Predictors of Employment and Productivity Among Returning National Guard Members

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Presentation outline

- Background and prior studies
  - Quantification of employment rates among VA patients
  - Longitudinal assessment of depression and employment among VA patients
  - Use of VA employment support services
  - Employment among recently returning Veterans

- Veteran Opinions Informing Care for Effective Solutions (VOICES) Study

Background and introduction

- Importance of employment for military and Veteran families

- Mental health issues are a potential barrier to successful employment

Quantifying rates of employment overall and by mental health status

- We sought to evaluate the association between mental disorders and labor force status among VA health care users

- We assessed the relationship between mental disorders and employment among patients aged 18-64 who completed the 2005 Survey of Healthcare Experiences of Patients (SHEP)

Results

- **Among those aged 18-64, labor force participation:**
  - **78% of non-Veterans**
  - **80% of Veterans**
  - **41% of VA patients**

- **Of the 98,867 VA patients who met eligibility criteria:**
  - **36% were disabled**
  - **35% were employed**
  - **20% were retired**
  - **7% were unemployed**

Results and conclusions

- **Those with bipolar disorder, depression, posttraumatic stress disorder, schizophrenia, or a substance use disorder were more likely to be unemployed, disabled, or retired than employed**

- **This study confirmed a negative relationship among VA patients between having a mental disorder and being employed**

Longitudinal assessment of depression and employment

- **Mental illness including depression is associated with difficulty obtaining and retaining employment**
  - **Most research to date has been cross-sectional in nature**

- **Improved understanding of the longitudinal relationship between depression and employment could have important policy implications**

- **We sought to examine the relationship between changes in depression and changes in employment among working-aged Veterans initially identified with depression**

Results

- **Veterans completed baseline (BL), seven, and eighteen month assessments (N=516, 368, and 229, respectively)**
  - **Mean age was 54.7**
  - **Average BL PHQ-9 score was 16.18 (sd=4.38)**
  - **49% had probable PTSD**

- **Overall employment rates remained stable (21-23%) throughout the study**

Results, continued

- **Decreased depression was associated with an increased likelihood of becoming employed over seven months among those who were both depressed and not employed at baseline**

- **Decreased depression from seven to eighteen months was associated with remaining employed over the eighteen months relative to those who remained depressed the entire time**

Conclusions

- The persistence of depression may have a significant impact on an individual's ability to both <u>attain and maintain</u> employment

- Supported employment and vocational rehabilitation programs are often designed for Veterans with serious mental illness, however these findings suggest the need for employment support in the depressed population as well

- Given the large number of working aged Operation Enduring Freedom and Operation Iraqi Freedom (OEF/OIF) Veterans, further attention to the depression/employment relationship is urgently needed

Receipt of employment services among VA users with psychiatric diagnoses

- VA provides vocational rehabilitative services to assist Veterans with psychiatric diagnoses with employment

- Includes four primary types of vocational rehabilitative services
  - supported employment (SE)
  - transitional work experiences (TWE)
  - incentive therapy (IT)
  - vocational assistance (Voc Assist)

Background and objective

- VA has ongoing monitoring of those who participate in VA employment services

- However, less is known about the extent to which the overall population of VA patients with psychiatric disorders access these services

- We sought to assess the reach of these services by examining the prevalence of VA users with psychiatric diagnoses who used employment services and to identify sociodemographic characteristics associated with accessing services (SE, IT, TWE, Voc Assist)

Results

- **Sample characteristics**
  - **VA users with psychiatric diagnoses in FY2010 (N= 52,542)**
  - **90.3% male, 59.1% middle-aged, 71.9% Caucasian**
  - **Most common psychiatric diagnoses were depression (41.1%) and PTSD (32.9%)**

- **Receipt of employment services**
  - **4.1% (N=2,178) received at least one employment services visit**

  - **VA users who were African-American, had a substance use disorder, and a homelessness indicator were more likely to receive services**

  - **VA users aged 45-65, >65, married, unknown ethnicity or race, and had a service connected condition were less likely to receive services**

Results, continued

- **Service access**
  - **34.84% received TWE**
  - **29.98% received Voc Assist**
  - **27.59% received SE**
  - **7.58% received IT**

Conclusions

- **Only a small percentage of VA users access employment services**
  - 4.1% of VA patients with a psychiatric diagnosis
  - 2.38% (anxiety disorders) to 5.63% (bipolar disorder)

- **Those with diagnoses of schizophrenia had higher odds of accessing any services relative to those with PTSD, depression, or anxiety, but comparable to those with bipolar disorder**
  - Services are designed to focus on schizophrenia and bipolar disorder

- **Those who were African-American, had a substance use disorder, and had an indication of homelessness were more likely to receive services**

- **Those with a service connected disability were less likely to obtain services**
  - **Regulations associated with a loss of benefits due to employment could serve as a disincentive to seeking employment**

- **Further research is needed to identify factors associated with employment services among Veterans with psychiatric diagnoses**

Welcome Back Veterans (National Guard)

- We sought to examine rates of civilian employment among recently returning Afghanistan and Iraq Veterans (45-60 days post-mobilization)
  - 41% employed
    - 79% of those employed full-time

  - Older age (>31 vs. 18-30), higher income, and recent combat exposure was associated with higher likelihood of employment
  - Higher income, better mental health was associated with full-time employment

Burnett-Zeigler et al, *Military Medicine*, 2011

Veteran Opinions Informing Care for Effective Solutions (VOICES)

PI: Marcia Valenstein, MD

Objective and study population

- **Goal of study:**
  - **To assess sociodemographic and clinical predictors of employment and productivity among returning National Guard members**

- **Study population**
  - **Michigan Army National Guard (MI ARNG) members who were surveyed 6-months and 12-months post deployment**
  - **Present sample: 1,217 MI ARNG members who completed the 6-month assessment**

Study measures

- **Dependent variables**
  - **Employment status: employed (Y/N)**
  - **Work productivity (scale of 1-10, higher is better)**
  - **Work satisfaction (scale of 1-10, higher is better)**

- **Independent variables**
  - **Demographic characteristics:**
    - **Age (18-30, 31-40, >40)**
    - **Gender (male/female)**
    - **Relationship status (Y/N)**
    - **Educational attainment (<college, ≥college)**
    - **Income (<$25,000, $25,001-$50,000, >$50,000)**
    - **Have a child at home (Y/N)**
    - **Life satisfaction (high/low)**
    - **Relationship satisfaction (satisfied/not)**

Study measures, continued

- Military characteristics:
  - Rank (commissioned officers, and enlisted groups E-1 to E-4; >E-4)
  - Combat exposure (Y/N)
- Clinical characteristics:
  - Dichotomous measures:
    - PTSD (PCL ≥50)
    - Depression (PHQ ≥10)
    - Anxiety (GAD ≥10)
    - Hazardous alcohol use (Y/N)
    - Any barrier to mental health care (Y/N);
  - Continuous measures (higher is better):
    - Perceived stress
    - Meaning in life (presence)
    - Meaning in life (search for)
    - SF-12: physical and mental health

Statistical analyses

- Logistic regression predicting employment status

- Linear regression predicting work productivity among employed

- Linear regression predicting work satisfaction among employed

Results: employment status
774 (63.6%) employed

- older age (>31 vs. 18-30)
- being in a committed relationship
- higher rank (officer or >E4 vs. E1-E4)
- higher income
- having a child at home
- being satisfied with life
- being satisfied in a personal relationship
- not having an alcohol use disorder
- lower stress level
- having a higher sense of meaning in life
- having a lower level of looking for meaning in life

Results: better work performance

- younger age (18-30 vs. 31-40)
- lower rank E1-E4 vs. >E4 (officer NS)
- lower level of education
- not having exposure to combat
- being satisfied with life
- being satisfied in a personal relationship
- not having PTSD
- not having depression
- not having anxiety
- not having barriers to mental health care
- lower stress level
- having a higher sense of meaning in life
- having a lower level of looking for meaning in life
- having better physical health
- having better mental health

Results: higher work satisfaction

- younger age (18-30 vs. 31-40)
- lower level of education
- lower rank (officer or >E4 vs. E1-E4)
- not having exposure to combat
- higher life satisfaction
- not having PTSD
- not having depression
- not having anxiety
- not having any barriers to mental health care
- lower stress level
- not having an alcohol use disorder
- having a higher sense of meaning in life
- having a lower level of looking for meaning in life
- being satisfied in a personal relationship
- having better physical health
- having better mental health
- having more social support

Discussion and conclusions

- Predictors of employment appear plausible:
  - Higher rank, income, having a child at home, not having an alcohol disorder

- Predictors of work performance are mixed:
  - Better physical and mental health makes sense
    - No significant impact of specific mental health conditions
  - Not sure how to interpret lower level of education

- Predictors of work satisfaction also mixed:
  - No alcohol disorder, higher meaning of life, better mental health makes sense
  - Again, not sure how to interpret lower level of education

Conclusions and next steps

- 63% employment rate
  - lower than general US population and overall Veteran population; higher than VA patient population
- Need to compare work productivity/satisfaction levels to other populations
- Need to investigate unexpected educational attainment findings further
  - older vets with at least some college rated their performance and satisfaction lower than the younger vets with some college
- Need to examine collinearity of mental disorders

- Next steps:
  - Complete analyses on full sample
  - Complete 12 month assessment and compare results

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Questions, comments, concerns, collaborations?

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