# Individual and Community Risk Factors and Sexually Transmitted Diseases Among Arrested Youths: A Two-Level Analysis*

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# STDs among Juvenile Offenders

- Individual
  - Race
  - Age
  - Gender
  - Substance Use
- Community Factors
  - Concentrated Disadvantage
  - Residential Stability
  - Population Composition

→ Complex, multi-dimensional public heath issue

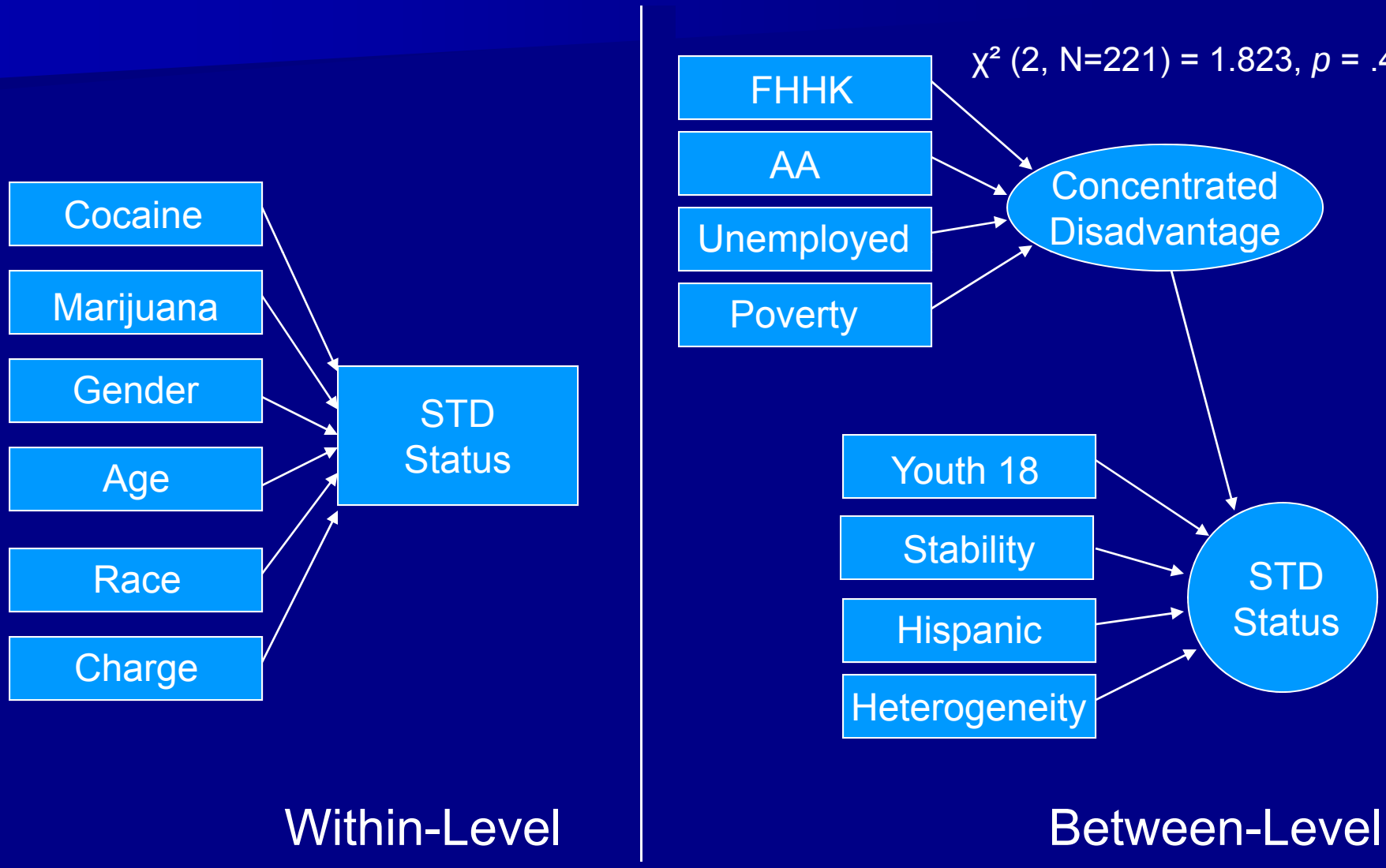
# Limitations of Current Research

- Incarcerated adolescents *or* community samples of adolescent
- Individual-level *or* community-level variables
- Importance:
  - Strong delinquent behavior-STD infection link
  - Juvenile offenders are more likely to reside in disadvantaged neighborhoods
  - Evidence that community-level factors predict individual-level behavior
  - Examination of the covariation between macro-level factors and STD infection among juvenile offenders is extremely rare

# Current Study

- Study Objective = to identify individual and community-level factors that predict STD status
- Within Level
  - *n* = 924
  - Weighted: *n* = 1,368
- Between Level
  - 221 Census Tracts
  - Six-county area
    - 88% in Hillsborough County

# Two-Level Logistic Regression Model



# STD Status across the Individual-Level Factors

| | + STD | | +STD |
|---|---|---|---|
| **Gender*** ** | | **Marijuana Test Result*** | |
| Male (*n* = 937) | 10.8% | Negative (*n* = 848) | 11.9% |
| Female (*n* = 431) | 19.7% | Positive ( *n* = 517) | 16.2% |
| **Race*** ** | | **Cocaine Test Result*** | |
| Non African American (*n* = 652) | 6.9% | Negative (*n* = 1291) | 13.0% |
| African American (*n* = 719) | 19.7% | Positive (*n* = 75) | 27.0% |
| **Age*** ** | | **Charge Level*** ** | |
| Positive | 15.92 | Diversion (*n* = 858) | 10.0% |
| Negative | 15.39 | DJJ (*n* = 508) | 19.7% |

* $p < .05$; ** $p < .01$; *** $p < .001$

# Results of Two-Level Logistic Regression Analysis

| Within Level: | Estimate | S.E. | Critical Ratio | Odds Ratio |
|---|---|---|---|---|
| Cocaine Test Result | 0.642 | 0.363 | 1.770 | 1.900 |
| Marijuana Test Result | 0.328 | 0.263 | 1.250 | 1.388 |
| Gender | -1.144 | 0.201 | -5.690*** | 0.319 |
| Age | 0.330 | 0.086 | 3.828*** | 1.390 |
| Race | 1.413 | 0.255 | 5.548*** | 4.109 |
| Charge Level | 0.810 | 0.209 | 3.868*** | 2.248 |
| **Between Level:** | **Estimate** | **S.E.** | **Critical Ratio** | |
| Concentrated Disadvantage | 1.561 | 0.795 | 1.965* | |
| Youth | -2.563 | 2.107 | -1.156 | |
| Residential Stability | 1.192 | 1.032 | 1.156 | |
| Hispanic | 0.167 | 1.109 | 0.151 | |
| Ethnic Heterogeneity | -0.760 | 0.887 | -0.856 | |
| Threshold for STD | 8.372 | 1.674 | 5.084*** | |
| Residual Variance for STD | 0.190 | 0.189 | 1.006 | |

* $p < .05$; ** $p < .01$; *** $p < .001$

# Cross-Level Interactions

| | Estimate | S.E. | *t* Ratio |
|---|---|---|---|
| Disadvantage x gender | 0.997 | 0.935 | 1.066 |
| Disadvantage x age | 0.331 | 0.371 | 0.891 |
| Disadvantage x race | 2.006 | 1.294 | 1.551 |
| Disadvantage x charge level | -2.690 | 1.105 | -2.436* |

* $p < .05$; ** $p < .01$; *** $p < .001$

➡ Youths who resided in less disadvantaged neighborhoods and were arrested on more serious charges were more likely to test STD positive than youths with less serious charges in more disadvantaged areas

# Implications of the Results

- African American female offenders = high-risk subgroup
- Insignificant association between substance use and STD status
- Concentrated disadvantage
  - Formal organizations
  - Significant risk associated with serious delinquency

➡ Need to simultaneously address the STD issue at both the individual and community levels

# Limitations and Future Research

- Limitations
  - Generalizability
  - Drug test results
  - Officially recorded charge level
  - Lack of ethnicity
  - Cross-sectional data
- Future Research
  - Replication
  - Improved measures