

Defendants with intellectual disabilities and mental health diagnoses: faring in a mental health court

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Abstract

Background Begun in the late 1990s, mental health courts are specialty criminal courts developed to address the needs of persons with mental illness.

Methods As many persons with intellectual disabilities (IDs) may overlap in the mental health court system, we used mental health court records to examine the phenomenology and outcomes of 224 defendants with and without co-occurring IDs in the mental health court. This study had two goals: (1) to examine the prevalence of defendants with IDs in the court and (2) to compare defendants with dual diagnoses with defendants with lone mental health disorders.

Results Approximately 11% of defendants in the mental health court also had IDs. Compared with individuals with mental health disorders alone, individuals with dual diagnoses were more likely to be younger, male, African-American and less well-educated; these defendants were also more likely to show externalising, 'turning-against-others' symptoms, less likely to show internalising, 'turning-against-self' symptoms. Defendants with IDs (vs. those without) more often received behavioural, vocational rehabilitation and other services,

although the two groups did not differ on most outcome variables.

Conclusion Directions for future research are discussed.

Keywords intellectual disability, mental health, personality disorders, psychiatric disorders

Compared with defendants without disabilities, defendants with intellectual disabilities (IDs) are more likely to have low-socioeconomic backgrounds and limited educations, as well as to be unemployed, male and young (Hayes 1996). Furthermore, compared with defendants without IDs, persons with IDs also seem to be incarcerated at greater rates (Hodgins 1992; Holland *et al.* 2002). These defendants with IDs may also have co-occurring mental health disorders. To date, we know little about defendants with co-occurring disorders (IDs and psychiatric disorders), including their prevalence, demographics and treatment options within the criminal justice system. By better understanding these defendants, we can create better interventions to decrease their rates of recidivism.

Although rates vary across studies, as many as 40% of individuals with IDs may also have mental illness (Dykens 2000). Similarly, within the criminal justice system, persons with IDs have high rates of

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mental health needs (Birmingham *et al.* 1996; Winter *et al.* 1997; Simpson & Hogg 2001). In one retrospective study, Day (1988) noted that of the 20 persons with IDs he studied in the criminal justice system, 30% had concomitant mental illness, 50% had a background of psychosocial deprivation, 85% had a history of serious childhood behavioural problems and 50% had a family history of offending. More recently, European studies have examined the co-occurrence of IDs and mental health diagnoses among defendants across three settings – community, medium/low security prison and high security prison. In high security settings, for example, the prevalence of individuals with co-occurring disorders is strikingly high, with 39.3% of defendants having a personality disorder and IDs (Lindsay *et al.* 2006).

There may also be important differences between individuals with dual diagnoses and individuals with mental illness alone. For example, individuals with dual diagnoses (vs. individuals with psychiatric diagnoses but without IDs) are less likely to retain employment and more likely to be subject to social stigma (Reiss & Benson 1984). In addition, compared with individuals with psychiatric diagnoses but without IDs, individuals with dual diagnoses had more symptoms of turning-against-others and fewer symptoms of turning-against-themselves, more symptoms related to action rather than thought, and more hallucinations without delusions (Glick & Zigler 1995).

Having a dual diagnosis may also add to difficulties in attaining appropriate services. Lying between two spheres of services, one for persons with IDs and the other for persons with mental illness, individuals with dual diagnoses are likely to fall between the cracks (Hayes 1996). It may also be difficult for persons with IDs to receive an accurate diagnosis of co-occurring psychiatric disorders. The lack of appropriately trained diagnosticians and limited time within the criminal justice system contribute to less sensitive and effective screening for mental illness (Birmingham *et al.* 1996). Furthermore, persons with IDs experience recidivism rates that are strikingly high. From 1962 to 1990, with follow-up periods ranging from 1 to 20 years, reconviction rates for persons with IDs ranged from 39% to 72% (Lindsay 2002). These exceedingly high reconviction rates suggest that, when they leave

the criminal justice system, persons with IDs do not have the services and supports they need to stay out of jail.

Begun in the USA in the late 1990s, mental health courts are specialty criminal courts developed to address the needs of persons with mental illness. Witnessing the inappropriate placement of persons with mental illness in the criminal justice system, Judges Mark A. Speiser and Ginger Lerner Wren developed the first mental health court in 1997. Currently, the USA has more than 100 such courts – with over 7500 active defendants (Redlich 2005) – and the mental health court system is expanding rapidly. The foremost attribute of mental health courts is their mission to serve persons with mental health diagnoses. Primary characteristics of mental health courts include: (1) uniformity in recognising the inappropriate placement of persons with mental illness in the criminal justice system and the need for this population to receive effective treatment and (2) partnership between the criminal justice system and community mental health providers to ensure these persons receive appropriate treatment. Defendants who enter the regular criminal justice system, for example, are generally referred to attorneys, assigned money for bond and, depending upon the charge, placed in jail until the court hears the case. In contrast, mental health court defendants are usually placed in residential facilities with mental health supports along with a treatment plan. The primary difference between criminal justice and mental health courts concerns this shift from punishment to treatment. For example, mental health courts may send defendants to outpatient or inpatient facilities to access treatment. Additionally, if a defendant violates parole or is issued another warrant, that defendant may be sent to jail. Jail, however, is the least preferred intervention used with mental health court defendants.

To date, few studies have evaluated the effectiveness of mental health courts; among those that have, findings are often mixed. Using propensity scores to compare defendants with mental illness in San Francisco's mental health court as opposed to regular criminal justice system, McNiel & Binder (2007) found that mental health court defendants went for a longer period of time without incurring any new criminal charges or charges for violent crimes. Similarly, Trupin & Richards (2003) also

found that defendants in the mental health court had fewer criminal charges and increased treatment referrals, with medium to large effect sizes. In contrast, mental health courts may have few effects on the defendants' mental health status. Using the Brief Psychiatric Rating Scale, Boothroyd *et al.* (2005) found no differences between the mental health court and the regular court related to the defendants' clinical status, intervention received or interaction between the intervention and type of court.

In 2000, Davidson County, Tennessee began a mental health court, the fifth (of 100) in the country, to serve individuals with mental health problems. Unlike the courts of the regular criminal justice system, the emphasis of Davidson County Mental Health Court is on treatment rather than punishment. Defendants in the court receive a variety of interventions to address their needs (e.g. psychotropic medications, behaviour analysis, art therapy). Defendants are generally referred to the court by the public defender, private attorney, case manager or probation officer.

In this study, we utilised records from Davidson County Mental Health Court to assess the prevalence of court defendants who have IDs, as well as their treatments and outcomes. So far, no studies have examined who is in the mental health court system or the effectiveness of the mental health courts for individuals with IDs and mental health disorders. This study compared defendants with IDs and mental health disorders with defendants with mental illness alone. By examining the court records of defendants, this paper had two goals: (1) to examine the prevalence of defendants with dual diagnoses in the mental health court and (2) to compare the two groups (individuals with dual diagnoses vs. individuals with mental illness alone) in relation to demographic variables, symptomatology, levels of support available, and interventions and subsequent outcomes.

Method

Participants

This study included two groups of participants: 93 defendants (65 M; 28 F) with IDs and 131 defendants (71 M; 60 F) without IDs. As shown in

Table 1 Defendants in the mental health court ($n = 150$)

	Random sample of defendants (n)
Gender: male	56.7% (85)
Age	
Younger than 20 years	6.7% (10)
20–29 years	30.7% (46)
30–39 years	25.3% (38)
40–49 years	28.7% (43)
50 years and older	8.7% (13)
Race	
White	54.0% (81)
African-American	42.7% (64)
Education levels	
Less than high school	39.3% (57)
High school graduate	35.2% (51)
More than high school	25.5% (37)
Marital status	
Married	10.0% (15)
Never married	54.7% (82)
Divorced/widowed/separated	28.7% (43)

Table 1, a random sample of the first 150 cases (including those with and without IDs) revealed that mental health court defendants were predominantly male, African-American, young (most defendants were in their 20s or 30s), unmarried and with low levels of education. As a group, defendants in Davidson County Mental Health Court were primarily charged with assault (51.4%), theft (16.1%), drug possession (8.9%), vandalism (8%) and trespassing (7.1%). Of those defendants whose contact with the court had ended, 32% were considered to have ended successfully, whereas the remainder had been considered to have not been successful. See Table 1.

Operating procedures of the Davidson County Mental Health Court

Upon their referral to the mental health court, the court's social workers completed an initial interview with each defendant to determine eligibility for the court. Information received during this interview was entered into an intake form. Upon determining a defendant's eligibility, the social worker requested records of the defendant from the public school, day and residential treatment facilities, hospitals

and the criminal justice system. This information went into the defendant's file.

From among the defendants who entered the court between 2002 and 2008, active files existed for defendants who were currently under the jurisdiction of the court and were actively receiving services. Inactive files existed for all defendants who had been closed from the court and were no longer receiving services. Inactive files were divided into two categories: closed and graduated. Closed files contained the records of all defendants who had been unable or unwilling to complete treatment and who had been terminated from the court. Graduated files contained the records of all defendants who had successfully completed the court's treatment programme and had been deemed stable by the court. Over the past 9 years, the Davidson County Mental Health Court has served over 800 defendants and, at the time of this study, had 51 active defendants. For each defendant, the record included a DSM-IV diagnosis; the diagnoses included the first four axes and the fifth axis (called the Global Assessment of Functioning or GAF) of the DSM-IV. We specifically focused on the first two axes, which detail the psychiatric diagnoses of the individual. We also focused on Axis V, in which the intake worker provided an overall estimate (ranging from 0 to 100) about the defendant's overall functioning level. Additionally, the records included the defendant's responses to questions about substance abuse, psychiatric history and physical health. Such intake information was supplemented by records relating to hospitalisation, psychiatric treatment, school and substance abuse treatment.

Procedures

Prior to beginning this study, the Davidson County Mental Health Court and the Vanderbilt Kennedy Center agreed to collaborate and share records for this study. Furthermore, an application was submitted and approved by the Vanderbilt University Institutional Review Board. Within this application, necessary procedures were included to protect the safety and storage of the data.

At the outset of this study, the research team met with the judge and director of the Davidson County Mental Health Court to negotiate access and to ask

more about how the court operated and the nature of court records. From these conversations, we developed an extensive coding form that examined various aspects of defendants, their histories, criminal offenses and experiences with the mental health court, including interventions tried and outcomes of each defendant. Initial drafts of coding sheets were then shared with court personnel, who provided additional advice and suggestions.

Of the potential 841 individuals who appeared before the court over the study period (2002–2008), we examined the records of 224 defendants. To derive the percentage of court defendants who had IDs, we chose the first 150 cases randomly (i.e. via alphabetic order); these cases ranged across all years of the Mental Health Court and included those who had successfully graduated, were 'closed' (i.e. dismissed) and were open (i.e. were currently receiving services). From this initial sample of 150 cases, we identified a relatively small number of defendants with IDs. To enlarge our sample of defendants who also had IDs, we then coded all court cases who also had IDs. In this way, we followed various researchers who 'over-sample' rare populations to provide large-enough sample sizes for statistical analyses (Sudman & Blair 1999; Kalton 2009). Using this procedure, we identified 74 additional cases with dual diagnoses. We compared original and over-sampled cases with IDs in our preliminary results.

Data analysis

After coding the records of 224 mental health court defendants, data were then keyed into an SPSS database with all personal identifying information removed. This final, de-identified dataset was used for analyses. We conducted χ^2 -tests and ANOVAs comparing defendants with co-occurring mental health diagnoses and IDs with defendants with only mental health diagnoses.

Sources of information and measures

Mental health court records

After reviewing the available information in the defendants' files and informally interviewing various officials of the court, we developed a coding sheet of approximately 800 variables. Most of the infor-

Table 2 Information coded from court records

Topic	Subtopics
Demographic information	Age, ethnicity, gender, marital status, number of children, education level and income
Psychiatric history and treatment	Psychotropic medications, hospitalisations and medication compliance
Medical history	Chronic health conditions, physical disabilities and whether the person smoked cigarettes
Case management history	Type of case management services, anger management classes and type of insurance
Social and family history	Family history of: substance abuse, learning disabilities, drinking problems, criminal charges and psychiatric disorders
Documentation of intellectual disabilities	Diagnosis of an intellectual disability, date of diagnosis and special education services
Criminal charges and convictions	Past, current, and post-court misdemeanour and felony charges and convictions, and jail visits
Substance abuse history and treatment	Substance abuse diagnoses, date of first use, current drugs used and rehabilitation treatment
DSM diagnosis	Type of psychiatric disorder (per the DSM-IV) and Axis V (Global Functioning)
Case progress notes	Number of court appearances, therapies, medications and housing

mation gathered on the coding sheet came from the intake form of the social worker's initial interview. Using all sources from each person's mental health court records, we were able to record information about characteristics of defendants and their histories, treatments and outcomes. Such information included: the defendant's basic demographics; psychiatric history and treatment; medical history; case management history; social and family history; documentation of IDs; criminal charges and convictions; substance abuse history and treatment; DSM diagnoses; and case progress notes. See Table 2.

Young Adult Behaviour Checklist

From the intake and other records, we coded psychiatric symptoms using the Young Adult Behaviour Checklist (YABCL) for ages 18–30 (Achenbach 1993). Originally developed by reviewing case histories of community mental health clinic and inpatient populations (Achenbach & Edelbrock 1978), the YABCL is a 115-item instrument that addresses specific emotional and behavioural problems of the individual. Because this study relied on court records – and coders could not determine the degree or severity of YABCL items on a 3-point scale – we coded each item only as to its presence ('1') or absence ('0'). The YABCL has a 1-week test–retest reliability of $r = 0.87$ with an inter-rater agreement of $r = 0.63$.

Symptom classifications

Using case records from inpatient psychiatric patients, Glick & Zigler (1995) described symptom differences between individuals with co-occurring mental health disorders and IDs and individuals with mental health diagnoses alone. Glick & Zigler (1995) classified symptoms as thought symptoms, action symptoms, and turning-against-self, turning-against-others, and avoidance-of-others. Fourteen symptoms comprised the thought category (e.g. suspiciousness, phobias, obsessions) and 14 the action category (e.g. murder, arson, rape, robbery). Hallucinations and delusions were divided into three categories: hallucinations without delusions, hallucinations and delusions, and delusions without hallucinations. Symptoms of turning-against-self and turning-against-others are shown in Table 4.

Reliability

To derive estimates of inter-rater reliability, two coders independently coded 39 randomly chosen files (17.41% of all cases coded). We then conducted kappas for dichotomous variables and intraclass correlations for continuous variables. For each section of the coding sheet, we calculated the median and range for inter-rater reliability across items. Median reliabilities equalled 0.948 (range = 0.784–1.00) for questions relating to

defendant demographics; 0.929 (0.673–0.988) for psychiatric history; 0.846 for medical history (0.552–1.00); 0.851 for case management history (0.778–0.827); 0.696 for social and family history (0.462–1.00); 0.972 for criminal history (0.789–1.00); 0.910 for substance abuse (0.839–1.00); 0.912 for DSM diagnoses (0.641–1.00); and 0.813 for court progress (0.423–1.00). All disagreements were settled through discussion of the two coders (examples of items are provided in Table 2). As per Cicchetti's (1994) guidelines, median estimates for all domains fell in the 'excellent' range (0.75 and above) of inter-observer reliability, with the reliability of individual items at least either 'good' (0.60–0.74) or (on a few occasions) 'fair' (0.40–0.59).

Results

Preliminary results

We first performed ANOVAs and χ^2 -tests to determine whether individuals with IDs from the random sample ($n = 19$) differed from individuals with IDs in the purposeful sample ($n = 74$). No differences emerged in relation to gender, race, marital status, education level, age, or receipt of special education services or social security (Social Security Income, SSI).

Prevalence of intellectual disabilities

To determine the presence of an ID, each of the 841 files was individually examined for either a diagnosed IQ under 70 or a recorded diagnosis of an ID. Of Mental Health Court defendants over the period from 2002 to 2008, 11.06% (or 93/841) had IDs. The mean IQ score (available in 54.06% of records) was 60.31 ($SD = 9.134$). A small percentage of defendants without IDs (8.46%) had been given formal IQ assessments. Of defendants diagnosed with IDs, 55.1% were diagnosed by the school, 29.0% by a physician and 14.0% by the mental health court. Most of these defendants (90.1%) received special education services (self-contained classrooms, homebound instruction, residential services); 9.9% received solely regular education services. In addition, although they were older than age 18, 12.4% of defendants with IDs

had a legal guardian. No significant differences occurred between the percentages of active versus closed files among defendants with and without IDs, $\chi^2(1, 223) = 1.78$, *ns*.

Comparing defendants with and without intellectual disabilities

Demographic information about the defendants

Compared with defendants with mental illness only, defendants with dual diagnoses were more likely to be male, younger, African-American and less educated. Defendants with dual diagnoses were also more likely to be younger upon entering the court: defendants with IDs, $M = 29.01$ ($SD = 10.65$) and defendants without IDs, $M = 34.70$ ($SD = 10.81$), $F_{1,223} = 15.19$, $P < 0.001$. Furthermore, defendants with IDs were more likely to have received special education services and to have fewer years of education: defendants with IDs, averaged a 10th grade education ($SD = 1.70$) and defendants without IDs averaged a 12th grade education ($SD = 2.19$), $F_{1,223} = 23.52$, $P < 0.001$.

At the same time, the two groups did not differ on other personal characteristics. Groups did not differ in their numbers of hospitalisations or in whether they received outpatient mental health care. Criminal histories were also comparable, as the two groups did not differ regarding the numbers or types of misdemeanour or of felony charges and convictions, prior to entering the mental health court. There were no significant differences related to whether the defendant's file was active, graduated or closed. See Table 3.

Social support

At the time of entry into the court, defendants with IDs had less social support. Of the defendants with IDs, 20.4% had been married, compared with 47.7% of defendants without IDs, $\chi^2(1, 222) = 17.42$, $P < 0.001$. Similarly, 16.9% of defendants without IDs were currently married or cohabitating, compared with only 7.5% of defendants with IDs, $\chi^2(1, 222) = 4.23$, $P < 0.04$. Of defendants without IDs, 58.1% had children compared with 37.6% of defendants with IDs, $\chi^2(1, 222) = 9.09$, $P < 0.003$.

Table 3 Descriptions of the defendants in the mental health court

	With intellectual disabilities (n or SD)	Without intellectual disabilities (n or SD)	F or χ^2	P
Case management				
Had anger treatment	9.8% (9)	4.8% (6)	2.09	0.148
Had case management	67.7% (63)	62.0% (80)	0.77	0.379
Demographic				
Has ever held a job	50% (14)	81.8% (72)	19.09	0.000
Was in juvenile justice system	24.7% (23)	8.7% (11)	10.45	0.001
Health				
Had hallucinations	55.4% (51)	45.2% (57)	2.12	0.137
Has chronic conditions	62.0% (57)	61.5% (80)	0.004	0.950
Had a physical disability	10.8% (10)	8.7% (11)	0.272	0.602
Had a history of blackouts	19.8% (18)	35.4% (40)	6.04	0.014
Psychiatric				
Psychotropic medications	1.21 (1.28)	1.67 (1.23)	6.43	0.012
Compliant with medications	73.6% (39)	62.9% (56)	1.71	0.192
Criminal				
Had a warrant	27.8% (25)	43.2% (54)	5.35	0.021
Number of times in jail	4.05 (6.12)	3.26 (4.02)	1.18	0.279
Cumulative jail time	112.10 (245.48)	89.58 (174.21)	0.628	0.429
Number of arrests	3.88 (5.05)	4.81 (7.12)	1.15	0.286
Substance abuse				
Age of first drug use	14.98 (5.40)	15.05 (4.79)	0.079	0.937
Longest period of abstinence (days)	397.69 (722.24)	632.51 (1202.21)	1.02	0.310

Family psychiatric history

Compared with other defendants, defendants with IDs were more likely to have family members with substance abuse problems and learning disabilities (19.5% vs. 33.3% for substance abuse; 5.1% vs. 18.6% for learning disabilities), $\chi^2(1, 201) = 4.98$, $P < 0.026$ and $\chi^2(1, 203) = 9.45$, $P < 0.002$. Defendants without (vs. with) IDs were, however, more likely to have a family member with a psychiatric problem (52.9% vs. 31.4%, respectively), $\chi^2(1, 205) = 9.41$, $P < 0.002$.

Financial support

Compared with other mental health court defendants, defendants with IDs were less likely to retain employment. Of defendants without IDs, 81.8% had held a job before entering the court, compared with 50% of defendants with IDs, $\chi^2(1, 222) = 19.09$, $P < 0.001$. Similarly, of defendants without IDs, 28.5% had been independently employed, compared with 11.8% of defendants with IDs,

$\chi^2(1, 222) = 8.80$, $P < 0.003$. Defendants with IDs had a shorter cumulative duration of past employment (0.83 vs. 3.29 years), $F_{1,81} = 15.402$, $P < 0.001$, and spent less time at their most recent job ($M = 1.14$ years, $SD = 1.72$ vs. $M = 3.27$, $SD = 2.87$), $F_{1,133} = 26.92$, $P < 0.001$. Defendants with (vs. without) IDs were, however, more likely to receive SSI benefits (34.6% and 66.7%, respectively), $\chi^2(1, 220) = 22.05$, $P < 0.001$.

Psychiatric symptoms

Although no significant group differences emerged in delusions-hallucinations or thought-action categories, significant differences did relate to turning-against-others and turning-against-self. Compared with other court defendants, defendants with IDs were more likely to turn against others, $F_{1,221} = 4.54$, $P < 0.034$. With the exceptions of drinking and using drugs, all remaining symptoms occurred more frequently among the group with IDs. For such behaviours as getting into fights, cruelty-bullying-meanness, showing temper tan-

trums, lying-cheating and breaking rules, rates among defendants who had IDs were two or more times rates for those who displayed mental health concerns alone. Conversely, defendants with IDs showed lower levels of internalising symptoms, $F_{1,221} = 9.58$, $P < 0.002$. Lower proportions of defendants with IDs (vs. without) showed every internalising symptom, with significant differences found for unhappy-sad-depressed, nervous-highstrung, trouble sleeping, compulsions, phobias, feeling worthless and talk of killing self. See Table 4.

Those defendants who did not have IDs also received more psychotropic medications ($M = 1.67$, $SD = 1.23$ and $M = 1.21$, $SD = 1.28$, respectively), $F_{1,200} = 6.43$, $P < 0.012$. For defendants without IDs, the median number of psychotropic medications

was 2.00, the mode was 3 and the range was from 0 to 4. For defendants with co-occurring IDs and mental health diagnoses, the median was 1.00, the mode was 0 and the range was from 0 to 5. Defendants without IDs also averaged higher GAF scores ($M = 45.65$, $SD = 10.88$) than did defendants with IDs ($M = 40.00$, $SD = 8.91$), $F_{1,193} = 14.67$, $P < 0.001$. See Table 5.

Differences between the two groups also related to substance abuse. Whereas almost 3/4 (72.9%) of other mental health court defendants were diagnosed with substance abuse, this diagnosis was given to only half (52.7%) of defendants with IDs, $\chi^2(1, 222) = 10.13$, $P < 0.006$. Doctors were more likely to make the diagnosis for defendants without IDs, whereas the substance abuse diagnosis for defendants with IDs was more often made by

Table 4 Psychiatric symptomatology across the two groups

	Defendants without ID	Defendants with ID	χ^2	P
Turning against self				
Attempts suicide	56.3% (71)	47.8% (43)	1.55	0.213
Talks about killing self	72.8% (91)	60.0% (54)	3.90	0.048
Does not eat well	25.7% (28)	13.9% (10)	3.64	0.056
Nervous, highstrung, tense	37.6% (41)	16.4% (12)	9.50	0.002
Feels worthless or inferior	18.4% (9)	4.0% (2)	5.17	0.023
Unhappy, sad or depressed	51.0% (50)	23.9% (17)	12.62	0.001
Fears he may do something bad	14.3% (7)	6.1% (3)	1.78	0.182
Compulsions	16.3% (8)	4.0% (2)	4.14	0.042
Has trouble sleeping	30.3% (33)	16.7% (12)	4.30	0.038
Obsessions	6.5% (5)	1.4% (1)	5.01	0.078
Phobias	16.3% (8)	4.0% (2)	4.14	0.042
Feelings of sexual inadequacy	3.7% (4)	0	2.70	0.100
Turning against others				
Drinks too much	65.1% (84)	48.4% (45)	6.21	0.013
Steals	24.8% (32)	30.1% (28)	0.770	0.480
Irresponsible behaviour	17.1% (22)	33.3% (31)	7.88	0.005
Breaks rules	7.0% (9)	34.4% (32)	27.01	0.001
Physically attacks people	60.9% (78)	89.2% (83)	21.83	0.001
Gets in many fights	9.3% (12)	45.2% (42)	37.75	0.001
Temper tantrums	15.5% (20)	47.3% (44)	26.65	0.001
Screams or yells a lot	14.0% (18)	31.2% (29)	9.61	0.002
Cruelty, bullying or meanness	1.6% (2)	31.2% (29)	34.50	0.001
Stubborn, sullen or irritable	34.9% (45)	51.6% (48)	6.21	0.013
Lying or cheating	4.7% (6)	16.1% (15)	8.31	0.004
Sets fire	1.6% (2)	4.3% (4)	1.55	0.212
Destroys others' things	14.7% (19)	23.7% (22)	2.86	0.091
Overeating	4.7% (6)	8.6% (8)	1.43	0.232
Uses drugs	63.3% (81)	53.8% (50)	2.02	0.155

ID, intellectual disability.

Table 5 Differences across the two groups in specific psychiatric diagnoses

	Defendants without ID	Defendants with ID	χ^2	P
Axis I (primary)				
Mood d/o	53.1% (69)	23.7% (22)	19.43	0.001
Psychotic d/o	20.0% (26)	34.4% (32)	5.85	0.016
Depression d/o	18.5% (24)	12.9% (12)	1.24	ns
Anxiety d/o*	3.1% (4)	2.2% (2)	1.78	ns
Impulse control*	0 (0)	2.2% (2)	2.82	ns
Disruptive behaviour*	2.3% (3)	10.8% (10)	7.04	0.017
Axis I (secondary)				
Mood d/o*	2.3% (3)	4.3% (4)	0.709	ns
Psychotic d/o*	6.9% (9)	1.1% (1)	4.33	0.048
Depression*	1.5% (2)	4.3% (4)	1.58	ns
Anxiety d/o*	10% (13)	2.2% (2)	5.32	0.021
Impulse control d/o*	.8% (1)	4.3% (4)	3.09	ns
Disruptive behaviour*	2.3% (3)	5.4% (5)	1.48	ns

* For cells with less than 5, the Fisher's exact test was used.
ID, intellectual disability.

Table 6 Different interventions across groups

	Defendants without ID	Defendants with ID	χ^2	P
Art therapy	1.5% (2)	13.0% (12)	12.07	0.001
Exercise regimen	3.9% (5)	11.8% (11)	5.11	0.024
State waiver*	0	19.4% (18)	27.17	0.000
Behaviour analyst	0.8% (1)	17.4% (16)	20.88	0.000
Working with vocational rehabilitation services	11.9% (15)	34.8% (32)	16.46	0.000
Psychotropic drug regimen	82.5% (100)	71.4% (60)	3.64	0.056

* For cells where the sample was <5, the Fisher's test was used.
ID, intellectual disability.

mental health court staff (for doctor diagnoses, 80.7% for individuals without IDs; 59.6% for individuals with IDs), $\chi^2(1, 134) = 6.98$, $P < 0.008$. Of those in each group with substance abuse diagnoses, defendants who did not have IDs were more likely to receive drug rehabilitative services (54.7% vs. 34.0%, respectively), $\chi^2(1, 134) = 6.05$, $P < 0.014$. Such treatment differences are noteworthy in that, upon entering the court, defendants with IDs used (on average) more illegal drugs ($M = 2.25$, $SD = 1.61$) than did other mental health court defendants ($M = 1.32$, $SD = 1.43$), $F_{1,134} = 19.15$, $P < 0.001$.

Interventions and outcomes

With the exception of psychotropic drug regimens, those defendants with IDs received more interventions. As shown in Table 6, greater percentages of defendants with (vs. without) IDs received art therapy, exercise regimens, state waivers, behaviour analyst services and vocational rehabilitation services. During their time in the mental health court, the two groups significantly differed only in relation to times in jail. Compared with other court defendants ($M = 0.98$; $SD = 1.36$), defendants with IDs were jailed more often ($M = 1.47$; $SD = 2.15$),

$F_{1,222} = 4.10$, $P < 0.044$. No significant between-group differences emerged for the number of arrests, misdemeanour charges or convictions and felony charges and convictions during the duration with the mental health court. Similarly, the two groups did not differ in post-court graduation rates, frequency or cumulative time in jail, number of arrests, or of misdemeanour or felony charges or convictions.

There were, however, outcome differences for housing and employment. Compared with other court defendants ($M = 5.33$; $SD = 2.00$), defendants with IDs were more likely to retain stable housing ($M = 4.76$; $SD = 2.30$), $t(1, 222) = 1.94$, $P < 0.054$. And, while defendants with IDs were more likely to receive state vocational rehabilitation services, defendants with mental illness alone were more likely to retain employment (29.7% vs. 14.0%), $\chi^2(1, 222) = 7.49$, $P < 0.006$ and to have stable employment ($M = 4.70$; $SD = 2.03$, vs. $M = 3.62$, $SD = 1.97$), $t(1, 222) = 2.19$, $P < 0.032$.

Discussion

This study examined the prevalence and characteristics of defendants with dual diagnosis compared with defendants with mental health disorders. Regarding prevalence, this study found that approximately 11% of defendants had dual diagnoses. Compared with defendants with mental health disorders alone, defendants with dual diagnoses were more likely to be younger, African-American, male, less educated and to have received special education services. In addition to demographic information, this study had four additional findings.

First, compared with individuals with only mental health disorders, individuals with dual diagnoses had less social support. They were less likely to be married or cohabitating, or to have had children. In terms of familial support, both groups of defendants had less stable family structures. Defendants with dual diagnoses were more likely to have family members with substance abuse disorders and learning disabilities, while defendants without IDs were more likely to have family members with psychiatric disorders. Financially, except for SSI benefits (which favoured defendants with IDs), those indi-

viduals who did not have IDs were also more likely to have held a job and to have had more cumulative employment. Considering all levels of support – social, familial and financial – defendants with dual diagnoses seemed to fare worse than did defendants without IDs.

Second, the two groups differed in the nature of their psychiatric symptoms and diagnoses. Compared with defendants without IDs, defendants with dual diagnoses were less likely to turn against themselves and more likely to turn against others. Such differences in individual symptoms also emerged for psychiatric diagnoses, with mood disorders more common in the group without IDs, disruptive behaviour (and psychoses) more commonly diagnosed in the group with IDs.

Third, differences emerged in relation to substance abuse disorders. Specifically, defendants without IDs were more likely to have been labelled with substance abuse disorders, to have received that diagnosis from a doctor and to have received drug rehabilitative services. Even though these defendants without IDs were more likely to have diagnosed substance abuse disorders, defendants with dual diagnoses were, on average, using more drugs upon entering the court. This poses interesting questions regarding whether defendants with dual diagnoses are being accurately diagnosed with substance abuse disorders. If individuals with dual diagnoses are, in fact, individuals with triple diagnoses (ID, mental health disorder and substance abuse disorder), their treatment should also address their substance abuse issues. Considering that individuals with dual diagnoses were, on average, using more drugs upon entering the court, perhaps a closer examination of the existence of a substance abuse disorder should occur as they join the court.

Finally, compared with defendants without IDs, those with dual diagnoses were significantly more likely to receive many kinds of treatment: art therapy, exercise regimen, state waiver, behaviour analysis and vocational rehabilitation. Only in the area of psychotropic drug regimens did defendants without IDs receive more services than defendants with IDs.

While this study provides several contributions to the field, it also had several limitations. First, as a records study, if data were not listed in the records or if the records did not accurately reflect the char-

acteristics or treatment of a defendant, then that defendant's information was misrepresented in the dataset. Furthermore, because this study was cross-sectional, there may have been cohort effects. Thus, our sample ranged in age from 18 to 59 years, and individuals in school prior to the passage of P.L. 94-142 (1975) may not have received special education services compared with those were in school after 1975 and eligible to receive such services. The existence and quality of educational services may have subsequently affected individuals' later employment, post-secondary education and self-concept.

While this study has a few limitations, it has important implications for future research. Within Davidson County, 11% of the mental health court defendants had dual diagnoses and these individuals generally received less support (familial, social and financial) and were more likely to turn against others. On average, they were using more drugs than individuals without IDs and, yet, had significantly less substance abuse disorder diagnoses. Compared with defendants without IDs, individuals with dual diagnoses received more treatment from the mental health court. More research needs to be done to learn about individuals with dual diagnoses in the mental health court system to ensure that these individuals receive appropriate diagnoses and subsequent services.

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Note

Some minor corrections have been added to the authors' names and affiliations, Table 4, acknowl-

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