Prison-based Education: Programs, Participation and Proficiency in Literacy/Numeracy

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Why do we study 3Ps?

- High incarceration rate in the United States (670 per 100,000 persons as per Walmsley 2018)
- Evidence - correctional education enhances post-release employability and reduces recidivism
- Lack of literature linking educational programs to literacy/numeracy skills needed for reentry
Why PIAAC?

- Using PIAAC data, we can
  - compare skills level and skills use between household and the incarcerated population
  - connect program, participation and proficiency
Selected research questions:

- Q1 - What are the characteristics of the incarcerated population, relative to the household population (in PIAAC), vis-à-vis (a) education levels, (b) literacy/numeracy levels, and (c) use of skills in life and at work?

- Q2 - What are the reasons reported by inmates for participating (or not) in the academic or vocational programs?

- Q3 - Are inmates who participate in educational programs more likely to use more literacy/numeracy skills than non-participants?
Research methods

Q1 - Percentage of each population:

<table>
<thead>
<tr>
<th>Education</th>
<th>Literacy or numeracy</th>
<th>Use of literacy or numeracy skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low (no high school diploma)</td>
<td>Plausible values, Cut-off score of the PIAAC basic proficiency level (Level 2)</td>
<td>often use</td>
</tr>
<tr>
<td>Medium (high school diploma and/or some college without degree)</td>
<td></td>
<td>rarely use</td>
</tr>
<tr>
<td>High (college degree)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Research methods (cont.)

Q2 - Reasons for participating in academic or vocational programs

Percentage of inmates:
- required
- increase employability or self-improvement
- other
Research methods (cont.)

Q3 - Ordinal logistic regression:

- **DV**: Number of literacy/numeracy skills used in prison life
- **IVs**: during the current incarceration,
  - (a) completed or not completed a higher education level
  - (b) participated or not participated in vocational programs
- **Controls**
  - (a) proficiency level,
  - (b) Demographics (gender, age, race)
  - (c) inmates’ desire to enroll in academic programs
Results of Q1 - Characteristics

- Only 6% of the inmates have high-level education, while 64% have medium-level, and 30%, low-level education (Household: 36% high, 50% medium, 14% low)

- 29% of inmates have literacy below Level 2 (household: 19%)

- 52% of inmates have numeracy level below Level 2 (household: 29%)
Use of Cognitive Skills in Life / at Work

**Literacy**
- Read directions or instructions
- Read letters or memos
- Read newspaper articles
- Read professional journals
- Read books
- Read manuals
- Write letters or memos
- Write reports
- Fill in forms

**Numeracy**
- Calculate prices or costs
- Use fractions, decimals or percentages
- Use calculator
- Use simple algebra/formulas
- Prepare charts
- Read financial statements
- Read diagrams, maps

Skill Use in Life
- Incarcerated
- Household

Skill Use at Work
- Incarcerated
- Household

(notice the chart with skill use frequency indicated by orange and blue bars, showing 'often' and 'rarely')
Results of Q2 - Reasons for participation

- 73% of the inmates who enrolled in basic skills programs wanted to improve themselves or increase their chances for employability.

- 79% of the inmates who during the incarceration completed a level of education higher than the level they had prior to prison wanted to increase their chances for employability or for self-improvement.
Results of Q3 - Use of skills in prison

- Inmates who participated in vocational training were more likely to use more literacy and numeracy skills in prison than inmates who did not.

- Inmates who completed a higher education level during the current incarceration did not show higher likelihood to use more literacy or numeracy skills than inmates who did not complete.
Implications for policy and practice

- As almost one in three inmates have education levels lower than high school diplomas, expanding programs targeting basic skills is a must.

- Participation in vocational programs is positively associated with skills-use; career and technical education (CTE) need to receive more resources in correctional education.
Limitations and future study

- Longitudinal data are needed to link proficiency to program effectiveness and inmates’ post release employment or recidivism.
- Demographic factors (e.g., race) should be studied to identify possible cultural differences in the use of cognitive skills.
Thank you!