

The Effects of Diagnosing a Young Adult with a Mental Illness: Evidence from Randomly Assigned Doctors

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Discussed by

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What is the paper about?

- Around the globe high prevalence rates of mental illness
- Mental health/depression leading cause of disability (WHO)
 - With consequences for individual well-being, health and mortality, labor market outcomes, marriage outcomes and health care spending
- **This paper:** causal effect of **being diagnosed** at age 18 on later life (age 30) socio-economic outcomes
 - Uses conscript data, linked with 6 admin datasets to track health, labor market and family outcomes

Findings

- **Diagnosis** of mental; illness at age 18 has negative effect effects on the marginal patient.
- Effects are **huge**, for example:
 - 1.2 pp ↑ (880%) in death from internal illness b/w age 18-30
 - 19.5 pp ↑ (84%) in odds of visiting a hospital as an outpatient
 - 9.4 extra sickness days (216% ↑)
 - 8.9pp ↑ (164%) in odds of long-term unemployment spell and 6pp ↑ (108%) in odds of short-term unemployment spell
 - Also, strong and quantitatively large effect on family outcomes and finances
- I am a 'bit' alarmed by the size of the effects

First, there is much to like about this paper

- Good and very relevant question that has not been addressed before (as least, as far as I know)
- Great data
- Sound empirical methods
 - Ticking all possible and relevant boxes required for causal interpretation
 - Clear that authors know the relevant methods
- Spectacular results

Comments/questions

Comment/question:

- Mental illness, what are we talking about?
 - Anxiety? Depression? Schizophrenia? Bi-polar?
 - The conditions considered here in identification strategy are the marginal / less severe cases. Right?
 - Then, why should we expect to find large effects?
 - If severe, then treatment/medication should be in order
 - Table 8 suggests that they can not explain this...
- => Either way, provide more direct information to explain the (large) effects

Q: Is it the empirical model?

- What the authors do:
 - The main equation:
 - $$Y_i = \alpha + \beta D18_i + \omega X_i + \epsilon_i$$
- $D18$ is endogenous => use 2SLS:
 - Use indiv level residuals (from a regression of $D18$ on $c * t$ f.e.)
 - To construct **Z** a ‘**residualized leave-out measure**’ of doctor’s diagnosis tendency
 - The first stage:
 - $$D18_{ict} = \pi \mathbf{Z}_{ict} + \gamma X_{ct} + \epsilon_{ict}, \text{ with } X_{ct} \text{ } c * t \text{ fixed effects}$$

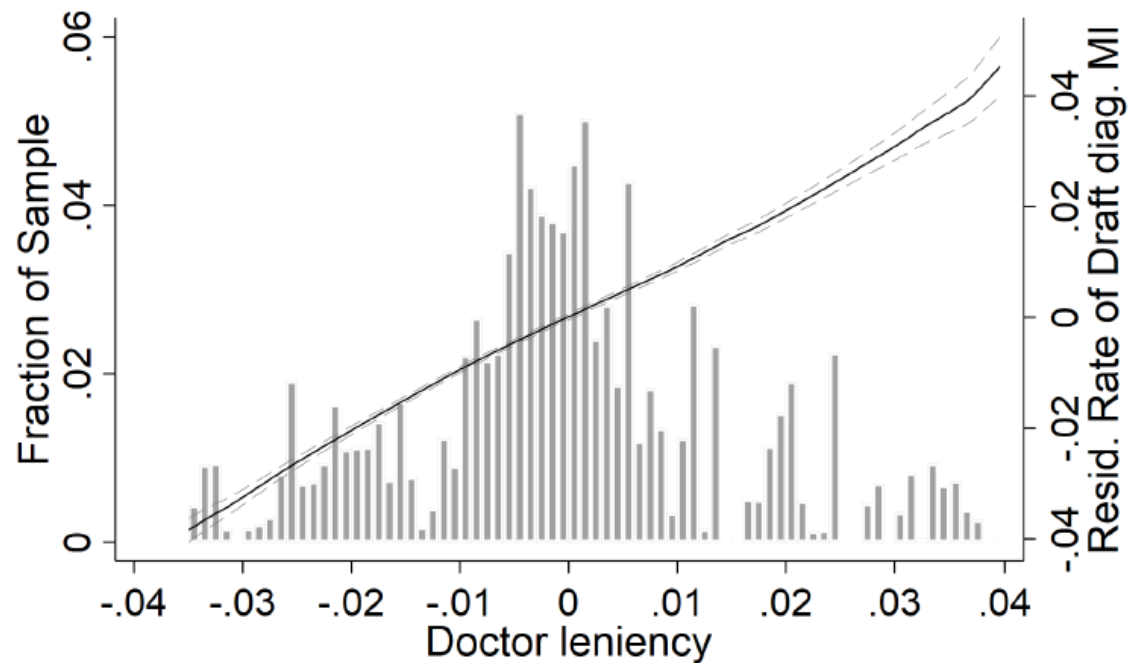
- Instead, I would estimate:
 - The main equation:
 - $$Y_{icd} = \alpha + \beta D18_{icd} + \mu_c + \epsilon_{icd}$$
- So, look at the doctor (d) level diagnosis and control for enlistment center specific effect (possibly also time fixed effects)
 - The first stage:
 - $$D18_{icd} = \delta + \pi D_{cd(-i)} + \vartheta_c + \epsilon_{ict} ,$$

with $D_{cd(-i)}$ the avge of doctor d in center c , diagnosis, leaving out the decision for individual i
 - So, now explicitly the within c variation of doctor d

Q: You do something different?

C: You should also **show the simple OLS** results

Q: Could the huge effects be due to too **little variation** in the instrument? (cf weak instrument problem)



Leniency Mean: $-3.5e-11$
Leniency Median: $-.00074$
Leniency SD: $.017$

- In search of mechanisms for large effects the authors examine whether **military service** might explain matters
 - They follow the **same approach** to measure the effect of serving the military on the same set of outcomes
 - Find that these **effects** are **much smaller**
 - => Authors rule out important effect of military service on diagnosis effect
- C: Not sure this is meaningful, b/c diagnosis effects are too large
- C: Why not estimate model of outcomes on service and diagnosis (OLS and 2SLS)?

- Next, authors turn to other possible mechanisms that may explain large long-term effect of the diagnosis
 - Suggestive evidence for limited effects of psychiatric medication (so treatment not effective?.....)
 - Self-perception can not explain either
 - No differential effects by SES parents

Q: So, what does explain the large effects?

Q: Seems that there is little role for policy. Am I right?

C: If role, please extend on this