

CHANGING LABOR MARKETS AND MENTAL ILLNESS: IMPACTS ON WORK AND DISABILITY

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Overview

- Motivation
- Data Description
- Trends in Labor Force Participation by Mental Health Status
- Changing Occupational Composition and Skill Demand

Motivation

- Most prevalent mental illnesses cause significant cognitive dysfunction that affect productivity
- Many mental illnesses have onsets in late adolescents and early adulthood compromising accumulation of human capital
- Technology is changing skill demand by automating routine tasks and expanding demand for non-routine cognitive intensive work
- The pattern of labor market changes has potentially profound effects on employment of people with mental illnesses and disability claims

Data

- National Health Interview Survey (NHIS)
 - ▣ Large National Household Survey (about 87,500 people in 35,000 households)
 - ▣ Mental Health Measures rely on K-6 but include depression measures 2010-2017
 - ▣ Finer Occupation codes
 - ▣ Covers 1997-2017

Labor Force Participation in the Adult (18-64) Population by Level of Psychological Distress

Gender	K6 Score	1997-99	2006-08	2015-17	Δ 97-17
Female					
	None (0-4)	71.07%	70.95%	70.87%	-0.20%
	Mild (5-9)	64.26%	62.33%	63.83%	-0.42%
	Moderate (10-12)	54.84%	49.17%	54.03%	-0.82%
	Severe (13-24)	43.67%	35.73%	37.82%	-5.85%
Male					
	None (0-4)	85.75%	84.39%	82.05%	-3.70%
	Mild (5-9)	76.44%	71.76%	70.41%	-6.03%
	Moderate (10-12)	62.69%	52.85%	56.40%	-6.29%
	Severe (13-24)	45.95%	38.91%	37.69%	-8.25%

Observations

- For women with no, mild, or moderate psychological distress, LFP has largely returned to 1997-1999 pre-recession levels
- For men with no, mild, or moderate distress LFP rates have not returned to 1997-1999 levels
- For both men and women with SPD LFP rates were low in the late 1990s and have declined notably since (by 17.9% and 13.3%)

Decomposition of LFP Changes

Labor Force Participation

1997-99

2006-08

2015-17

Aggregate of Demographic Groups

$\sum_i \ell_{i,t} \times w_{i,1997}$

78.02%

77.33%

78.86%

$\sum_i \ell_{i,t} \times w_{i,2017}$

75.49%

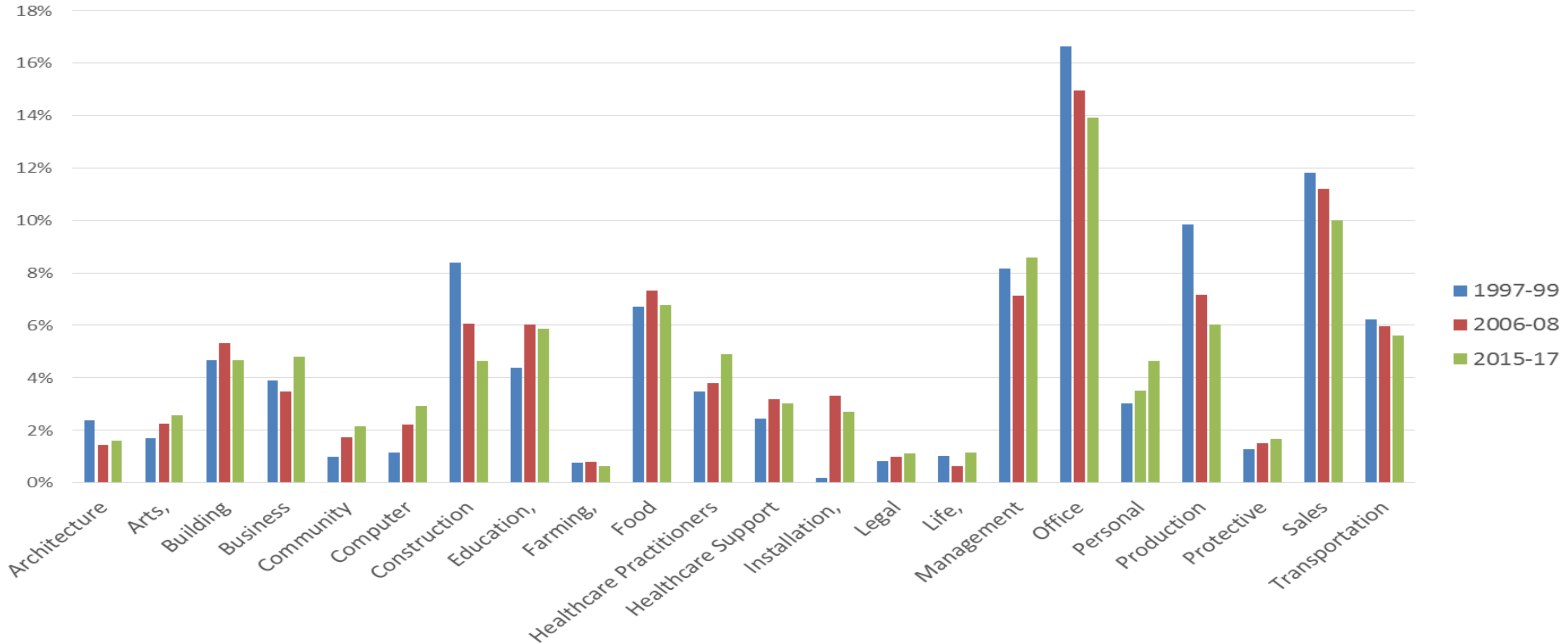
75.26%

77.05%

Observations

- Labor Force Participation for people with psychological distress has generally been declining
- Our estimates suggest that LFP across the population would have increased slightly if population composition (age, sex and mental health status) were held constant.
- The observed decline in LFP is partially due to the aging of the population.
- But increasing rates of psychological distress especially for men (36% for moderate and 30% for serious psychological distress) have also contributed.

% of Employed Adults with Moderate or Serious Psychological Distress (K6 \geq 10) in Each Occupational Category, 1997 to 2017



A Note on Data and Skill Composition

- The analysis of the skill composition of jobs by mental health status combined
 - ▣ O*Net data with occupational and mental health status information from the NHIS using modified census codes for occupations and the K-6 score to classify the level of psychological distress
- Applied methods of Acemoglu and Autor (2011) to obtain skill scores

Task Skill Analysis, 1997-2017

**Average Task Skill Decomposition and Offshorability
by Gender and Level of Psychological Distress in Adults (18-64), 2004-17**

Gender SPD by K6 Score	Non-Routine Cognitive: Analytical		Non-Routine Cognitive: Interpersonal		Routine Cognitive		Non-Routine Manual: Physical		Routine Manual	
	1997	2017	1997	2017	1997	2017	1997	2017	1997	2017
Female										
None (0-4)	0.18	0.10	0.26	0.16	0.13	0.02	-0.30	-0.35	-0.16	-0.28
Mild (5-9)	0.04	-0.09	0.15	-0.03	0.14	0.13	-0.20	-0.26	-0.08	-0.16
Moderate (10-12)	-0.20	-0.20	-0.09	-0.13	0.20	0.12	-0.05	-0.08	0.20	0.02
Severe (13-24)	-0.25	-0.30	-0.09	-0.16	-0.04	0.19	-0.03	-0.13	0.12	0.00
Male										
None (0-4)	-0.08	0.00	-0.16	-0.08	-0.09	-0.06	0.21	0.32	0.10	0.21
Mild (5-9)	-0.21	-0.12	-0.25	-0.17	-0.08	0.00	0.28	0.35	0.16	0.28
Moderate (10-12)	-0.48	-0.33	-0.45	-0.24	-0.13	0.03	0.52	0.52	0.43	0.47
Severe (13-24)	-0.43	-0.51	-0.41	-0.41	-0.16	0.09	0.36	0.68	0.38	0.63

Observations

- For non-routine cognitive analytical and interpersonal people with psychological distress are in jobs that rely less on those skills
 - ▣ The degree of under reliance appears to have declined from 1997 to 2017
- For routine cognitive and manual (males only) people with psychological distress are in jobs that rely more heavily on those skills
- Both men and women with more serious psychological distress are in jobs that rely more heavily on non-routine manual and on routine manual skills than are the jobs held by men and women without psychological distress

Technology Change

- There is considerable agreement that existing technologies create the greatest near term employment threats for jobs that rely most on routine manual and cognitive skills
- Non routine low skills/low wage jobs likely to be threatened by evolving technologies but that would be in medium (10 years +) to long term

Expectations and Challenges

- People with mental health problems have more negative trends in LFP than the rest of the population, especially men
- The combination of evolving technologies and changing educational requirements pose threats to the employability of people with mental health problems in low wage service jobs