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Assessing for Racial Disparity in the Use and Effects of Disciplinary Segregation: A Propensity Score Matching Analysis

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Competing Views of Restrictive Housing

- **Prison system view**

- Targets the “worst of the worst”
- Effective deterrent

- **Critics’ view**

- Placement influenced by ascriptive characteristics (e.g., mental illness, race, age)
- Increases criminal behavior, especially among vulnerable populations

Review of the Research

- Little is known about the uses of restrictive housing.
 - Effects may vary based on who is placed in the setting, why they are placed there, the conditions of confinement, and how long they spend there.
- Few studies assess the impact of restrictive housing on behavioral indicators:
 - Some find a benefit (e.g., Ralph & Marquart, 1991)
 - Some point to a detriment (e.g., Lovell et al., 2007; Mears & Bales, 2009)
 - Some suggest no effect (e.g., Butler et al., 2016; Morris, 2016)
- Virtually no information available on the influence of moderators.

Race and Restrictive Housing

- Descriptive studies find a greater proportion of minority inmates in restrictive housing settings compared to the general prisoner population (e.g., Beck, 2015).
- Multivariate investigations reveal race is not a significant predictor when other factors are included (Butler & Steiner, 2016; Mears & Bales, 2010).
- The disproportionate presence of minorities in restrictive settings may cause a greater distrust of authority, which may lower their likelihood for complying with institutional rules (Olson, 2016; Schlanger, 2013).

Current Study

- Sample includes inmates admitted into ODRC between 2007 and 2011 who served 365 consecutive days in prison ($N = 40,981$).
- Restrictive housing is defined here as the experience of disciplinary segregation (DS) within 3 months of ODRC admission.
- Institutional misconduct is defined as a finding of guilt for any violation of an ODRC rule of conduct:
 - Violent/serious offenses (e.g., assault)
 - Non-violent/less serious offenses (e.g., damage to property, theft, drug use)

Method

- Logistic regression is used to predict placement in DS within 3 months.
- Propensity score matching (PSM) is used to match black and white inmates on a variety of theoretically relevant variables, including placement in DS.
- One-to-one nearest neighbor matching with a .05 tolerance level.
- PSM is useful because it reduces potential biases due to confounding variables (Rosenbaum & Rubin, 1983).
- Once matched, the group differences in misconduct measures are examined.

Comparison of Characteristics (Full Sample)

	Black (<i>N</i> = 18,980)	White (<i>N</i> = 22,001)	%STD Diff
% DS within first 3 months*	15.11	11.25	11.4
% male*	94.52	88.05	23.1
% gang affiliation*	23.36	15.46	20.1
% serious mental illness*	20.67	39.56	42.1
% recidivist*	53.33	42.00	22.8
Mean age at admission (<i>SD</i>)*	30.51 (10.38)	33.36 (10.91)	22.0
Mean total violent convictions (<i>SD</i>)*	0.78 (1.13)	0.44 (0.85)	26.6
Mean total nonviolent convictions (<i>SD</i>)*	0.78 (1.34)	0.86 (1.51)	4.7
Mean pre-violent misconduct (<i>SD</i>)*	0.07 (0.27)	0.04 (0.21)	9.7
Mean pre-nonviolent misconduct (<i>SD</i>)*	0.16 (0.56)	0.10 (0.42)	9.5

Note. **p* < .01.

Logistic Regression Predicting DS Within 3 Months

	Model 1	Model 2
Black	1.22*	1.05
Male	1.20*	1.19
Gang affiliation	1.32*	1.12
Serious mental illness	1.81*	1.45*
Age at admission	0.95*	0.97*
Recidivist	0.96	0.95
Violent convictions	1.41*	1.35*
Nonviolent convictions	1.20*	1.20*
Pre-violent misconduct	—	23.71*
Pre-nonviolent misconduct	—	5.08*
Nagelkerke R-square	.134	.410

Note. * $p < .01$.

Odds ratios are reported.

Effect of Race on Misconduct (Full Sample)

	Mean (Black)	Mean (White)	Difference	Cohen's d
Violent				
Prevalence*	.18	.12	.06	.17
Incidence*	.25	.15	.10	.18
Nonviolent				
Prevalence*	.31	.25	.06	.13
Incidence*	.95	.67	.27	.14

Note. * $p < .01$.

Comparison of Characteristics (Matched Sample)

	Black (N = 16,092)	White (N = 16,092)	%STD Diff
% DS within first 3 months*	13.48	15.18	4.9
% male*	93.64	92.82	3.2
% gang affiliation	20.08	19.92	0.5
% serious mental illness*	23.70	32.64	19.9
% recidivist*	51.19	48.76	4.8
Mean age at admission (<i>SD</i>)	31.35 (10.68)	31.08 (9.64)	2.1
Mean total violent convictions (<i>SD</i>)	0.60 (.93)	0.60 (.95)	0.0
Mean total nonviolent convictions (<i>SD</i>)*	0.80 (1.38)	1.14 (1.63)	18.9
Mean pre-violent misconduct (<i>SD</i>)	.06 (.24)	.06 (.25)	0.0
Mean pre-nonviolent misconduct (<i>SD</i>)	.13 (.49)	.13 (.49)	0.0

Note. * $p < .01$.

Effect of Race on Misconduct (Matched Sample)

	Mean (Black)	Mean (White)	Difference	Cohen's d
Violent				
Prevalence	.17	.17	.00	.00
Incidence*	.23	.21	.02	.04
Nonviolent				
Prevalence*	.29	.34	-.05	-.10
Incidence	.89	.91	-.02	-.01

Note. * $p < .01$.

Summary of Results

- Black inmates are more likely to experience DS; however, this difference appears due to objective risk factors, most notably, violent institutional behavior.
- Supplemental analyses produce similar results when predicting number of days spent in DS, % of time spent in DS, and number of placements in DS within first 3 months.
- Black inmates are more likely to be written up for institutional misconduct; however, the magnitude of the differences is largely diminished when matched:
 - Once matched, there is little difference found between race categories in subsequent violent behavior and whites appear to have more subsequent nonviolent misconduct.

Limitations

- Findings may not be applicable to all restrictive housing settings and inmates.
- The current study is limited to adult inmates from Ohio who were placed in restrictive housing for disciplinary purposes.
- This study also relied on the use of official data.
- It is possible that differences exist in officers treat inmates by race:
 - Officers may be more likely to write up black inmates for misbehavior, and rule infractions boards may be more likely to place black inmates in DS for misbehavior.

Conclusion

- Restrictive housing might create benefits; however, it may also create harms.
- These possibilities clearly warrant further investigation (see Frost & Monteiro, 2016).
- In addition, there is a need for more studies to assess for the influence of potential moderators (e.g., age, gender, race, mental health, risk level).
- Such an endeavor will inevitably lead to more informed policy decisions regarding the use of restrictive housing.

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Supplemental Analyses

	Mean (Black)	Mean (White)	Difference	Cohen's d
Violent				
Prevalence	.30	.30	.00	.02
Incidence	.44	.42	.02	.03
Nonviolent				
Prevalence	.53	.54	-.01	-.02
Incidence	2.01	1.92	.09	.03

Note. * $p < .01$.