Distribution Agreement

In presenting this thesis or dissertation as a partial fulfillment of the requirements for an advanced degree from Emory University, I hereby grant to Emory University and its agents the non-exclusive license to archive, make accessible, and display my thesis or dissertation in whole or in part in all forms of media, now or hereafter known, including display on the world wide web. I understand that I may select some access restrictions as part of the online submission of this thesis or dissertation. I retain all ownership rights to the copyright of the thesis or dissertation. I also retain the right to use in future works (such as articles or books) all or part of this thesis or dissertation.

Signature: _____ _____

Ernestine Mahar Date

Characteristics and carceral experience for persons with and without intellectual and developmental disabilities in a southeastern US state prison system

By

Ernestine A. Mahar

Master of Public Health

Department of Epidemiology

Rolling School of Public Health

_____

Dr. Anne C. Spaulding

Committee Chair

Characteristics and carceral experience for persons with and without intellectual and developmental disabilities in a southeastern US state prison system

By

Ernestine A. Mahar

B.S.

Rutgers University the State University of New Jersey

2004

Thesis Committee Chair: Anne C. Spaulding M.D., MPH

Ernestine A. Mahar - Thesis Manuscript for

An abstract submitted to the Faculty of the Rollins School of Public Health of Emory University in partial fulfillment of the requirements for the degree of Master of Public Health in Epidemiology 2021

Abstract:

Intellectual, neurodevelopmental, and developmental disabilities (ID/ND) in prison populations are highly prevalent compared with the community. We conducted a cross-sectional study of all persons who resided in a southeastern US state prison system on January 1, 2017. Our goal was to describe the ID/ND population and delineate their experiential differences from their neurotypical (NT) peers. Our hypothesis was that those with ID/ND do not have the same experience before and while imprisoned compared to their neurotypical peers. They had higher levels of mental health services classified as inpatient/severe during their entire health history (OR 3.99 $p<0.0001$) and for their most recent mental health record (OR 4.53 $p<0.0001$). They had twice the prevalence of HIV compared to their NT peers (2.5% vs. 1.2%), were more likely to live under higher security settings (high = 24.8% vs 26.0%; medium = 68.1% vs 65.0%; minimum = 6.9% vs 8.8%), have had prior incarcerations on their criminal record (no previous incarcerations = 45.3% vs 59.0), and spend more time in the prison system (10 versus 8 years). Since ID/ND persons in our study utilized mental health services at high levels, carceral programming for persons with ID/ND should account for their high behavioral health needs.

Characteristics and carceral experience for persons with and without intellectual and developmental disabilities in a southeastern US state prison system

By

Ernestine A. Mahar

B.S.

Rutgers University the State University of New Jersey

2004

Thesis Committee Chair: Anne C. Spaulding M.D., MPH

Ernestine A. Mahar - Thesis Manuscript for

A thesis submitted to the Faculty of the Rollins School of Public Health of Emory University in partial fulfillment of the requirements for the degree of Master of Public Health in Epidemiology 2021

Introduction:

Since the 1800s, American society has been detaining and confining individuals with intellectual, neurodevelopmental, and developmental disabilities (ID/ND). With the development of special facilities for people with intellectual, psychiatric, and developmental disabilities, a new era of institutionalization of “problematic” peoples began (Grob, 1973; Sarrett, 2019). From the 1950’s onward, the deinstitutionalization of those with ID/ND and mental health issues steadily increased leading to the closing of many of these facilities. Community-based care systems were not fully developed so many were not placed in care systems after their release (Sarrett, 2019). As a result, disabled peoples are disproportionately represented in prison systems.

Many risk factors for incarceration such as poverty, having a parent in detention, having a parent with drug/alcohol problems, and their alcohol and drug usage does not differ between NT individuals and individuals with ID/ND (Asscher et al., 2012); however, having low non-verbal IQ levels significantly predicted being convicted (Farrington, 2020).

Identification methods of ID/ND in prison populations vary greatly. Many prison systems use standardized tests such as IQ (Kidd, 1962) and WRAT (Jantz et al., 2015) testing, but these have recently been criticized for under-identification (Munoz Garcia-Largo et al., 2020). About a third of people with ID/ND have mental health comorbidities (Cooper et al., 2007; Deb et al., 2001) which means that they could require mental health services more often.

Our study focuses on the characteristics of those living in prison with ID/ND, their carceral experience, and whether they were classified to inpatient or higher mental health services than their NT peers. We hypothesized that ID/ND individuals would require more intense psychiatric care services and that those who did require these services could also be experiencing high rates of recidivism.

Methods and Materials:

This study was conducted using the information from 46,803 individuals living in a single southeastern state prison system on January 1, 2017, representing 89.72% of the prison system population. Inclusion criteria for persons with ID/ND were rudimentarily determined as having an IQ of less than 70 on a “Culture Fair IQ Test” (Kidd, 1962); all others were classified as neurotypical (NT). Excluded from the study were non-tested persons classified as those who had an IQ score of less than 10 and less than 20 on all three Pearson Wide Range Achievement Tests (WRAT) (Jantz et al., 2015) for reading, spelling, and mathematics. A mental health proxy was defined as having inpatient or higher levels of previously administered mental health services and excluded outpatient services and those who never had mental health services. Odds ratios for levels of behavioral health services and disciplinary actions among those with ID/ND were calculated using ordinal logistic regression in SAS9.4 (Cary, North Carolina). The regressions were assessed for collinearity, interaction, and confounding for the following controlled variables - sex, age, race, percentage of sentence served, and previous violent offenses. Univariate analysis without controlling for sex, age, race, percentage of sentence served, and previous violent offenses are represented in all figures and tables and are discussed in the results section. We chose to control for age,

sex, race, percentage of sentence served, and previous violent offenses as they may contribute to differences in being classified at higher or lower levels of behavioral health services.

Results:

After eliminating possible non-testers, the ID/ND population resulted in n=1334 individuals which is equivalent to 2.6% of the prison population in this southeastern prison system. The demographic breakdown of our ID/ND population on average shows this group to be older, more likely to be persons of color, and to have a longer sentence duration (Table 1). The prevalence of HIV in the ID/ND cohort was twice that of their NT peers, (2.5% vs. 1.2%). A comorbid group was assessed for recidivism and was defined as having ID/ND and being positive for the mental health proxy (receipt of inpatient services) while the NT peer cohort had outpatient patient mental health services only or no previous mental health services ever (Figure 1). The ID/ND proxy comorbid group had higher rates of recidivism in comparison to their NT peer cohort as seen in Figure 1. While 59.0% of the NT group had 0 previous incarcerations only 45.3% of the comorbid ID/ND group did. Figure 1 shows a trend of increasing incarcerations among those in the comorbid group in comparison to their NT peers and can be seen in detail in Table 4. Those living in prison with ID/ND were equally likely to have been found guilty of similar crimes as their NT peers; however, they were more likely to be living in public prisons and at higher security levels (see Table 2).

The histograms of those with and without ID/ND living in prison are shown with regards to their total (violent and non-violent) disciplinary events (Figure 2). Those without ID/ND appear to have more disciplinary events than their NT peers. In Figure 2,

the right side of the tail was not included due to outlying individuals with over 800 disciplinary events. Counter to the appearance of higher disciplinary events, while controlling for sex, race, age, percentage of sentence served, and violent offender status having ID/ND in prison was protective against disciplinary events (OR = 0.880 p=0.27); however, this association was not statistically significant. Depending on the type of disciplinary action taken, this protective effect for those with ID/ND could be due to not being susceptible to further disciplinary actions while in solitary housing units.

After adjustment for sex, race, age, percentage of sentence served, and violent offender status, those living in prison with ID/ND showed a statistically significant odds ratio of having experienced in-patient behavioral health services regarding their most recent service (OR 4.53, $p<0.0001$). Behavioral health services include the categories (0) No mental health evaluation performed, (1) Evaluation performed and found to be okay, (2) Outpatient treatment (in general population), (3) Inpatient moderate, (4) Inpatient intensive, (5) Undergoing crisis stabilization, and (6) Forensic psychiatric hospitalization. Regarding their highest ever recorded level of behavioral health service the results were similar and significant (OR 3.99, $p<0.0001$).

Discussion:

Persons with ID/ND living in this southeast prison system on average do not have the same experience as their neurotypical peers. They tend to live in higher security settings; within non-privatized facilities (81.1% vs 69.9%), as private prisons may be geared toward taking the medically and psychiatrically uncomplicated persons. They are more likely to have had prior incarcerations on their criminal record and have spent on average two additional years in the prison system. Facing internal disciplinary

processes is more common (Table 3); however, they may be protected from having very high numbers of disciplinary events (OR 0.88 p=0.27). They are also more likely to need higher levels of behavioral health services (OR 4.53 p<0.0001) and possibly more often than their neurotypical peers.

In comparison to the British study by Chaplin et al., we studied an older ID/ND group (45.9 versus 40.8 years) comprised of a higher percentage of racial minorities (81% v 65%) (Chaplin et al., 2017).

With our ID/ND population's higher HIV prevalence (2.5%, for ID/ND vs. 1.2% for NT), discharge planning needs are complex. In treatment continuum studies regarding HIV persons re-entering society, programs utilizing patient navigation strategies (especially involving peer support and substance use treatment strategies) demonstrated improvements in post-release clinic attendance and viral suppression (Woznica et al., 2021). For ID/ND re-entrants, an emphasis on peer support may be beneficial to their HIV care continuation since peers living with HIV and/or have histories of incarceration can educate re-entrants against potentially negative social pressures and act as role models (Woznica et al., 2021).

Our study did not account for specific behavioral issues, mental health diagnoses, drug and alcohol problems, personality disorders, learning disabilities, or interpersonal skills. Other studies have found that persons with ID/ND facing criminal charges differed from their NT peers in that they were more likely to display serious behavior problems, be impulsive, value antisocial behavior, have personality disorders, have attention deficit hyperactivity disorder (ADHD), and have mental health disorders (Asscher et al., 2012; Chaplin et al., 2017; Cooper et al., 2007; Deb et al., 2001; Young

et al., 2018). They were less likely to have drug and alcohol problems and had fewer interpersonal skills in the areas of solving problems, situational perception, handling difficult situations, and dealing with others (Asscher et al., 2012; Chaplin et al., 2017; Cooper et al., 2007; Deb et al., 2001; Young et al., 2018). Impoverished relationships (Hauser et al. 2014), childhood adversity, witnessing violence, personality disorder (Lindsay et al., 2013), physical, sexual, and verbal abuse (Lindsay, 2011) are highly correlated to offending in those with ID/ND. Personality disorder in those with ID/ND is a strong risk indicator of offending and violent behavior (Lindsay, 2011). Those with ADHD offended more often than those without ADHD and were more likely to have been previously charged for an offense (Hauser et al., 2014).

Our data on top criminal charges (Table 2.) align well with older studies that show ID/ND persons were more likely to commit felony offenses against persons (homicide, assault, robbery, kidnapping, rape, etc.) and misdemeanor offenses against persons (involving threats, force, or physical harm) (Asscher et al., 2012). In direct contradiction to these findings, Chaplin et al. found that persons living in prison with ID/ND had no significant difference in offenses against persons when compared to their NT peers (Chaplin et al., 2017).

There is a lack of uniformity in prison studies when considering how to identify ID/ND. This variation in methods of identification is a result of both the development of better and more precise testing and progressive thinking in the field of ID/ND carceral identification over time. A future direction for researchers in this field should center on adopting accurate, precise, inexpensive methods of identification that can be common to all studies. Removing the variation in these studies would strengthen the field of

research, empower advocacy, and possibly support the funding of new programs. Future studies on this population could also focus on how to expand health data collection so that secondary data studies on chronic conditions of ID/ND individuals living in prison systems can be more easily researched. New programming for ID/ND individuals living in prison systems is needed and will require effectiveness studies. The results of these studies should be published allowing effective programs to be more widely adopted.

Some of the limitations in our study include the classifications for ID/ND and NT are rudimentary and may not represent the total population of those with intellectual disabilities living in this prison system. It would have been favorable to utilize measurements that assess cognitive abilities such as problem-solving, dealing with difficult situations, and social skills instead of raw IQ scores. Newer trends in prison studies regarding this population are emphasizing cognitive ability assessments over raw test scores. The reasoning for this shift is to identify those persons who tested as NT or borderline ID/ND that could still have a severe lack of cognitive abilities and interpersonal/social skills. Assessments of cognitive abilities and interpersonal/social skills were not available in our data set possibly due to the prison system's concerns with test difficulty/subjectivity and cost. Another limitation of our study lies in the protective nature of ID/ND against high occurrences of disciplinary actions. This may be overestimated as 5,000 individuals were removed from our dataset as non-testers. Among this excluded group there may be an overrepresentation of persons with ID/ND that may or may not have experienced more disciplinary events. The ID/ND population

reflects 2.9% of the study population, lending to a high control to case ratio in our regressions which may cause p-values to appear more significant.

Understanding the current carceral experience of those with ID/ND is vital to identifying gaps in current programming and practices that could be indirectly and directly harming this vulnerable population. It is also important to understand the differences in this population's needs in comparison to NT populations. With this information, new programs can be developed to meet the specific educational, interpersonal/social, and cognitive needs of the ID/ND individual. Succeeding in teaching these skills could help reduce recidivism and even reduce sentence duration for ID/ND individuals. In the general population, those with ID/ND have a specialized set of needs that need to be met and it can be difficult to ensure they are met in prison systems and criminal justice settings (Monasterio et al., 2020). Many systems are failing to meet needs such as ensuring individuals understand the criminal justice system, offering ID/ND knowledgeable representation, and emotional support before and during imprisonment (Howard et al., 2015). This vulnerable population is less likely to benefit from mainstream criminal justice support systems/programs and is more likely to be bullied while in prison (Boer et al., 2016).

The question of whether those with ID/ND should be imprisoned at all is ongoing. Some have hypothesized that the relationship between moral reasoning is moderated by intelligence with regard to illegal behavior (Langdon P, 2010; Langdon et al., 2011). If moral reasoning is moderated by intelligence, then those with ID/ND may have difficulties in determining right and wrong during decision-making. Imprisonment for these individuals may not be an effective treatment for preventing illegal behavior in

comparison to instructing moral and social development. In Figure 3., a world diagram listing diversion programs that consider ID/ND person can be seen and it is apparent that more justice programs for those with IDND are needed. ID/ND persons living in prison systems are an extremely vulnerable population that requires special considerations during any involvement with the legal system.

Next Steps:

While some prison and pre-prison programs are doing better than others reports of these programs and their successes are few and far between and even the exemplary programs have areas that can be improved upon.

Improvements can be made in school programs that nurture positive relationships between students with ID/ND and their NT peers which could help reduce bullying and the need to be macho, teach valuable behavioral/social skills, and reduce feelings of isolation. Educational systems that focus on skills that are valuable in finding and keeping skilled work and build occupational community connections.

Once a person with ID/ND has offended they enter a timeframe of high sensitivity as they transition out of their normal life. Starting at the onset of booking, required improvements that are needed center around screening for ID/ND, increasing staff's compassion toward and knowledge of ID/ND, offering qualified liaisons or representatives to guide persons with ID/ND through the legal process and legal interactions, information formatted for their understanding, emotional support, and community-based alternatives to isolation in holding cells.

For the current prisoner with ID/ND, having programs tailored to reducing offensive behavior, increasing social and occupational skills, and offering emotional support programs would be a significant improvement. Another program that is needed centers around identifying mental health issues in those with ID/ND and getting appropriate treatment during their time in prison.

Figures and Tables:

Table 1: Demographics of those living in a southeastern state prison system with ID/ND in comparison to their NT peer cohort. January 1st, 2017

Table 1.

Characteristic	**ID/ND**	**NT**
Female	15.14%	6.80%
Male	84.86%	93.20%
Age (Mean in years)	45.9	40.6
Black	74.44%	60.40%
White	18.82%	35.37%
Hispanic	6.37%	3.76%
Time Sentenced (Mean in years)	10	8
HIV Prevalence	2.50%	1.20%

Table 2: Criminal charges, housing type, and security level for those living in a southeastern US prison system. January 1, 2017

Table 2.

Top Criminal charges	**ID/ND**	**NT**
Murder	17.02%	11.84%
Armed Robbery	12.14%	11.77%
Aggravated assault	9.22%	10.58%
Rape	6.37%	3.33%
Child Molestation	6.15%	5.05%
Burglary 1st	6.67%	9.38%
Facility type		
State Prison	81.11%	69.92%
Private Prison	11.39%	15.71%
County CI	4.27%	9.83%
Transitional Center	3.22%	4.53%
Security Level		
High	24.84%	26.02%
Medium	68.14%	65.05%
Minimum	6.93%	8.84%
Trusty	0.09%	0.05%

Table 3: Total disciplinary events for those living in a southeastern US prison system.

January 1, 2017

Table 3.

Total Disciplinary Events	**ID/ND**		**NT**	
Events	Count	Percent	Count	Percent
0	217	63.82%	7987	64.34%
1 to 20	98	28.82%	3719	29.96%
21 to 40	13	3.82%	449	3.62%
41 to 60	4	1.18%	124	1.00%
61 to 80	1	0.29%	64	0.52%
81 to 100	2	0.59%	31	0.25%
101 to 120	3	0.88%	18	0.15%
121 to 140	1	0.29%	3	0.02%
141 to 160	0	0.00%	6	0.05%
161 and above	1	0.29%	12	0.10%

Table 4: Prior incarcerations for those living in a southeastern US prison system.

January 1, 2017

Table 4.

Prior Incarcerations	ID/ND Inpatient	NT Outpatient or no prior SMI treatment
0	45.30%	58.99%
1	19.61%	18.07%
2	13.54%	9.57%
3	9.39%	5.81%
4	5.52%	3.24%
5	3.04%	1.81%
6	1.38%	1.04%
7	1.66%	0.61%
8	0.28%	0.41%
9	0.28%	0.20%

Figure 1: Number of prior incarcerations among those with and without receipt of inpatient SMI services and either an IQ score of <70 or ≥70, in population of a southeastern prison system on January 1, 2017

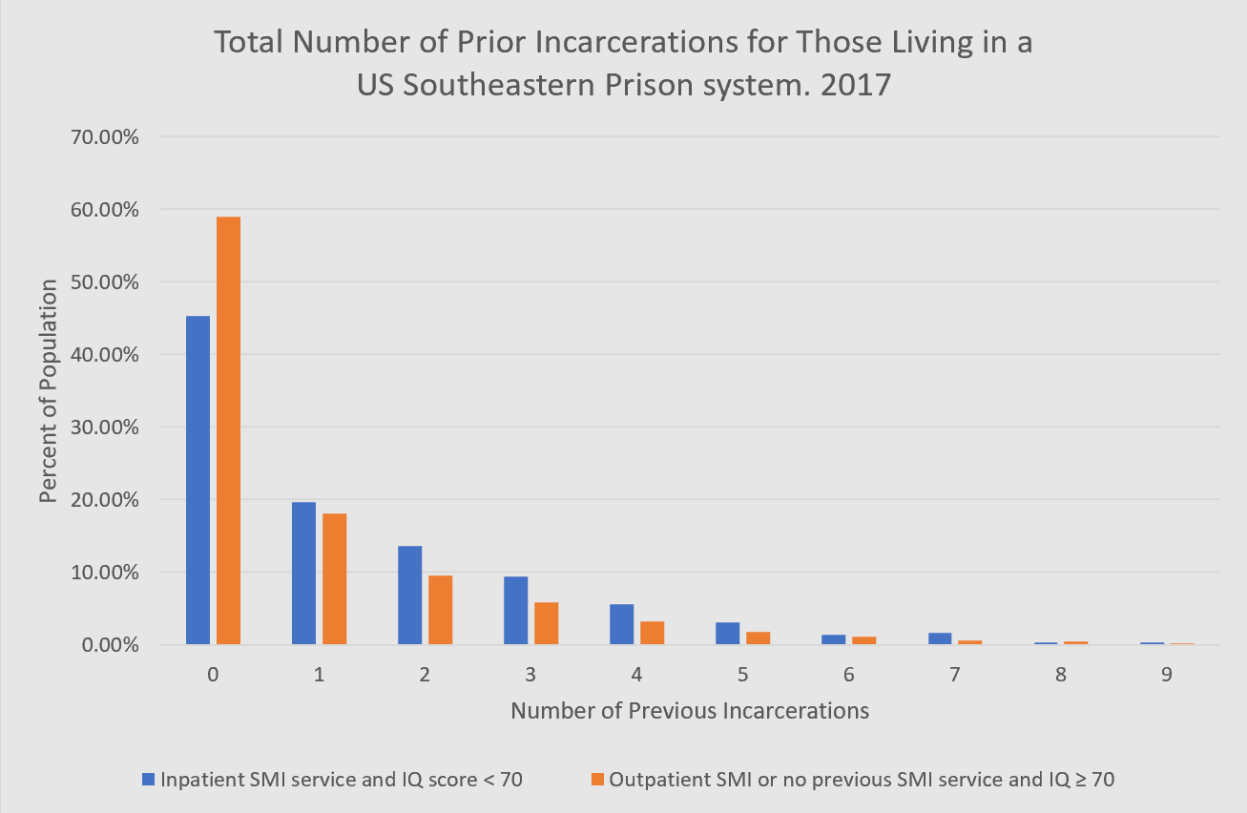


Figure 2: Comparison of total disciplinary events between those with/without ID/ND living in a southeastern prison system. January 1, 2017

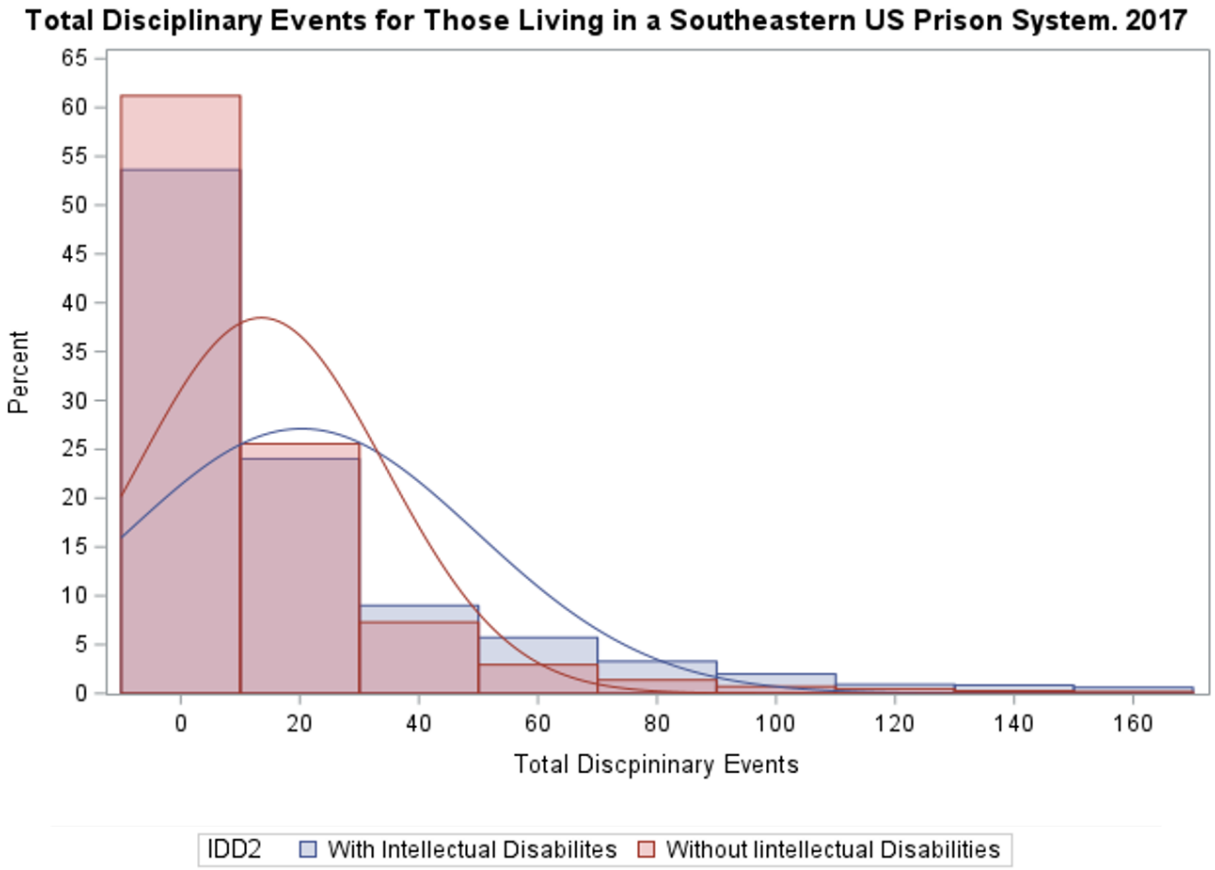
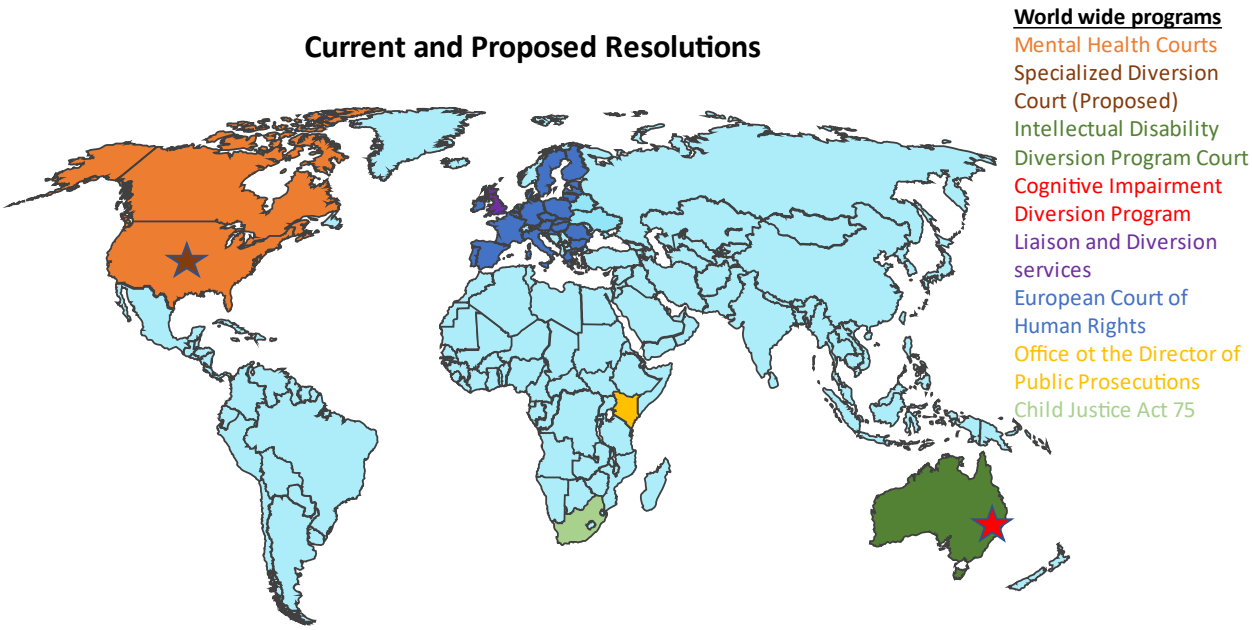


Figure 3: World diagram of ID/ND specific justice programs and Justice programs concerning those with ID/ND as of 2021



References:

Asscher, J. J., van der Put, C. E., & Stams, G. J. (2012). Differences between juvenile offenders with and without intellectual disability in offense type and risk factors. *Res Dev Disabil*, *33*(6), 1905-1913. https://doi.org/10.1016/j.ridd.2012.05.022

Boer, H., Alexander, R., Devapriam, J., Torales, J., Ng, R., Castaldelli-Maia, J., & Ventriglio, A. (2016). Prisoner mental health care for people with intellectual disability. *International Journal of Culture and Mental Health*, *9*(4), 442-446. https://doi.org/10.1080/17542863.2016.1260200

Chaplin, E., McCarthy, J., Underwood, L., Forrester, A., Hayward, H., Sabet, J., Mills, R., Young, S., Asherson, P., & Murphy, D. (2017). Characteristics of prisoners with intellectual disabilities. *J Intellect Disabil Res*, *61*(12), 1185-1195. https://doi.org/10.1111/jir.12441

Cooper, S.-A., Smiley, E., Morrison, J., Williamson, A., & Allan, L. (2007). Mental ill-health in adults with intellectual disabilities: prevalence and associated factors. *British Journal of Psychiatry*, *190*(1), 27-35. https://doi.org/10.1192/bjp.bp.106.022483

Deb, S., Thomas, M., & Bright, C. (2001). Mental disorder in adults with intellectual disability. 1: Prevalence of functional psychiatric illness among a community-based population aged between 16 and 64 years. *J Intellect Disabil Res*, *45*(Pt 6), 495-505. https://doi.org/10.1046/j.1365-2788.2001.00374.x

Farrington, D. P. (2020). Childhood risk factors for criminal career duration: Comparisons with prevalence, onset, frequency and recidivism. *Crim Behav Ment Health*, *30*(4), 159-171. https://doi.org/10.1002/cbm.2155

Grob, G. N. (1973). Mental Institutions in America: Social Policy to 1875. *New York: The Free Press*.

Hauser, M. J., Olson, E., & Drogin, E. Y. (2014). Psychiatric disorders in people with intellectual disability (intellectual developmental disorder): forensic aspects. *Curr Opin Psychiatry*, *27*(2), 117-121. https://doi.org/10.1097/YCO.0000000000000036

Howard, R., Phipps, E., Clarbour, J., & Rayner, K. (2015). "I'd trust them if they understood learning disabilities" support needs of people with learning disabilities in the Criminal Justice System. *Journal of Intellectual Disabilities and Offending Behaviour*, *6*(1), 4-14. https://doi.org/10.1108/JIDOB-05-2015-0011

Jantz, P. B., Bigler, E. D., Froehlich, A. L., Prigge, M. B., Cariello, A. N., Travers, B. G., Anderson, J., Zielinski, B. A., Alexander, A. L., Lange, N., & Lainhart, J. E. (2015). Wide Range Achievement Test in Autism Spectrum Disorder: Test-Retest Stability. *Psychol Rep*, *116*(3), 674-684. https://doi.org/10.2466/03.15.PR0.116k24w8

Kidd, A. H. (1962). The culture-fair aspects of Cattell's test of g: culture-free. *J Genet Psychol*, *101*, 343-362. https://doi.org/10.1080/00221325.1962.10533635

Langdon P, C. I., Murphy GH. (2010). Moral reasoning and illegal behaviour by adults with intellectual disabilities. *Psychology Crime and Law*, *17*, 101-117. https://doi.org/10.1080/10683160903392384

Langdon, P. E., Clare, I. C. H., & Murphy, G. H. (2011). Moral reasoning theory and illegal behaviour by adults with intellectual disabilities. *Psychology, Crime & Law*, *17*(2), 101-115. https://doi.org/10.1080/10683160903392384

Lindsay, W. R. (2011). People with intellectual disability who offend or are involved with the criminal justice system. *Curr Opin Psychiatry*, *24*(5), 377-381. https://doi.org/10.1097/YCO.0b013e3283479dc9

Lindsay, W. R., Carson, D., Holland, A. J., Taylor, J. L., O'Brien, G., & Wheeler, J. R. (2013). The impact of known criminogenic factors on offenders with intellectual disability: previous findings and new results on ADHD. *J Appl Res Intellect Disabil*, *26*(1), 71-80. https://doi.org/10.1111/jar.12011

Monasterio, E., Every-Palmer, S., Norris, J., Short, J., Pillai, K., Dean, P., & Foulds, J. (2020). Mentally ill people in our prisons are suffering human rights violations. *N Z Med J*, *133*(1511), 9-13.

Munoz Garcia-Largo, L., Marti-Agusti, G., Martin-Fumado, C., & Gomez-Duran, E. L. (2020). Intellectual disability rates among male prison inmates. *Int J Law Psychiatry*, *70*, 101566. https://doi.org/10.1016/j.ijlp.2020.101566

Sarrett, J. (2019). Incarcerating Disability: How Society-Wide Structural Violence Diminishes Justice for People with Intellectual and Developmental Disabilities. *Iperstoria Journal of American and English Studies*, *14*.

Woznica, D. M., Fernando, N. B., Bonomo, E. J., Owczarzak, J., Zack, B., & Hoffmann, C. J. (2021). Interventions to Improve HIV Care Continuum Outcomes Among Individuals Released From Prison or Jail: Systematic Literature Review. *J Acquir Immune Defic Syndr*, *86*(3), 271-285. https://doi.org/10.1097/QAI.0000000000002523

Young, S., Gonzalez, R. A., Mullens, H., Mutch, L., Malet-Lambert, I., & Gudjonsson, G. H. (2018). Neurodevelopmental disorders in prison inmates: comorbidity and combined associations with psychiatric symptoms and behavioural disturbance. *Psychiatry Res*, *261*, 109-115. https://doi.org/10.1016/j.psychres.2017.12.036