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ICPSR 3404

Drug Abuse Treatment Outcome Study--Adolescent (DATOS-A), 1993-1995: [United States]

United States Department of Health and Human Services. National Institute on Drug Abuse

Codebook for Measures Data

Terms of Use

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TABLE OF CONTENTS

DRUG ABUSE TREATMENT OUTCOME STUDY-ADOLESCENT

INTRODUCTION

A. Background

The family of Drug Abuse Treatment Outcome Studies is the third in the National Institute on Drug Abuse's (NIDA) series of large-scale multisite studies of community-based treatment. It follows the Drug Abuse Reporting Program (DARP) and the Treatment Outcome Prospective Study (TOPS). The family of Drug Abuse Treatment Outcome Studies consists of the adult component (DATOS), the adolescent component (DATOS-A), and the Cocaine Treatment Outcome Study (CTOS). DATOS-A is the first study designed specifically to conduct an in-depth, systematic investigation of the outcomes and effectiveness of drug treatment programs for adolescents.[1]

The major objectives of DATOS-A are to (1) develop current and more comprehensive information about the effectiveness of adolescent drug treatment; (2) investigate the characteristics of adolescents entering treatment; (3) investigate the characteristics of the structure and process of drug abuse treatment in adolescent programs; (4) assess the contributions to client outcomes of program type, client characteristics, and treatment received.

DATOS-A is a comprehensive, multiyear, multi-site prospective cohort study of clients entering treatment from 1993 to 1995. Approximately 3,400 clients from 37 programs in 6 cities were assessed at intake. Re-interviews were completed at 1, 3, and 6 months during treatment with clients who continued their treatment. A follow-up sample of about 3,000 clients (12-months after treatment) was selected for locating and interviewing in the community.

B. Research Design

Community-based studies of the effects of drug abuse treatment on client behavior have many complexities in design, analysis, and interpretation. DATOS-A used a naturalistic, longitudinal, prospective cohort design. This design is highly suitable for gathering descriptive information on study populations and for investigating causal relationships in studies based on measurement of naturally occurring events rather than planned interventions (Cook & Campbell, 1979; Singer, 1986). Moreover, this design is quite appropriate for developing baseline measures for long-term longitudinal studies of adolescents, where maturation is likely a key factor affecting behavior change (Newcomb & Bentler, 1989).

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[1] Sections of the Introduction were taken from the following source: Kristiansen, P. L., & Hubbard, R. L. (2001). Methodological overview and research design for adolescents in the Drug Abuse Treatment Outcomes Studies (DATOS-A). *Journal of Adolescent Research*, 16(6), 545-562.

C. Program Sample

The DATOS-A study design specified a sample of programs that treated an adolescent population separately from an adult population. A further consideration was the data collection infrastructure developed for the adult study. The decision was also made to limit the sample to programs in the cities where the adult data collection was being conducted. In those locations, programs specializing in adolescent treatment and judged to be typically community-based treatment organizations in existence for at least 2 to 3 years and expected to remain as stable, viable organizations throughout the period of the study were identified. The programs with sufficient projected patient admissions of at least five patients per month were purposely selected for participation in the study. In addition, selection of programs was limited to programs committed to the research and ones that would permit efficient collection of detailed data about patient behaviors and treatment.

Six cities located in different sections of the United States were selected for DATOS-A because these cities each had a sufficient number of adolescent programs to support the DATOS research design. All six cities were medium to large metropolitan areas with established treatment systems. The selection of the six cities also enabled us to realize significant savings with respect to fieldwork costs and to obtain a more complete picture of patient characteristics and treatment services within the selected areas. The six cities also had the most experienced data collection staff members who had worked on the DATOS adult study. In most of the cities, the programs selected served most if not all the adolescents seeking treatment in the area. No programs selected to participate refused.

Programs in the sample represented the following three major modalities treating adolescents: therapeutic community or residential programs, chemical dependency or short-term inpatient programs, and outpatient drug-free programs. The programs differed primarily in their therapeutic orientation and planned duration. During the study, however, planned duration was reduced in many of the programs to address concerns about cost containment. The residential modality included traditional, modified, and short-term therapeutic community programs as well as halfway houses and shelter programs. These programs required patients to live in the treatment setting and included traditional treatment interventions along with those designed to resocialize patients. Planned duration of stay was much shorter than the long term residential treatment for adults. The planned durations initially varied from 3 months to 1 year (median = 5 months) compared to 4 months to 2 years for adult programs (median = 11 months). Short-term inpatient programs provided such treatment interventions as individual, group, and family counseling as well as 12-step counseling. Planned duration of stay was no more than 35 days, but more often it was fewer than 14 days. The outpatient drug-free modality included regular and intensive outpatient and day treatment programs. The type of program was distinguished by the range of services offered and the duration and frequency of treatment sessions. Planned duration of stay varied from 1 month to 2 years.

D. Instrumentation

The repeated measures design included the use of three sets of instruments for client-level data collection. These included the intake, in-treatment, and follow-up questionnaires.

Intake 1. The Intake 1 Questionnaire's function was to obtain baseline measures of patient characteristics and behaviors. The instrument took approximately 90 minutes to complete. Some of the key sections of the questionnaire were Demographics and background, Education and training, Admission information, Drug use, Mental health status, Illegal involvement, Employment/support status, Income and expenditures, Hostility, Empathic concern/perspective taking, and Sociability/self-worth.

Intake 2. The Intake 2 Questionnaire was administered approximately one week after the Intake 1 Questionnaire. This interview averaged 2 hours to complete. Because of the instrument's length and the age of the respondents, the interviewers allowed respondents frequent breaks. It contained sections on Health, Cognitive impairment, Religiosity and self-concept, Anxiety, Depression, Sexual experiences, Behavioral problems, Psychological distress, and Motivation and readiness for treatment.

In-treatment. Interviewers administered intreatment instruments to patients 1, 3, and 6 months after admission to treatment. Patients were interviewed only if they remained in treatment at the time an interview was due. The client in-treatment interviews obtained behavioral information similar to that collected at intake for the in-treatment time frames. The interviews also asked detailed questions about services received during treatment, the content of service sessions, provider, amount (number and length of sessions), satisfaction and perceived helpfulness.

Follow-up. Interviews were administered at 12-months after treatment termination. The 12-month follow-up instrument required approximately 90 minutes to complete. The instrument focused on patient behaviors and experiences during the past 12 months. Anchors based on key events and calendars were employed to focus patients on the time periods of interest. Descriptive and behavioral measures complemented those obtained through earlier interviews.

E. Data Collection Procedures

Trained professional data collectors were assigned the role of Program Researchers (PRs) for each participating program. PRs administered the intake and intreatment instruments to patients within the program's physical facilities. Programs received compensation for interviewing space and clerical time required to refer new patients to the PR. During a weeklong training session, experienced trainers instructed PRs on how to work with the programs and administer the instruments. Before PRs were certified to begin interviewing, they had to demonstrate their ability to conduct the interviews. Throughout data collection, PRs were closely monitored by a continuous review of interviews received and weekly phone communication with the PRs. Each month, two interviews completed by each PR were selected randomly for quality control review. In addition, supervisors made quarterly site visits to monitor data collection.

All patients entering the selected programs who had not reached their 19th birthday at the time of admission were included in the sample frame. Data collection for admissions began during late November 1993, and the final intake assessments were completed by December 1995. Upon

admission to treatment, program staff members asked patients to speak with a PR about participating in the study. Procedures called for obtaining permission to participate in the study from a parent or guardian of anyone younger than 18 and assent from the adolescent. Informed consent was obtained directly from youth aged 18 years or older. Patients were offered $10 for each intake or intreatment interview and $15 for a follow-up interview.

For a more complete discussion of the DATOS methodology, see

Kristiansen, P. L., & Hubbard, R. L. (2001). Methodological overview and research design for adolescents in the Drug Abuse Treatment Outcomes Studies (DATOS-A). *Journal of Adolescent Research*, 16(6), 545-562.

For a list of DATOS publications please refer to Appendix A or the DATOS web page at <u>http://www.datos.org/publications.html</u>

F. ICPSR/SAMHDA Data Cleaning and Processing

This is to document the steps taken to clean and process the Drug Abuse Treatment Outcome Study – Adolescent (DATOS-A) files in preparation for releasing the files through the Substance Abuse and Mental Health Data Archive (SAMHDA).

Several steps were taken in order to prepare the files for public release. These steps included:

1.   Checking for wild codes.

2.   Checking for data consistency (e.g., making sure that codes for age-related and timeframe questions were within the range specified in the question).

3.   Checking for undocumented codes.

4.   Determining which variables could pose confidentiality issues and determining the best way to handle each potential risk. Variables were considered both individually and in conjunction with other potentially identifying variables.

For the first three steps, data processors referenced solutions to similar problems from the DATOS-adult study and also worked with the Principal Investigators to obtain value labels (e.g., for undocumented and wild codes) and confirm information in the documentation (e.g., for apparent inconsistencies). Editing of variable and value labels was also necessary.

Step four, determining confidentiality risks, involved looking individually at the variables that could present a risk and then examining those variables in conjunction with other variables. An overriding goal in cleaning and editing the files was to both protect confidentiality and preserve

variables as reported to the extent possible in order to provide the greatest analytic utility and to allow researchers to group values as necessary for comparability to other surveys.

The most highly identifying DATOS-A variables included city, treatment program, and date of birth. Overall, the data are most informative in terms of comparisons across modalities, not across sites or programs; therefore, city and program identifiers (i.e., value labels) were never part of the data files. Further, the variables identifying separate cities and programs were also deleted, again due to the primary utility of the data being comparisons across modalities. The absence of these identifiers from the files allowed considerable latitude in preserving the data as reported. Date of birth was removed from the files because age at time of interview was provided as a separate variable. These, as well as other variables examined and changed due to confidentiality concerns are discussed below.

City and program names: The numeric codes identifying separate cities and programs were deleted. The original client IDs had embedded codes (e.g., related to treatment program); these were also deleted. Individual cases are identified by a sequential number 1-3,382.

Date of birth: Date of birth (DOB) was deleted from the files. Age at time of interview was also on the files and was preserved. The age variable was top-coded at 18 or older and it was bottom-coded at 12 or younger.

Age at time of ... : Several continuous variables denote age at the time of a certain event. For some of these variables, dichotomous codes "1" and "95" were also used for "don't know but under 15" and "don't know but 15 or older," respectively. Code "1" was also used for actual responses of "1 year old." Because it is unlikely that these events occurred at age 1, "1" was changed to "94" ("1 or don't know but under 15") to make it clearer that this code indicates something other than age 1.

In examining the age codes, a few cases were apparently bad data (e.g., age at first use was 0-5, except as noted above) but were left alone due to the possibility that the use of the drug was administered by a parent or caretaker.

Legal status (criminal involvement) at time of admission, "Other; specify": The details provided in "specify" were deleted; value coded as "Circled."

Have other health plan: Plans offered in a limited geographic area were coded as "Other."

Occupation: Highly detailed occupation codes were combined into larger categories.

Race: These codes were re-coded as "White," "Black," "Hispanic," and "Other."

Ethnicity: Detailed ethnicity codes and variables were collapsed or deleted.

Description of ethnic/cultural background (Hispanic): Coded as "Puerto Rican," "Mexican," "Cuban," "Mixed," all others coded or re-coded as "Other."

What other languages do you speak: Coded as "German," "Spanish," "French," all others coded or re-coded as "Other."

Number of children/relatives: Many questions that ask for a number of children/relatives (e.g. number of children to whom you gave birth or fathered, number of biological brothers/sisters you have, or number of biological brothers/sisters who lived with you) were top-coded (3 or more, 6 or more, 7 or more) based on frequencies.

Date of admission: The month of admission was re-coded as quarter; day of admission was deleted (year is a separate variable).

Date of interview: This variable is associated with date of admission. Month was re-coded as quarter; day of admission was deleted (year is a separate variable).

ICD-9/DSM diagnosis codes: These were re-coded as "substance-related condition," "mental health condition," and "all other conditions."

Drug Names: Variables regarding specific drugs used (e.g., primary drug used or which drug caused you this problem) had some responses that were potentially identifying. These were re-coded into major drug categories (e.g., alcohol, narcotics/opiates, inhalants, etc.).

Number of months currently pregnant: Re-coded by trimester.

Reason felt worthless/sinful/guilty verbatim: This variable had verbatim responses and was therefore deleted.

Presence of a specific physical handicap: Many variables related to a specific physical handicap (e.g., blindness, deafness, or over/under weight) were potentially identifying. Therefore, they were all combined into one new variable (Abnormality: Blind, Deaf, Weight, Speech Impediment, Other).

Questions respondent did not understand: These variables were deleted from the files because they were not coded or in any particular order and therefore, of little analytical use.

Administrative variables: For time checkpoint variables, the month was re-coded as quarter and day of the month was deleted. "Batch," and all other remaining variables related to the administration of the questionnaire were deleted from the files.

Other variables: Other variables, such as those related to use of drugs with relatively low frequencies were examined in light of any risk to confidentiality but not changed due to the geographic and other identifying variables being removed from the files and other potentially identifying variables, such as date of birth being removed or re-coded. "Program type" was examined and left alone because it is critical to the intent of the study and because other potentially identifying codes were removed (e.g., geographic codes, DOB) or re-coded (e.g., date of admission). Remaining data items were related to subjective questions or approximate timeframes (e.g., trouble falling asleep, how helpful were services received, number of weeks

respondent felt depressed in last 12 months, etc.). These were not considered to pose risks to confidentiality and were left unchanged.

G. User Responsibility

Users are reminded that the data are to be used solely for statistical analysis and reporting of aggregated information and not for investigation of specific individuals or organizations.

H. ICPSR Processor Notes

1.   Users are advised that the data are most appropriately analyzed by modality.

2.   The Intake 1 and Intake 2 data files contain several continuous variables that denote age at the time of a certain event. For some of these variables, dichotomous codes "1" and "95" were also used for "don't know but under 15" and "don't know but 15 or older," respectively. Code "1" was also used for actual responses of "1 year old." Because it is unlikely that these events occurred at age 1, "1" was changed to "94" ("1 or don't know but under 15") in order to make it clearer that this code denotes something other than age 1. Users are cautioned that this may have an effect on any analyses performed using these variables.

FREQUENCIES

CASEID	CASE IDENTIFICATION NUMBER

```
    3,382 cases (Range of valid codes: 1-3382)

    Data type: numeric
    Missing-data codes:  lowest thru -1
    Columns: 1-8
```

INTAKE2	INTAKE2 INTERVIEW DONE

```
   PCT    PCT      N  VALUE  LABEL
  VALID    ALL
  13.6   13.6    461      0  No Intake-2
  86.4   86.4  2,921      1  Intake-2 interview
  -----  -----  -----
 100.0  100.0  3,382 cases

    Data type: numeric
    Missing-data codes:  lowest thru -1
    Columns: 9-10
```

ADHD	ATTENTION DEFICIT HYPERACTIVE DISORDER

```
   PCT    PCT      N  VALUE  LABEL
  VALID    ALL
  88.7   76.6  2,591      0  Criteria for dx not established
  11.3    9.8    330      1  Criteria for dx present
         13.6    461     -8  MISSING
  -----  -----  -----
 100.0  100.0  3,382 cases

    Data type: numeric
    Missing-data codes:  lowest thru -1
    Columns: 11-12
```

CONDUCT	CONDUCT DISORDER

```
   PCT    PCT      N  VALUE  LABEL
  VALID    ALL
  45.2   39.0  1,320      0  Criteria for dx not established
  54.8   47.3  1,601      1  Criteria for dx present
         13.6    461     -8  MISSING
  -----  -----  -----
 100.0  100.0  3,382 cases

    Data type: numeric
    Missing-data codes:  lowest thru -1
    Columns: 13-14
```

```
DEPRESS              DEPRESSIVE DISORDER
```

```
     PCT    PCT      N  VALUE  LABEL
   VALID    ALL
    91.3   78.9  2,668      0  Criteria for dx not established
     8.7    7.5    253      1  Criteria for dx present
           13.6    461     -8  MISSING
   -----  -----  -----
   100.0  100.0  3,382 cases

   Data type: numeric
   Missing-data codes:  lowest thru -1
   Columns: 15-16
```

```
OA                   OVERANXIOUS DISORDER
```

```
     PCT    PCT      N  VALUE  LABEL
   VALID    ALL
    98.8   85.3  2,886      0  Criteria for dx not established
     1.2    1.0     35      1  Criteria for dx present
           13.6    461     -8  MISSING
   -----  -----  -----
   100.0  100.0  3,382 cases

   Data type: numeric
   Missing-data codes:  lowest thru -1
   Columns: 17-18
```

```
PANIC                PANIC DISORDER
```

```
     PCT    PCT      N  VALUE  LABEL
   VALID    ALL
    98.7   85.3  2,884      0  Criteria for dx not established
     1.3    1.1     37      1  Criteria for dx present
           13.6    461     -8  MISSING
   -----  -----  -----
   100.0  100.0  3,382 cases

   Data type: numeric
   Missing-data codes:  lowest thru -1
   Columns: 19-20
```

```
┌──────────────────────────────────────────────────────────────────────────────┐
│ HER3R            HEROIN DEPENDENCE                                              │
└──────────────────────────────────────────────────────────────────────────────┘


     PCT     PCT      N  VALUE  LABEL
    VALID    ALL
    96.8    96.6  3,267      1  Abuse/dependence not established
     0.4     0.4     12      2  Abuse only
     0.1     0.1      5      3  Mild dependence
     1.0     1.0     33      4  Moderate dependence
     1.7     1.7     57      5  Severe dependence
                      8     -8  MISSING
             0.2
    -----   -----  -----
    100.0   100.0  3,382 cases

    Data type: numeric
    Missing-data codes:  lowest thru -1
    Columns: 21-22
```

```
┌──────────────────────────────────────────────────────────────────────────────┐
│ COC3R            COCAINE DEPENDENCE                                             │
└──────────────────────────────────────────────────────────────────────────────┘


     PCT     PCT      N  VALUE  LABEL
    VALID    ALL
    85.7    85.7  2,898      1  Abuse/dependence not established
     2.1     2.1     70      2  Abuse only
     0.4     0.4     12      3  Mild dependence
     6.3     6.3    214      4  Moderate dependence
     5.6     5.6    188      5  Severe dependence
    -----   -----  -----
    100.0   100.0  3,382 cases

    Data type: numeric
    Missing-data codes:  lowest thru -1
    Columns: 23-24
```

```
┌──────────────────────────────────────────────────────────────────────────────┐
│ ALC3R            ALCOHOL DEPENDENCE                                             │
└──────────────────────────────────────────────────────────────────────────────┘


     PCT     PCT      N  VALUE  LABEL
    VALID    ALL
    64.5    64.5  2,182      1  Abuse/dependence not established
    10.1    10.1    342      2  Abuse only
     2.8     2.8     96      3  Mild dependence
    16.4    16.4    554      4  Moderate dependence
     6.2     6.2    208      5  Severe dependence
    -----   -----  -----
    100.0   100.0  3,382 cases

    Data type: numeric
    Missing-data codes:  lowest thru -1
    Columns: 25-26
```

```
┌──────────────────────────────────────────────────────────────────────┐
│ MJ3R                     MARIJUANA DEPENDENCE                           │
└──────────────────────────────────────────────────────────────────────┘
```

```
     PCT     PCT      N   VALUE   LABEL
    VALID    ALL
    33.4    33.4   1,129      1   Abuse/dependence not established
     8.9     8.9     301      2   Abuse only
     0.9     0.9      32      3   Mild dependence
    42.0    42.0   1,420      4   Moderate dependence
    14.8    14.8     500      5   Severe dependence
    -----   -----   -----
    100.0   100.0   3,382 cases

    Data type: numeric
    Missing-data codes:  lowest thru -1
    Columns: 27-28
```

APPENDIX A: Publications

Broome, K. M., Joe, G. W., & Simpson, D. D. (2001). Engagement models for adolescents in DATOS-A. Journal of Adolescent Research, 16(6), 608-623.

Delany, P. J., Broome, K. M., Flynn, P. M., & Fletcher, B. W. (2001). Treatment service patterns and organizational structures: An analysis of programs in DATOS-A. Journal of Adolescent Research, 16(6), 590-607.

Etheridge, R. M., Rounds-Bryant, J. L., Smith, J. C., & Hubbard, R. L. (2001). Drug abuse treatment and comprehensive services for adolescents. Journal of Adolescent Research, 16(6), 563-589.

Farabee, D., Shen, H., Hser, Y., Grella, C. E., & Anglin, M. D. (2001). The effect of drug treatment on criminal behavior among adolescents in DATOS-A. Journal of Adolescent Research, 16(6), 679-696.

Galaif, E. R., Hser, Y., Grella, C. E., & Joshi, V. (2001). Prospective risk factors and treatment outcomes among adolescents in DATOS-A. Journal of Adolescent Research, 16(6), 661-678.

Grella, C. E. & Joshi, V. (2003). Treatment processes and outcomes among adolescents with a history of abuse who are in drug treatment. Child Maltreatment: Journal of the American Professional Society on the Abuse of Children, 8(1), 7-18.

Hser, Y., Grella, C. E., Hubbard, R. L., Hsieh, S. C., Fletcher, B. W., Brown, B. S., & Anglin, M. D. (2001). An evaluation of drug treatment for adolescents in four U.S. cities. Archives of General Psychiatry, 58(7), 689-695.

Joshi, V., Hser, Y., Grella, C. E., & Houlton, R. (2001). Sex-related HIV risk reduction behavior among adolescents in DATOS-A. Journal of Adolescent Research, 16(6), 642-660.

Kristiansen, P. L., & Hubbard, R. L. (2001). Methodological overview and research design for adolescents in the Drug Abuse Treatment Outcomes Studies (DATOS-A). Journal of Adolescent Research, 16(6), 545-562.

Rounds-Bryant, J. L., Kristiansen, P. L., Fairbank, J. A., & Hubbard, R. L. (1998). Substance use, mental disorders, abuse, and crime: Gender comparisons among a national sample of adolescent drug treatment clients. Journal of Child and Adolescent Substance Abuse, 7(4), 19-34.

Rounds-Bryant, J. L., & Staab, J. (2001). Patient characteristics and treatment outcomes for African American, Hispanic, and White adolescents in DATOS-A. Journal of Adolescent Research, 16(6), 624-641.

Wong, M. M., Hser, Y. I., & Grella, C. E. (2002). Compliance among adolescents during drug treatment. Journal of Child & Adolescent Substance Use, 12(2), 13-31.

Grella, C. E. (in press). The drug abuse treatment outcomes studies: Outcomes with adolescent substance abusers. In. H. Liddle and C. Rowe (Eds.), Adolescent Substance Abuse: Intervention and Management. Cambridge, UK: Cambridge University Press.