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Identifying Mental Health Treatment Needs Among Serious Institutionalized Delinquents Using Paper-and-Pencil Screening Instruments

Final Report
To the
National Institute of Justice

Executive Summary

California Youth Authority
Stanford University School of Medicine

July 2003



STATE OF CALIFORNIA
GRAY DAVIS
GOVERNOR

YOUTH AND ADULT CORRECTIONAL AGENCY
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AGENCY SECRETARY



Department of the Youth Authority

MISSION AND VALUES

THE MISSION OF THE YOUTH AUTHORITY is to protect the public from criminal activity by providing education, training, and treatment services for youthful offenders committed by the courts; directing these offenders to participate in community and victim restoration; and assisting local justice agencies with their efforts to control crime and delinquency; and encouraging the development of state and local programs to prevent crime and delinquency.

In order to enhance our ability to accomplish our mission, we have a shared set of values. **WE VALUE:**

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We treat all people with dignity, respect, and consideration.
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We believe people have the ability to grow and change, and we provide the opportunity for them to do so.
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We encourage staff to develop personally and professionally and to participate in decision making.
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We demonstrate behavior which is fair, honest, and ethical both on and off the job.
- **Citizen Participation**
We invite public involvement, support, and assistance to plan, deliver, and evaluate programs.
- **Excellence**
Our performance demonstrates a commitment to and recognition of quality, dedication, and innovation.
- **A Safe and Healthy Environment**
We believe that physical and mental health are important, and our commitment is to provide a safe and secure work and living environment.

Identifying Mental Health Treatment Needs
Among Serious Institutionalized Delinquents
Using Paper-and-Pencil Screening Instruments

Final Report to
The National Institute of Justice

Executive Summary

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In addition, valuable assistance was provided by numerous staff at CYA headquarters and each of the institutions and camps. These individuals provided access to ward records and facilitated gathering of data. Graduate student assistants from throughout California collected information at these sites. Staff at the Northern Youth Correctional Reception Center & Clinic and Southern Youth Correctional Reception Center & Clinic and Ventura Youth Correctional Facility, listed above, assisted with data collection and also helped frame the validation issues around assessment needs at these clinics.

Introduction

CYA commitments are drawn from juvenile offenders who have exhausted local (county) dispositional options. Although counties differ in their commitment policies, commitment to the CYA is expected to be limited to juveniles who commit very serious crimes, who have extensive criminal histories, and/or who have failed at local interventions (often multiple times). The CYA currently houses 5,000 wards in 11 institutions (two of which are reception centers) and four forestry camps. There are another 4,000 wards on parole.

In 1996, the CYA adopted an assessment process by which standardized mental health and substance abuse information could be gathered routinely on all wards entering CYA institutions. This self-report mental health screening/assessment procedure drew on extant, standardized, paper-and-pencil assessment instruments:

1. *Achenbach Child Behavior Checklist--Youth Self Report (YSR)* (Achenbach, 1991);
2. *Massachusetts Youth Screening Instrument: Second Version (MAYSI-2)* (Grisso and Barnum, 2000; Grisso, Barnum, Fletcher, Cauffman, and Peuschold, 2001);
3. *Weinberger Adjustment Inventory* (Weinberger and Schwartz, 1990; Weinberger, 1997), which is not considered in this study¹;
4. *Drug Experience Questionnaire (DEQ)*, which was designed by the author specifically for use by the CYA—it is a shortened version of the *Personal Experience Inventory* (Winters and Henley, 1989).

¹ This instrument focuses on certain self-reported areas of emotional distress, but is used by the CYA as a potential predictor of misbehavior. Research at one CYA institution indicates that the WAI can be predictive of institutional adjustment and future recidivism (Tinklenberg, Steiner, Huckaby, and Tinklenberg, 1996). Because this instrument does not focus specifically on mental health problems, however, results are not included in this report.

The assessment of all incoming wards began at the CYA's three reception centers during the Spring of 1997. This assessment process is formally termed the Mental Health and Substance Abuse Treatment Needs Assessment, or Treatment Needs Assessment (TNA). The assessment battery was developed as a screening tool to profile the CYA population and as a "back-up" to other methods of identifying wards in need of immediate intervention or psychological evaluation, such as file reviews, interviews by medical staff, observation by living unit staff, and interviews by caseworkers (Haapanen, 2000). Presently, the TNA is not used as part of the formal identification and evaluation process at the clinic.

The usefulness of the TNA instruments for profiling the CYA population and as an aid for identifying wards missed by standard clinical processes depends on their ability to identify wards who will need (or benefit from) mental health intervention during their stay in the CYA. To better understand this usefulness, the present study focused on the ability of the instruments in the battery to identify wards whose mental health problems rose to the level that services were considered appropriate during the ensuing twelve to eighteen months of their CYA stays.

Study Design

This project analyzed the relationships between Treatment Needs Assessment (TNA) results and subsequent mental health services for a large cohort of wards entering the CYA. The data on mental health treatment was used to determine whether the TNA instruments provided an early "heads up" regarding these treatment needs. In addition, criminal history information was used to analyze the relationships between criminal behavior, TNA scores, and CYA mental health intervention.

Sample

The overall (intake) sample consisted of two intake cohorts of wards committed to the CYA.

1. Males entering over a 5-month period from October 1998 through February 1999 (n=795).
2. Females entering over a 21-month period from October 1997 through June 1999 (n=183).

The time frames for females was longer than for males in order to obtain a sample large enough for statistical analysis. TNA assessments were not obtained for 142 (14.5%) of the wards, due to scheduling problems at the clinics. Analysis focused on 836 wards with valid TNA data: 664 males and 172 females.

The sample was demographically similar to all commitments during the 1998 and 1999 calendar years: predominantly Hispanic or African American and 16 or 17 years of age at commitment. Over half of the present sample was committed for a violent offense, and the vast majority (88.6% of males and 80.4% of females) had at least one prior violent offense prior to commitment. Percentages were very similar for males and females. Males in the sample averaged over nine prior arrest charges each and females 6.8 priors each, on average.

Data Collection

Follow-up data focused on whether or not members of the sample:

1. Were provided mental health treatment while in CYA institutions;
2. Were prescribed medications used to treat serious mental health problems; or
3. Were identified as needing treatment by CYA treatment or clinical staff but treatment was not yet provided.

Information on mental health evaluations, treatment and medications were obtained primarily from hard-copy files maintained at ward institutions (“Field Files”) and in central office (“Master Files”) and from records of institution transfers maintained in central automated data files. These sources were also used to obtain information on prior criminal offense charges.

Analysis

The intent of these analyses was to ascertain the usefulness of the individual scales and certain combinations of scales as they were developed and as they were intended to be used, with wards classified as having elevated levels on the basis of simple rules and cut-points. No attempt was made to determine better cut-off scores or ascertain the best overall prediction equations using these scales.

Using cut-scores provided by the authors, wards with elevations on individual scales were compared to those without elevations in terms of subsequent mental health interventions. For the MAYSI, elevations were at the “Warning” level established by the authors. For the YSR, elevations were at the cut-points recommended by the authors: a T-score of 70+ for individual scales and 64+ for summary scales.

The MAYSI analysis also focused on combinations of certain scales, with particular emphasis on three major dimensions: *Depressed-Anxious*, *Suicide Ideation*, and *Thought Disturbance* (and a two-item index of *Seeing/Hearing Things*).

Results

Mental Health Intervention Indicators

The number and percent of the CYA sample that had various indicators of mental health problems—types and levels—was substantial. Overall, 38.2% of the sample had at least one indicator of mental health intervention or identification. About 18% of the sample had been placed at least once in a mental health program (Intensive Treatment Program or Specialized Counseling Program) and 21% had one or more prescriptions for medications typically used to treat serious psychological problems. Combined, 29.5% of the sample was either placed in a mental health program or were prescribed psychotropic medications. Another 8.6% were identified as having mental health problems on the basis of psychological evaluations, suicide referrals, or verified staff observations. Of those with any of these mental health problem indicators, over half (56.7%) had more than one such indicator.

These percentages differed markedly for males and females: a much larger percentage of females were placed in programs or prescribed medication or both. Nearly 46% of the females were placed at least once in a mental health program (compared to 11% of the males), and 42% of the females were prescribed psychotropic medications (compared to 16% for males). In all, over two-thirds of the female wards in the sample had at least one indicator of mental health intervention, compared to 31% of the males.

TNA Scale Scores and Elevations

Percentages above the “Caution” level on *Massachusetts Youth Screening Instrument* (MAYSI) scales ranged from 21.9% (Suicide Ideation) to 58.5% (Thought Disturbance). Males had higher percentages than females on Alcohol/Drug Use and Somatic Complaints. More

females had elevated scores on the Depressed/Anxious Scale. Percentages at or above the “Warning” level ranged between 11.4% (Suicide Ideation) to 26.3% (Thought Disturbance). Males and females did not differ in the percentages scoring at this level except for the Depressed/Anxious scale, where more females scored in the “warning” range.

These percentages are very similar to percentages for all 6,500 wards who have completed the assessment since it was implemented in April, 1997. These percentages are higher than those reported for other juvenile justice samples of detainees in Texas (Schwank, Espinosa, and Tolbert, 2003) and Maryland (Maryland Department of Juvenile Justice, 2001) but similar to those found in Pennsylvania detention centers (Griffin, 2000). These cross-state comparisons are complicated, however, by differences in detention practices and points of entry to the juvenile justice system.

The *Achenbach Child Behavior Checklist—Youth Self-Report* (YSR) cut-off scores were selected by the authors to identify the top 2% of all adolescents for individual scales and the top 10% for the summary Internalizing, Externalizing, and Total scores. Higher percentages (typically two to three times as high) were found in this sample of CYA wards, although these percentages were generally under 10%. These cut-points identify a lower proportion of the population and suggest a lower level of psychopathology than do the MAYSI cut-points.

Association of TNA Scale Elevations to Intervention Indicators

The TNA was not used as part of the formal identification and evaluation process at the CYA. Although the TNA results were reviewed by psychologists and caseworkers, decisions regarding the need for full psychological evaluations and/or recommendations for mental health treatment were based on traditional clinical practices. Thus, there is no built-in relationship expected between these indicators of subsequent mental health intervention and TNA scores.

Each of the MAYSI scale elevations, except Traumatic Experiences, was able to identify wards who were more likely than others to obtain mental health services. Wards with elevated scores on scales focusing on traditional concerns of mental health systems (Depressed-Anxious, Suicide Ideation, and Thought Disturbance—especially Seeing/Hearing Things) had the highest rates of subsequent identification and intervention.

For female wards, the only statistically significant improvement over the base rate prediction of 66.3% came from the two-item index Seeing/Hearing Things (85.7%) and the Angry-Irritable scale (84.6%). Two other scales (Depressed-Anxious and the original Thought Disturbance, which is not supposed to be used for females) also were able to predict placement in mental health programs. Only the Depressed-Anxious scale was able to identify female wards who were subsequently prescribed psychotropic medications.

All of the YSR scales identified groups of males with higher rates of mental health problems than the base rate of 30.8%. However, due to lower cut-points, the number of wards with elevations on most scales was small, reducing the usefulness of the instrument for screening purpose.

As with the MAYSI, YSR scales were not as predictive for females. With one exception, the YSR scales focusing on traditional mental health issues (Anxious/Depressed, Social Problems, Thought Problems, and Withdrawn) did not predict any of the indicators of mental health intervention for females in this sample.

Combinations of MAYSI Scales (Pervasiveness of Reported Mental Health Symptoms)

Combinations of those MAYSI scales focused on certain mental health problems were able to identify wards with mental health service needs somewhat more effectively than single scales.

Of the cases with elevations on anxiety, depression, thought problems or suicidality, 48.2% had one or more indicator of mental health intervention or need in the CYA, compared to only 22% of those who had none of these elevations. Of the 10% of wards with two or more of these scale elevations, 68.7% were identified for mental health services later on.

Among females, 76.7% of those who had one or more of these elevations were later identified for services, compared to 58.6% of those with no elevations. In particular, this criterion helped to identify female wards who were subsequently placed in mental health units and/or placed on psychotropic medication.

False Positive and False Negative Errors

Although the MAYSI scales can identify smaller groups of wards who have a higher likelihood of needing mental health interventions later on there were substantial errors, and these errors could make the screening process inefficient and expensive and reduce the value of these instruments for describing and estimating the overall level of treatment need in the population.

True Positives comprised 16.4% of the male sample and True Negatives comprised another 52.4% of the sample. Together, 68% of the males were correctly identified by this criterion. This criterion was wrong for about 32% of the sample: 17.6% False Positives and 14.5% False Negatives. While false positive errors (over-prediction errors) may be expected and tolerated as the cost of sensitivity, false negative errors are more troubling, as they suggest that the process cannot identify wards who *do* need intervention. Almost half (96 of 205, or 47%) of wards who received mental health interventions had no elevations on these scales.

Additional analysis (not shown) found that, for males, these errors occurred mostly for those wards whose interventions and/or indicators of need occurred “later” in the wards’ stays and/or

which were less indicative of immediate need of mental health intervention. The scales were able to identify the more proximal and more intensive interventions (placement in mental health programs) nearly two-thirds (64%) of the time.

For females, the use of these scale elevations resulted in correct predictions only 56% of the time. Despite the high levels of treatment intervention for females, only 42% of the sample had any of these scale elevations. As a result, while there were relatively few false positives (9.9% of the sample), there were substantial numbers of false negatives. As with the males, however, these elevations were best able to identify those wards who were actually placed in mental health programs.

Substance Abuse and Mental Health Co-morbidity

Substance abuse, as measured by the Drug Experience Questionnaire (DEQ) was not related to the kinds of mental health indicators considered in this analysis. Statistically significant relationships were found only for the general (“Any”) indicator for males and for psychotropic medications for females. Combinations of DEQ elevations and elevations on one or more of the four treatment-relevant MAYSI scales worked no better than simply using elevations on the MAYSI scales alone.

Prior Criminal Behavior

Prior criminal behavior patterns of wards were not helpful in identifying wards in need of mental health services. Neither total prior offenses nor violent prior offenses was related to mental health interventions, and these variables did not add to the ability of MAYSI scale elevations to identify wards who would later receive mental health treatment.

Discussion

Overall, MAYSI Scales and YSR Scales were related to validation criteria in expected ways. Wards with high scores on these instruments tended to come to the attention of mental health personnel to a greater extent than those who did not score high. For screening purposes, these individual scales can be helpful for identifying wards who may require mental health intervention at some point during their institutional stay. Those scales that measure attitudes and experiences along the lines of traditional mental health concerns (depression, anxiety, strange thoughts, etc.) were most useful in this regard. These instruments cannot replace one-on-one evaluations, however, and the CYA's practice of using these scores as a back-up to standard clinical methods may serve as model to others. Brief interviews and file reviews triggered by high scores on certain scales could help identify wards who were unwilling to report problems in face-to-face interviews. These practices are relatively inexpensive and can be accomplished very quickly after receiving the results of the assessment.

Of the two instruments, the MAYSI, which was developed specifically for this kind of screening, performed better. Wards with elevated scores on various MAYSI scales were more likely to receive mental health intervention than were wards with elevations on similar YSR scales. Moreover, the cut-points for the YSR scales identified a smaller percentage of the CYA population, making the instrument less valuable as a screening tool.

Certain combinations of scales may provide a basis for increasing the efficiency of these instruments, particularly for males. These scales identified subsets of wards with relatively high probabilities of subsequent mental health intervention. Wards with elevations on scales measuring Depressed-Anxious feelings, Suicide Ideation, or Thought Disturbance (including

reports of Seeing/Hearing Things) represented a group with a relatively high probability of later mental health intervention.

The addition of information on prior criminal behavior patterns and substance abuse was not helpful in identifying wards with subsequent mental health treatment needs. More extensive patterns of criminal behavior or substance abuse did not help to distinguish wards who needed mental health services from those who did not.

Both the MAYSI and the YSR appeared to work better for males than for females. Neither instrument was as helpful for identifying female wards who received attention for mental health problems as they were for males. Further, neither instrument reflected the wide disparity in mental health intervention between female and male wards. Further, among the female wards, elevations on these instruments did not differentiate as effectively between those who received intervention and those who did not. It would appear that these paper-and-pencil questionnaires may not work as effectively for identifying mental health intervention needs for the female wards in this population.

An important next step will be to examine the performance of these instruments in terms of their ability to identify wards with acute mental health problems, rather than in terms of referral for treatment. Treatment decisions may take factors into account other than the mental health status of the wards. Such factors may include the availability of services at each site, other problems the ward may be experiencing, or the ward's behavior. These screening instruments should also be evaluated relative to actual diagnosis and the diagnosis/treatment interface. Research on these issues is currently underway.

Limitations of the Present Study

The present study was limited in its scope. The usefulness of these instruments for screening should be indicated by a strong association between these measures and direct indicators of mental health problems warranting treatment. No such indicators were available. As an approximation of this need for treatment, this study used indicators of actual intervention. However, some wards are placed in programs simply for evaluation or for reasons other than traditional mental health problems (e.g., violent offenders). Conversely, wards with mental health problems may not be treated in one of these ways (e.g., mentally ill sex offenders may be treated in sex offender programs). These limitations reduce the correspondence between these indicators and mental health treatment need.

In addition, the sample excluded 142 (14.5%) of the wards admitted during the sampling period. These wards were not administered the paper-and-pencil assessment battery, due to scheduling problems at the clinics. No detailed information was available on these wards, but it is possible that these scheduling problems could have been related to mental health or behavioral issues (e.g., wards placed in lock-up). The exclusion of these wards may have biased the sample toward fewer mental health problems to some unknown extent.

References

- Achenbach, T. (1991). *Manual for the Youth Self-Report and 1991 Profile*, Burlington, VT: University of Vermont Department of Psychiatry.
- Griffin, P. (2000) Assessing detained youth in Pennsylvania. Juvenile Justice Advisory Committee, Pennsylvania Commission on Crime and Delinquency. Report available at: <http://www.pccd.state.pa.us/PUBS/PROGRESS/dec2000.pdf>.
- Grisso, T., and Barnum, R. (2000). *Massachusetts Youth Screening Instrument-Second Version: User's manual and Technical Report*. Worcester, MA: University of Massachusetts Medical School.
- Grisso, T., Barnum, R., Fletcher, K., Cauffman, E., and Peuschold, D. (2001). Massachusetts Youth Screening Instrument for mental health needs of juvenile justice youths. *Journal of the American Academy of Child & Adolescent Psychiatry*, 40, 541-548
- Haapanen, R. (2000). *Mental health and substance abuse treatment needs assessment: Description and preliminary findings*. California Youth Authority
- Maryland Department of Juvenile Justice (2001). *Mental health and substance abuse programming enhancements in the juvenile justice system: A three year planning and budget strategy*. Report available at: <http://www.djj.state.md.us/pdf/mhsa2001.pdf>
- Schwank, J., Esponosa, E, and Tolbert, V. (2003). Mental health and juvenile justice in Texas. Texas Juvenile Probation Commission. Report available at: <http://www.tjpc.state.tx.us/publications/reports/Mental%20Health%20Report.pdf>
- Weinberger D. (1997). Distress and self restraint as measures of adjustment across the life span: Confirmatory factor analyses in clinical and non-clinical samples. *Psychological Assessment*, 9, 132-135.

Weinberger, D. and Schwartz, G. (1990). Distress and restraint as superordinate dimensions of self-reported adjustment: A typological perspective. *Journal of Personality*, 58, 381-417.

Winters, K. and Henly, G. (1989). Personal experience inventory (PEI) test and manuals. Los Angeles, CA: Western Psychological Services.