilian peers.¹
- In addition, some evidence that female Veterans may experience unique employment concerns following military service.^{1,2}

¹U.S. Dept of Labor, 2015

²Kleykamp, 2013

Background



Source: United States Department of Labor, Bureau of Labor Statistics, Economic News Releases 2008-2015

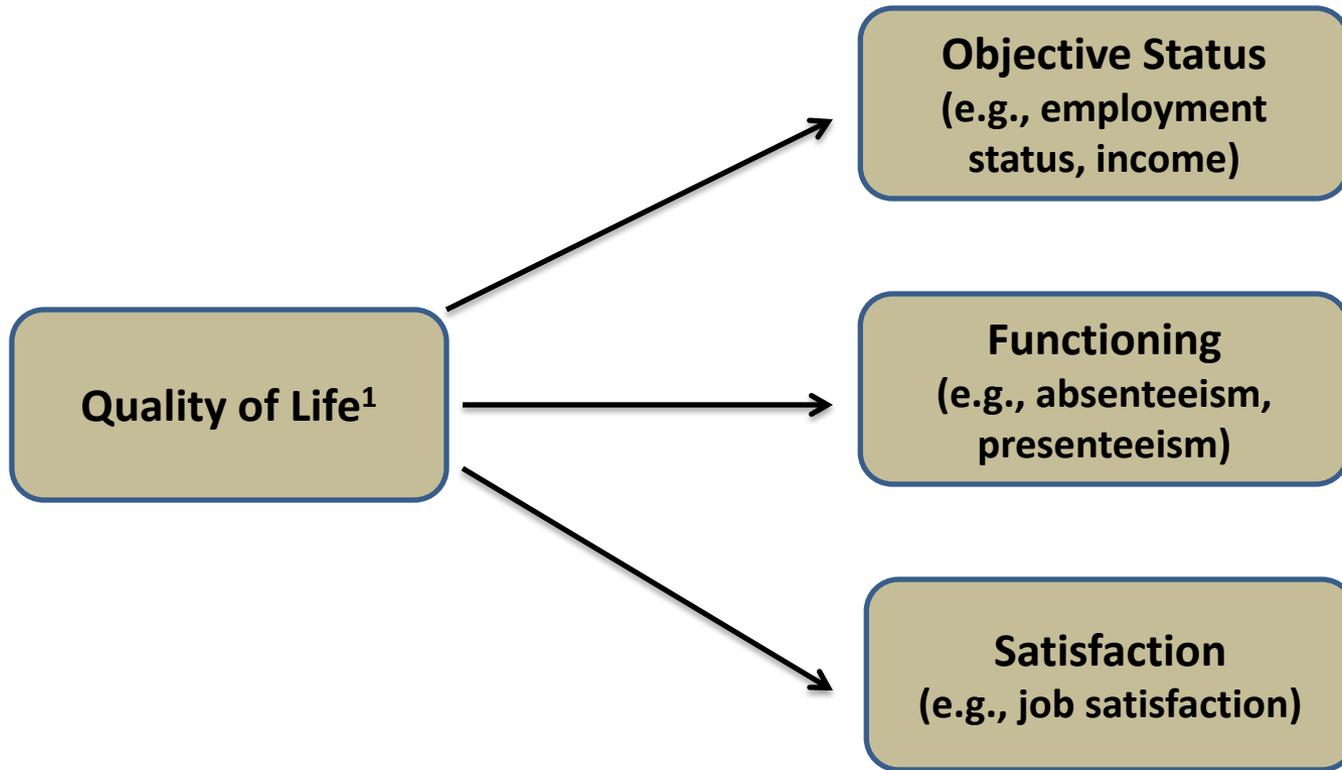
Background

- Impact of PTSD on employment?
 - PTSD symptoms can interfere with work attendance, completion of tasks, and effective relationships in work setting¹
- Some evidence that PTSD negatively impacts employment outcomes for Afghanistan and Iraq War Veterans^{1,2}
- To date, no comprehensive examination of the impact of PTSD on female and male Afghanistan and Iraq War Veterans' work-related quality of life

¹Schnurr et al., 2009

²Erbes, Kaler, Schult, Polusny, & Aribisi, 2011

Background



¹Gladis, Gosch, Dishuk, Crits-Cristoph, 1999

Background

- Family problems also identified as a key issue for deployed OEF/OIF Veterans^{1,2,3}
- Research suggests that deployments may strain service members' connections with family members and loved ones back home^{3, 4}
- Some research indicating that mental health consequences of stressful deployments, including PTSD, are associated with poorer family reintegration^{1,2,5}



¹ Sayers, Farrow, Ross, & Oslin, 2009

² Sayers, Noorbaloochi, Frazier, Carlson, Gravely, & Murdoch, 2010

³ Sheppard, Malatras, & Israel, 2010

⁴ Negrusa, Negrusa, & Hosek, 2014

⁵ Fontana, Rosenheck, & Desai, 2010

Background

- No comprehensive examination of family-related quality of life or impact of PTSD on family outcomes in both male and female Afghanistan and Iraq Veterans.
- Research limited on gender differences in family-related quality of life or how PTSD impacts family outcomes
 - Study found greater divorce risk associated with prolonged deployments for female service members¹

¹ Negrusa, Negrusa, and Hosek, 2014

Study Aims

- To document female and male Afghanistan and Iraq War Veterans' work- and family-related quality of life in nationally representative sample
- To evaluate prospective relationships between probable PTSD and work- and family-related quality of life outcomes

Methods

- Longitudinal national study of post 9/11 Veterans
- At Time 1 (2010-2011), potential participants randomly selected from DoD roster of all OEF/OIF Veterans who had returned from deployment and separated from service within prior two years
- Sample stratified by gender (50% female; 50% male) and deployment component (50% Active Duty, 50% National Guard/Reservist)
- Mailed survey completed by 1,046 Veterans (563 women, 483 men, 39%)

Methods

- Approximately 3.5 years following first data collection (2014-2015), T2 mail survey sent to 892 Veterans who agreed to be re-contacted.
- Completed surveys received from 524 Veterans (283 women and 239 men; 64%)
- To address potential for nonresponse bias and enhance representativeness to larger population, both design and non-response bias weights applied in analyses

Sample Demographics

T1 Demographics	
Gender	Female: 54%, Male: 46%
Age (T1)	M=37.17 (SD= 11.29); Men: 38.49 (SD=11.63); Women: 36.04 (SD=10.88)
Race/Ethnicity	Caucasian:78.7%, African American: 12.7%, Hispanic: 12%, Asian: 3.5%
Military Component	Active Duty: 54%, National Guard: 25% Reservists: 21%
Military Branch	Army: 65%, Marines: 7%, Navy: 13%, Air Force: 15%
Most Recent Deployment	OIF: 65%; OEF: 35%

T1 Measures

➤ PTSD:

- PTSD Checklist-Military Version¹: $\alpha = .94$
 - 17 items that assess PTSD symptom severity
 - Probable PTSD = >35 and meets DSM-IV symptom criteria²
 - 27% women; 23% men

➤ Other Mental Health Conditions:

- Adapted Beck Depression Inventory-PC³: $\alpha = .91$
 - 7 items that assess depression symptom severity
- AUDIT-C^{4,5}: $\alpha = .74$
 - 3 items that assess alcohol misuse over the past three months

¹Weathers, Litz, Herman, Huska, & Keane, 1993

²National Center for PTSD, 2014

³Beck, Steer, Ciervo, & Kabat, 1997

⁴Bradley et al., 2009

⁵Bush et al., 1998

T2 Employment QoL Measures

Objective Employment Status (T2)

- Questions drawn from the U.S. Bureau of Labor Statistics to assess involvement in workforce and employment status
- Assessment of income and hours worked

Occupational Functioning (T2)

- Inventory of Psychosocial Functioning (IPF)-Work^{1,2} ($\alpha=.92$) - assesses impairment in functioning
- Items from the World Health Organization Health and Work Performance Questionnaire³ to assess:
 - (1) absenteeism, reflected in % of hours lost per month
 - (2) presenteeism, reflected in % of time performance impaired

Job Satisfaction (T2)

- Abridged Job in General Scale (JIG)⁴ ($\alpha= .92$)

¹Marx et al., 2009

²McQuaid et al., 2012

³Kessler et al., 2004

⁴Russell et al., 2004

T2 Family QoL Measures

Objective Status (T2)

- **Romantic Relationship Status:** Married or living with a romantic partner
- **Parenting Status:** Parent or in a parenting role

Functioning (T2)

- **Romantic Relationship Functioning:** IPF-Romantic Relationship with Spouse or Partner^{1,2} ($\alpha=.91$) – 11 items assessing impaired relationship functioning
- **Parental Functioning:** IPF-Parenting^{1,2} ($\alpha=.92$)-10 items assessing impaired parental functioning

Satisfaction (T2)

- **Romantic Relationship Satisfaction:** 7 items adapted from Relationship Assessment Scale³ to assess satisfaction with romantic relationship ($\alpha=.92$)
- **Parenting Satisfaction:** 4 items adapted from Parental Satisfaction Scale⁴ to assess satisfaction with parenting experiences ($\alpha=.86$)

¹ Marx et al., 2009

² McQuaid et al., 2012

³ Hendrick, 1988

⁴ Wickrama, Conger, Lorenz, & Matthews, 1995

Analyses

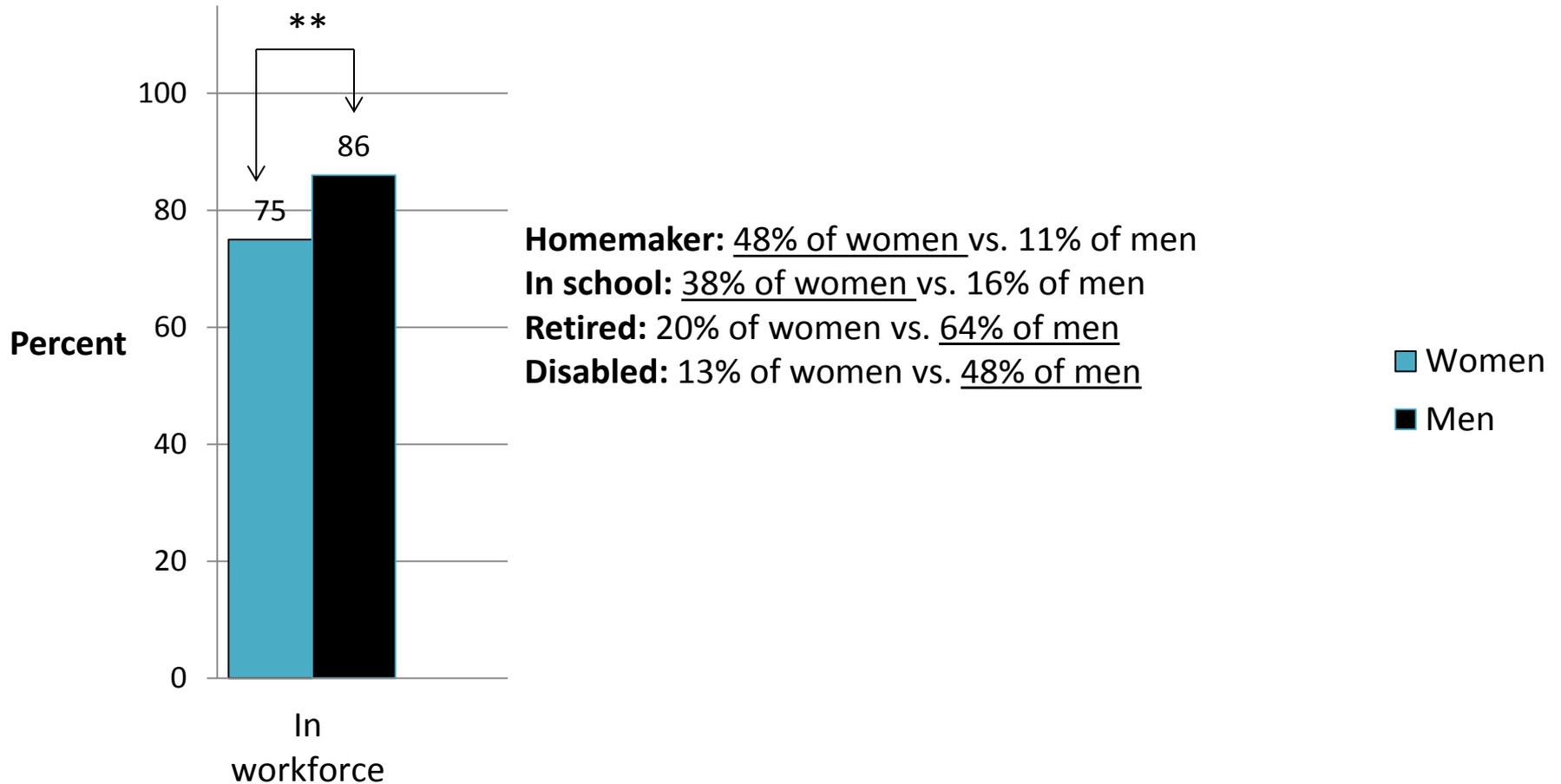
- Means/proportions /average item scores to describe work and family-related quality of life
- t-tests for gender comparisons
- ▶ Regressions to examine relationship between T1 PTSD on T2 work and family outcomes
- ▶ Accounted for potential demographic and mental health covariates

Results

* unadjusted

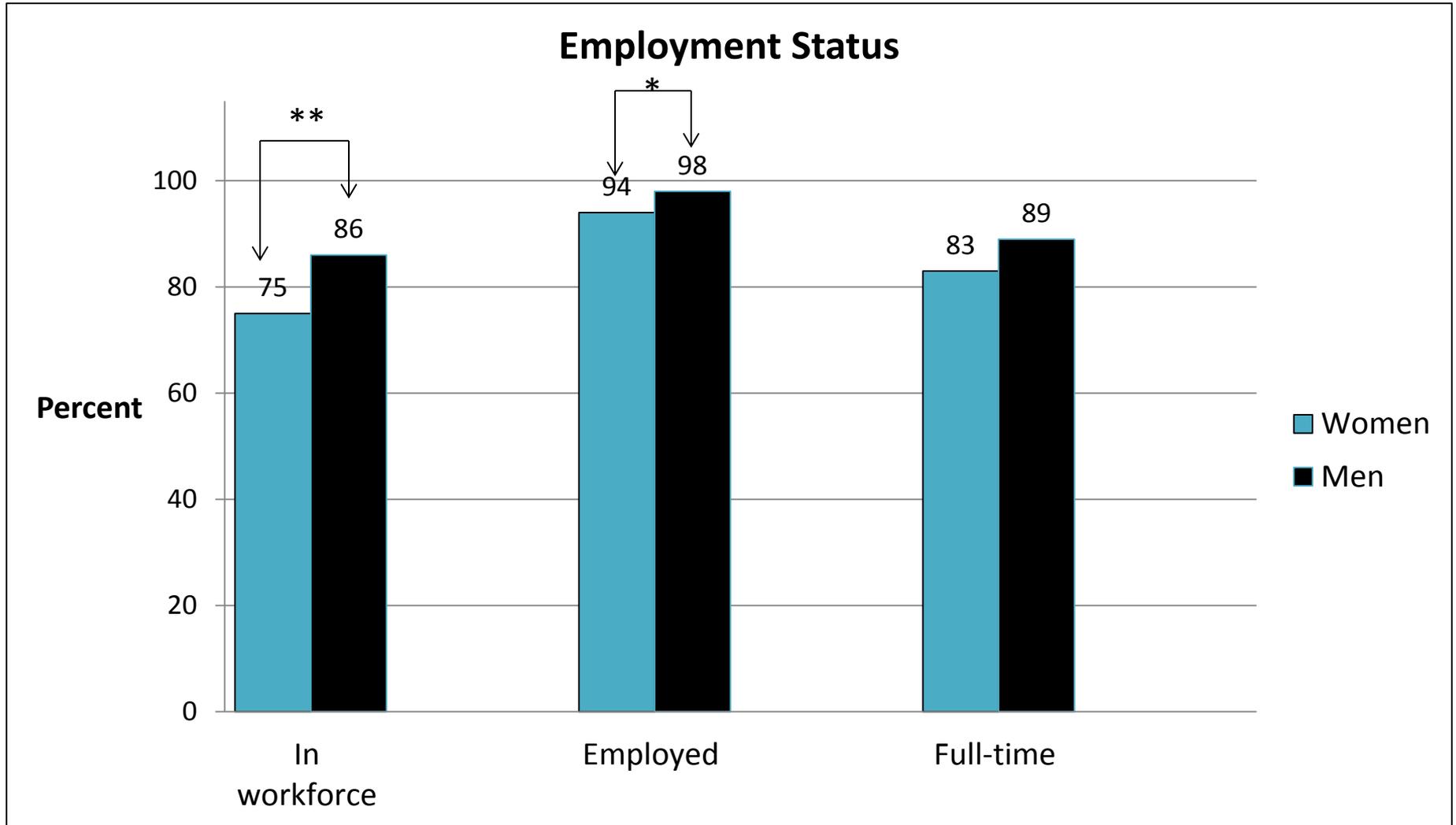
** adjusted + unadjusted

Employment Status



Results

* unadjusted
** adjusted + unadjusted



Results

T2 Objective Employment Status	Women %	Men %
Annual Individual Income (\$)**		
25,000 or less	35	17
25,001 - 35,000	15	11
35,001 - 50,000	15	20
50,001 - 75,000	15	21
75,001 - 100,000	12	17
Over 100,000	8	13
Annual Household Income (\$)		
25,000 or less	20	15
25,001 - 35,000	9	9
35,001 - 50,000	17	16
50,001 - 75,000	18	18
75,001 - 100,000	16	18
Over 100,000	20	24
Note. * = p < .05 for unadjusted analysis; ** = p < .05 for adjusted analysis (education)		

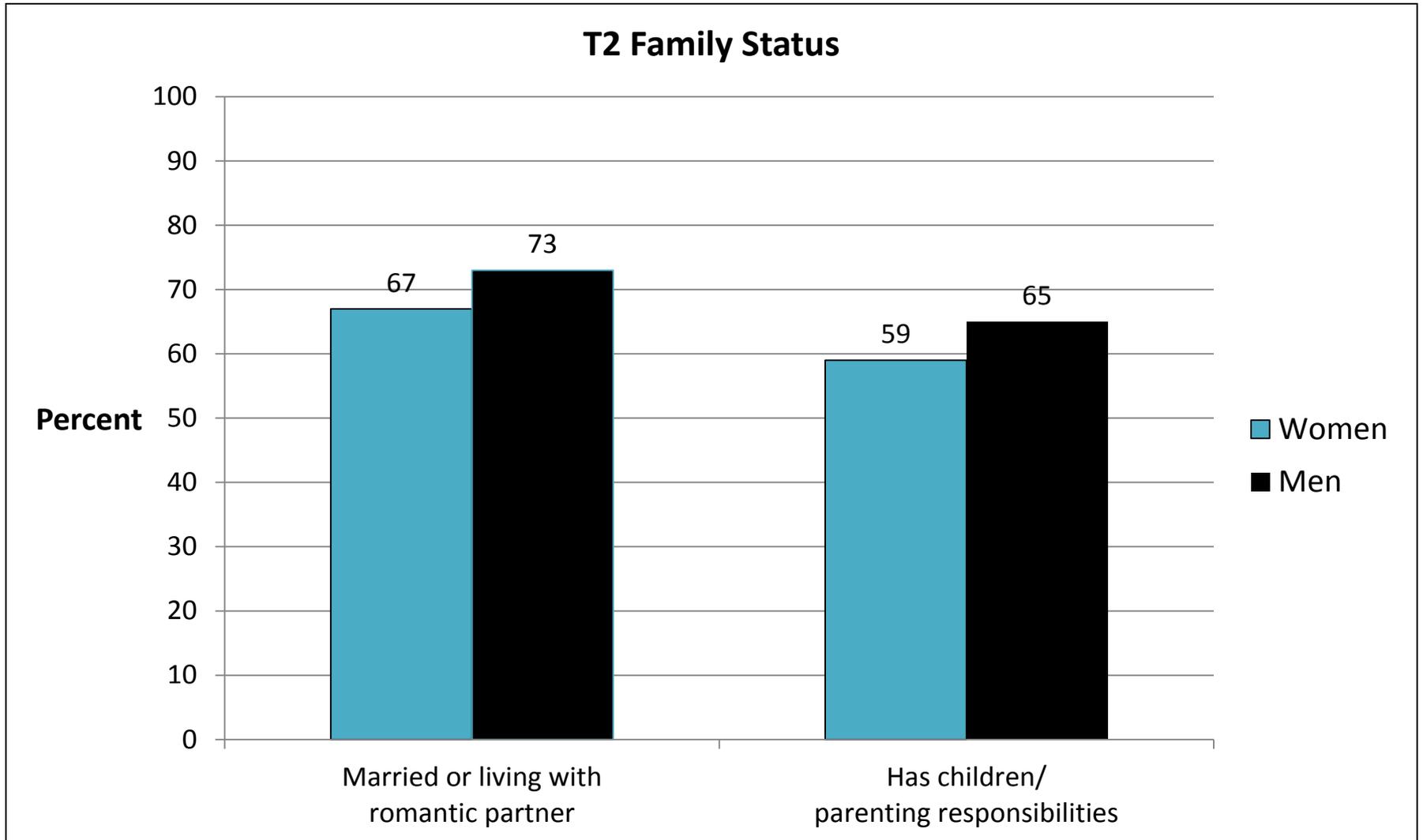
Results

	Women Avg. item score/%	Men Avg. item score/%
T2 Work Functioning and Satisfaction		
Functioning		
Work functioning (impairment)*	1.97	2.15
Absenteeism (% of hours lost per month)	11%	9%
Presenteeism (% of time impaired functioning)	18%	19%
Satisfaction		
Job Satisfaction	4.09	4.05
Note. * = p < .05 for unadjusted analysis; ** = p < .05 for adjusted analysis (education)		

Results

T1 Predictors of T2 Work Outcomes	Women	Men
Objective Status		
In Workforce vs. Out of Workforce	Age, education, marital status	Marital status, physical disability status
Employed vs. Unemployed	Education	
Full Time vs. Part Time		
Income	Age, education, alcohol misuse	Marital status, rank
Functioning		
Absenteeism		
Presenteeism	Depression	
Work functioning/impairment	Depression	PTSD , depression
Satisfaction		
Job Satisfaction	PTSD , depression	Rank, depression, alcohol misuse
Note. All predictors significant at $p < .05$		

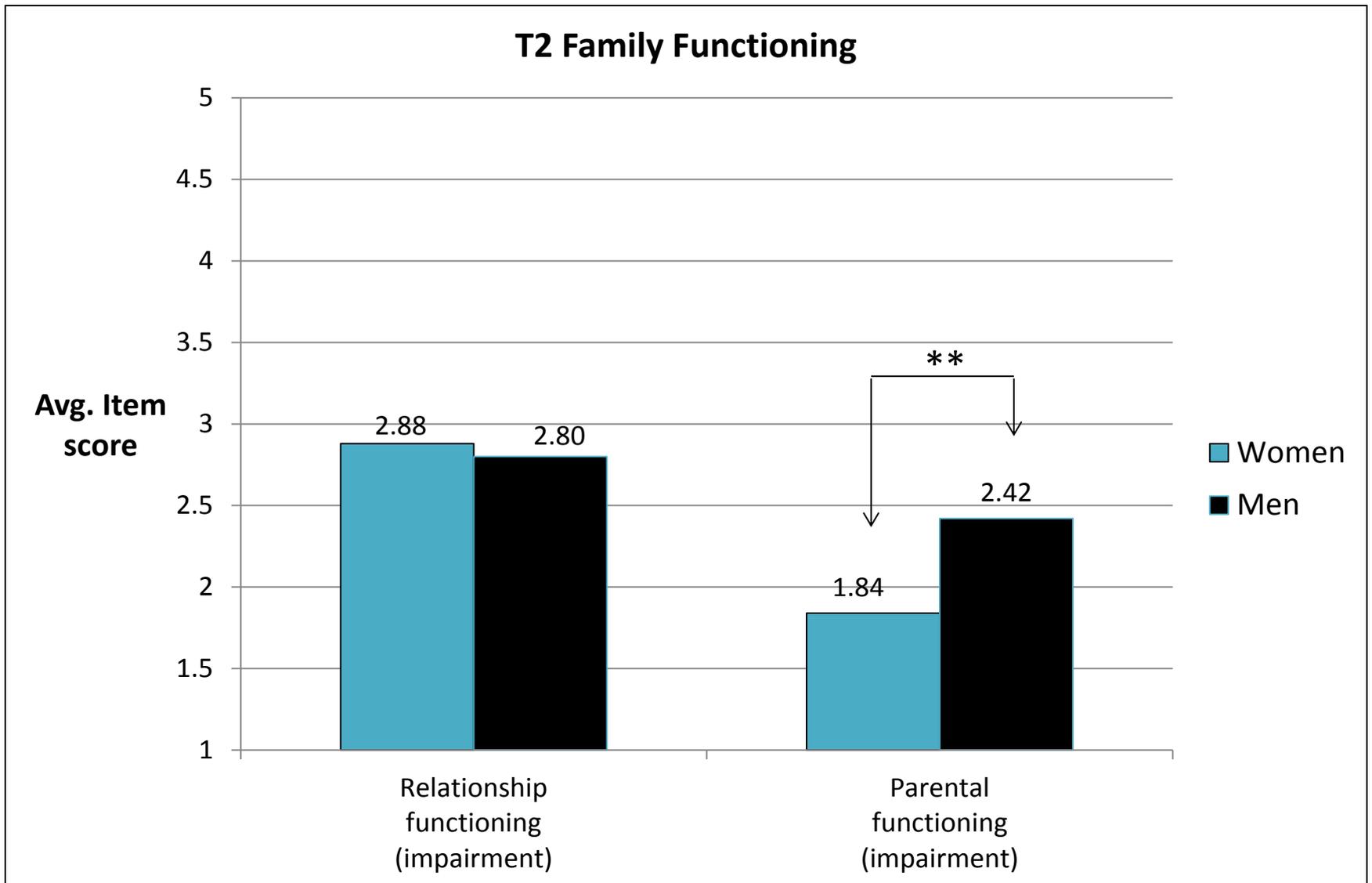
Results



Results

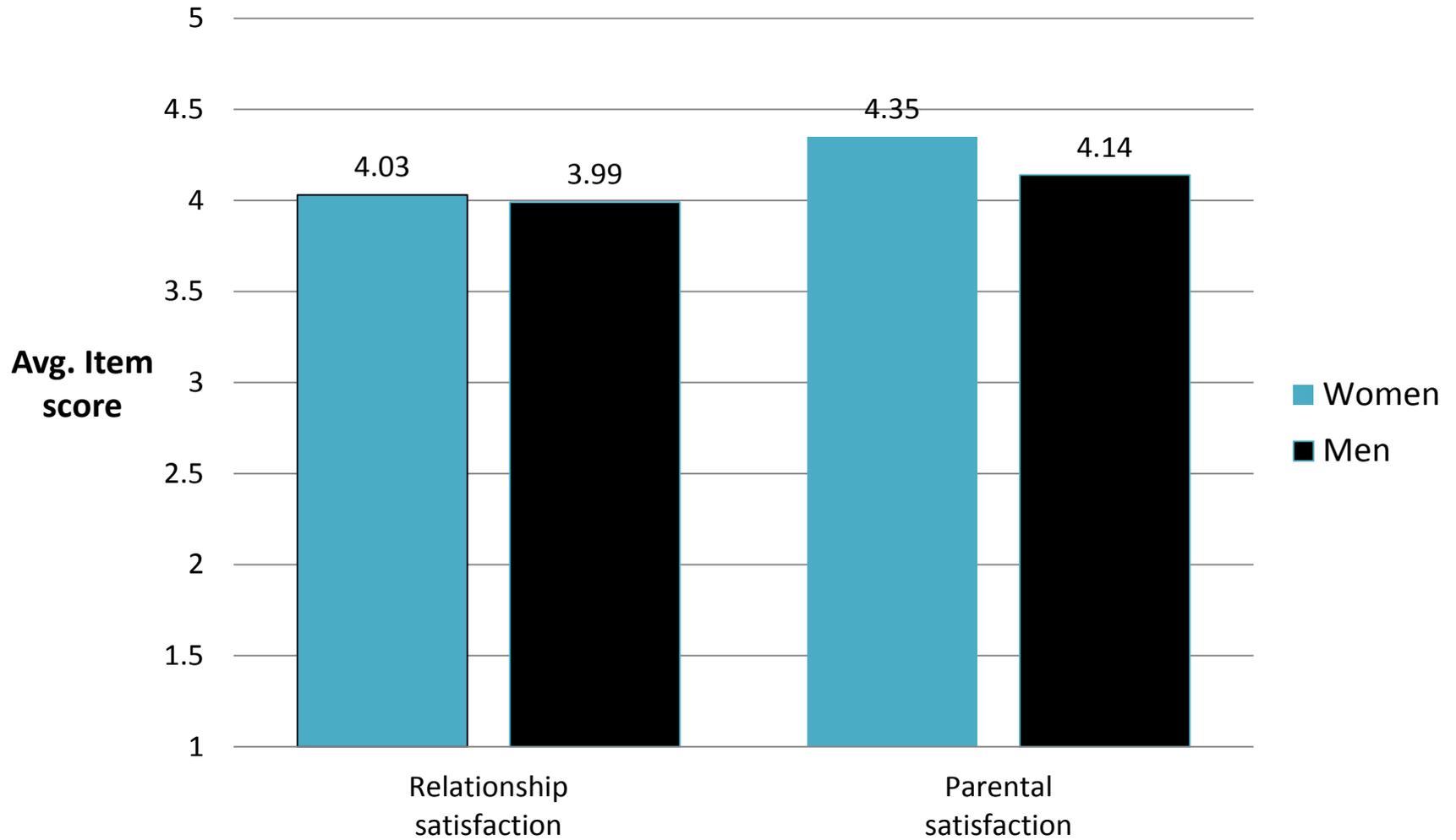
* unadjusted

** adjusted + unadjusted



Results

T2 Family Satisfaction



Results

T1 Predictors of T2 Family Outcomes	Women	Men
Objective Status		
Marital/relationship status	Age	
Parenting status	Alcohol misuse	Alcohol misuse, component
Functioning		
Romantic relationship functioning	PTSD , depression	PTSD
Parental functioning	Depression	Depression
Satisfaction		
Romantic relationship satisfaction	PTSD , depression, alcohol misuse	PTSD
Parental satisfaction	Depression, income	Physical disability, PTSD
Note. All predictors significant at $p < .05$		

Discussion

- Work QoL
 - Only about 5% reported being unemployed
 - Impairments in work functioning rare
 - Job satisfaction relatively high on average
- ▶ Family QoL
 - About two-thirds in romantic relationship
 - Rare to occasional impairments in relationship and parental functioning
 - Relatively high levels of satisfaction with romantic relationships and parenting

Discussion

- PTSD is important predictor of work- and family-related quality of life of both female and male post 9/11 Veterans, even after accounting for comorbidity and potential demographic confounders.
- Findings restricted to functioning and satisfaction outcomes, no impact of PTSD on objective status
 - Consistent with Erbes¹
- More consistent effects of PTSD on family than work outcomes
 - Perhaps more compartmentalization in workplace, or types of symptoms more impactful in romantic relationships (avoidance, hyperarousal)

¹Erbes, Kaler, Schult, Polusny, & Aribisi, 2011

Discussion

- In general, findings similar for women and men, consistent with recent review of broader literature¹
- Unemployment was greater concern for female Veterans
 - low education was a predictor of women's but not men's unemployment
- Several gender differences in impact of PTSD on functioning and satisfaction
 - For example, predictor of women's job satisfaction and men's parenting functioning

¹ Schnurr & Lunney, 2008

Implications

- Importance of thinking broadly about readjustment and well-being
 - within and across life domains
- Recognition that most Veterans are doing well
- Benefit of enhanced employment- and especially family-related support for subset with PTSD and work/ family problems
- Importance of prevention and/or early intervention

Implications

- Need for ongoing surveillance of impacts of PTSD and other health problems on QoL
- Need for further exploration of unique employment challenges for female Veterans

Limitations

- No information on work- and family-related QoL at T1
- Study limited to Veterans' perception of functioning
- Objective indicators of family QoL not necessarily reflective of well-being
- Study did not include homeless Veterans
- Assessment of PTSD based on self-report rather than clinical diagnosis

Poll Question #3

- Next steps for this research?
- Please write in recommendations for other research questions and analyses
- Thank you!



Questions/Comments?

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