impacTEEN

A Policy Research Partnership to Reduce Youth Substance Use

Exploring the Relationship Between the Drug Treatment Environment and Juvenile Drug Use Rates

Curtis J. VanderWaal, Ph.D.,

Andrews University

Yvonne M. Terry-McElrath, M.S.A.,

University of Michigan

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Drug Treatment Works

The National Institute of Justice no longer questions whether treatment works – we now want to know what treatments work best, for whom, and under which circumstances.

Jeremy Travis, former NIJ Director

December 1997 (paraphrased)

Trends in Drug Treatment in the Justice System

- Despite the continuing political rhetoric for the need to be “tough on crime”:
  - Soaring prison costs and overcrowding are resulting in movement away from mandatory sentencing and three-strike laws
  - Some states (e.g. New York, Arizona – Prop. 200, California – Prop. 36) are moving toward mandatory sentences of probation and drug treatment for non-violent drug offenders
  - Drug courts have rapidly grown in popularity – 547 juvenile or adult drug courts currently in operation, with at least another 150 in the planning stage

Arizona's Proposition 200 First Year Outcomes

- In the first year of the Arizona project, 77 percent of the 2,622 offenders tested drug-free at the end of their outpatient treatment programs. The state estimated the program saved $2.5 million in correction costs.

- Broderick, B (2000). Arizona Supreme Court Study

AOD Client Treatment Admissions by Year and Drug

Fiscal Yr	Cocaine	Heroin	MJ/Hashish	Alcohol
1992	257,714	123,181	76,590	975,664
1997	306,713	215,959	223,959	837,561
% chg	**+19%**	**+75%**	**+191%**	**- 14.2%**

Between 1992 and 1997, the number of clients admitted into treatment for illicit drugs rose to almost equal that of clients in treatment for alcohol

NASADAD, 1999

Eventual Drug Treatment Research Question

- How does the state environment (enacted laws, policies, expenditures, demographics, drug courts, etc.) affect the relationship between juvenile drug treatment and juvenile drug use rates at the local level?

Current Research Question and Primary Hypotheses

Does an expanded state-level drug treatment environment result in lower drug use rates among juveniles?

- H1: **Increased tx $** → **Increased client tx admissions**
- H2: **Increased tx $** → **Decreased juvenile use rates**

- H3: Increased # of drug courts → increased number of client
- treatment admissions
- H4: Increased # of client tx admissions → lower drug use rates
- H5: Expanded drug treatment environment (relationship
- between spending, clients, and drug court coverage) →
- lower drug use rates

Data for Analysis: NASADAD

- Data compiled from directors of 47 state designated AOD Agencies (+ D.C. & P.R.)
- Overall reliability of reporting on client admissions and tx expenditures is quite good
- Variables include:
  - Total AOD treatment $ per state
  - Change in AOD treatment $ per state over time (1992-1997)
  - Youth and adult AOD treatment admissions per state

STATE	AOD tx $ 1997	% chng AOD $, 95 to 97
AL	5.88	.12
AK	7.33	.21
HI	17.24	.15
MA	12.61	.01
MI	14.07	-0.09
MS	6.07	.11
MO	10.30	.24
MT	12.56	-.10
NV	6.43	.02
NY	43.49	-.06
OH	17.16	.08
SC	9.16	-.23
SD	10.48	-.41
UT	19.03	.07
VT	12.65	-.01
WV	15.19	.59
WI	23.76	1.09
WY	.	.

STATE	% juv tx 1997	% adult tx 1997
AL	.16	.36
AK	.13	.66
HI	.61	.38
MA	.27	1.66
MI	.21	.76
MS	.11	.62
MO	.18	.68
MT	N/A	.
NV	.19	.57
NY	.15	.80
OH	.36	.58
SC	.25	.49
SD	.97	.63
UT	N/A	.
VT	.33	.50
WV	.22	.37
WI	.03	.07
WY	N/A	.

Data for Analysis: U.S. Census

- Variables which utilized state-based census estimates included:
  - Per capita expenditures for AOD treatment
  - % of population admitted for AOD treatment
  - % ethnicity
  - Median household income
  - Gross state product

Data for Analysis: Book of States

- Data collected from The Council of State Governments
- Variable utilized:
  - Political party control of state house and senate

Data for Analysis: YRBS

- Youth Risk Behavior Survey (YRBS)
  - Included only states with state-level representative data for 1997 and 1999 (N=18)
  - Variables included:
    - 1997 – Lifetime drug use (mj, cocaine, crack/freebase, inhalants, other illegal drugs)
    - 1999 – Lifetime drug use (mj, cocaine, inhalants, heroin, meth)
    - 1997 and 1999 – Current use (mj or alcohol)

STATE	% life use 1997	% change life use 99-97	% MJ/ alc 1997	% change MJ/alc use 99-97
AL	45.04	1.79	48.95	-1.20
AK	52.79	-3.75	53.69	-3.88
HI	51.58	-2.73	44.55	3.16
MA	.	.	56.10	-1.40
MI	53.28	-3.03	53.70	-2.94
MS	45.87	-5.09	48.77	-4.51
MO	51.22	.92	55.17	-1.87
MT	49.53	- .69	61.48	-3.00
NV	51.33	1.47	52.96	1.69
NY	46.52	-1.58	50.82	.64
OH	49.39	.21	49.68	6.85
SC	.	.	48.91	-1.46
SD	41.64	.	61.07	-1.64
UT	31.11	-1.58	25.18	-2.29
VT	.	.	58.44	.
WV	55.60	-1.45	53.94	-3.69
WI	.	.	52.40	1.09
WY	49.31	-1.62	56.31	-1.45

Hypothesis #1: National Level

More Treatment Dollars Spent (per capita) → Increased Client Treatment Admissions

- N=43; using logistic regression
- For Juveniles:
  - No significant relationship
- For Adults:
  - Significant positive relationship: $p = .001$; $R^2 = .21$
  - The relationship remained significant when controlling for a) gross state product, median household income, and political party ($R^2=.26$); b) ethnicity ($R^2=.24$); and c) census region ($R^2=.31$)
- State treatment dollars were positively related to state median household income ($p = .009$; $R^2=.12$) but not significantly associated with gross state product or political party.

Hypothesis #1: YRBS States

More Treatment Dollars Spent (per capita) → Increased Client Treatment Admissions

- N=14; using logistic regression
- No initial relationship between increased per capita treatment dollars and percentage of clients admitted into treatment (for either juvenile or adult populations)
- However, when YRBS sample outliers South Dakota and Wisconsin were removed, a significant positive relationship was observed between tx $ and % youth clients ($p=.002$; $R^2=.57$)
- As with national results, in the YRBS sample, state treatment dollars were positively related to state median household income ($p = .020$; $R^2=.27$) but not significantly associated with gross state product or political party.

Hypothesis #2: YRBS States

Increased Drug Tx Expenditures → Lowered Drug Use Rates

- Initial analysis: relationship between per capita treatment dollars and juvenile drug use rates
- Final N= 9, using logistic regression after removing outliers and missing data
- No relationship between treatment expenditures and life and current use rates
- Significant inverse relationship between treatment expenditures and change in life use rates ($p=.009$; $R^2=.57$)
- Above relationship observed only after removing Wisconsin and Mississippi, and then Arkansas

SUMMARY

$H^{1:}$ More Treatment Dollars Spent (per capita) → More Clients in Treatment

- Appears to be supported at the national level for adults, but not for youth
- With YRBS states, it does not appear to be supported for adults, but seems to for youth (when 3 outlier states were removed from the regression)

$H^{2:}$ Increased Drug Tx Expenditures→ Lowered Drug Use Rates

- Increased treatment $ may potentially be related to decreased rates of change in youth lifetime use rates (again based on removing outliers)

However….

- Several current limitations with our data keep us from really being able to examine these potential relationships:
  - Need a better way to match state and local data
  - Need improved ability to track changes over time
- Local treatment environments are also extremely complicated. Factors may include:
  - State treatment $
  - Drug court existence and/or willingness to refer clients to treatment
  - Lack of appropriate treatment options
  - Treatment bed availability
  - Diversion programming options
  - Use of the court system e.g. graduated sanctions, case management

Further Limitations

- Strong need for increased sample size with full-state representative data
  - National Household Survey will be very useful in the near future
- Youth with the highest use rates are probably either under-represented or not represented in surveys such as YRBS and MTF since these are school-based surveys. Difficult to make inferences from "normal" population to "high-risk" population samples
- Need longitudinal data to examine trends
  - e.g. juvenile drug courts are very recent
- Analyses such as this hide a great deal of heterogeneity
- However, this analysis gives hints as to what might be possible for future analyses

Directions for the Future

NATIONAL-LEVEL COMPARISONS

- Use of National Household Survey data (general population rather than school-based) for more accurate state-level analyses and a higher number of states
  - Matched to state-level enacted laws relating to diversion

Directions for the Future

COMMUNITY-LEVEL COMPARISONS

- Plans to include other variables related to the local treatment environment will give us the ability to compare community-level data to MTF use rate data for community-level analyses
  - Community-level key informant interviews regarding local diversion alternatives
  - Community-level juvenile justice sentencing practices
- More adult and juvenile drug courts with longer time in operation should strengthen the longitudinal analyses