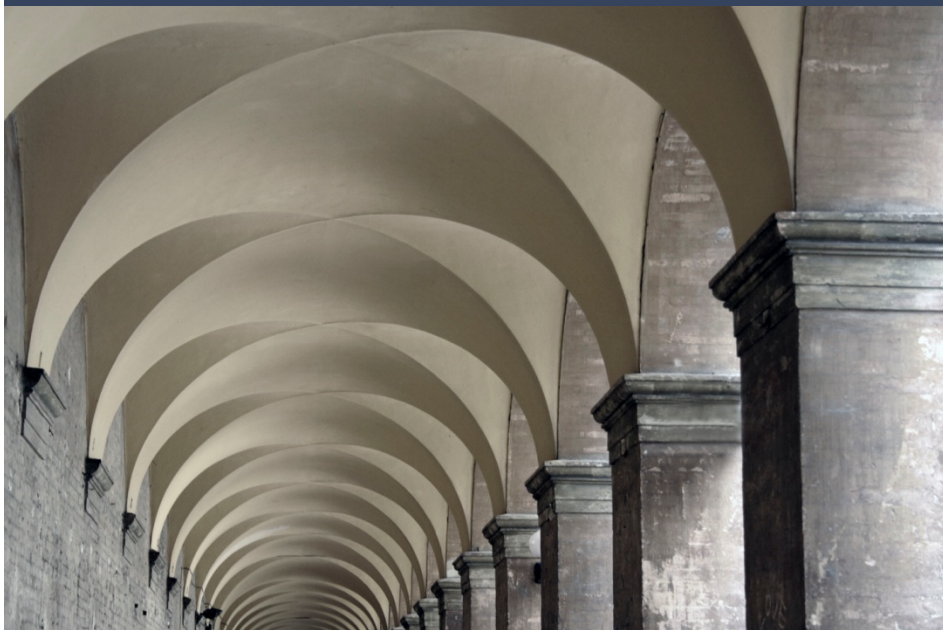


# How Do Drug Courts Work?



**John Roman**

**Jennifer Yahner**

**Janine Zweig**

**Ritadhi Chakravarti**

***National Institute of  
Justice***

***June 15, 2010***

---

*The views expressed are those of the authors and should not be attributed to The Urban Institute, its trustees, or its funders.*



**URBAN INSTITUTE**  
Justice Policy Center

# Presentation Overview

- Background
- Proposed Model
- Analytic Strategy
- Results
- Next Steps

# Intuition Behind SEM

- Individuals enter CJS with attributes that affect their outcomes;
- Individuals then encounter CJS interventions (drug court, BAU);
- The activities of those CJS interventions moderate the effect of attributes on offending;
- May also affect attitudes. Changes in attitudes mediates the moderation.

# Theory testing

- Does assignment to drug court alone affect outcomes?
- Do drug court practices moderate outcomes?
- Do drug court practices mediate moderated outcomes by changing attitudes and beliefs?

# Theory testing

- Which attitudes and beliefs matter the most?
- Deterrence (e.g. changes in the belief that you will be caught and punished for infractions)
- Procedural Justice (e.g. changes in the believe that the process is fair and understandable)
- Motivation for Treatment (e.g. recognize treatment, desire help)

\* \* \*

What about Attitude Toward Judge?

# Procedural Justice

- You felt you had the opportunity to express your views in the court.
- You felt too intimidated or scared to say what you really felt in the court.
- People in the court spoke up on your behalf.
- The court took account of what you said in decision what should be done.
- How much influence did you have over the agreement reached in the Court?
- You felt you had enough control over the way things were run in the court.
- You understood what was going on in the court.
- You understood what your rights were during case processing.
- All sides had a fair chance to bring out the facts in the court.
- You felt that people who committed the same offense were treated the same way by courts.
- You were disadvantaged in the court because of your age, income, sex, race, or some other reason.

# Attitudes Toward Judge

The judge is knowledgeable about your case.

The judge knows you by name.

The judge helps you to succeed.

The judge emphasizes the importance of drug and alcohol treatment.

The judge is intimidating or unapproachable.

The judge remembers your situations and needs from hearing to hearing.

The judge gives you a chance to tell your side of your story.

The judge can be trusted to treat you fairly.

The judge treats you with respect.

# Background

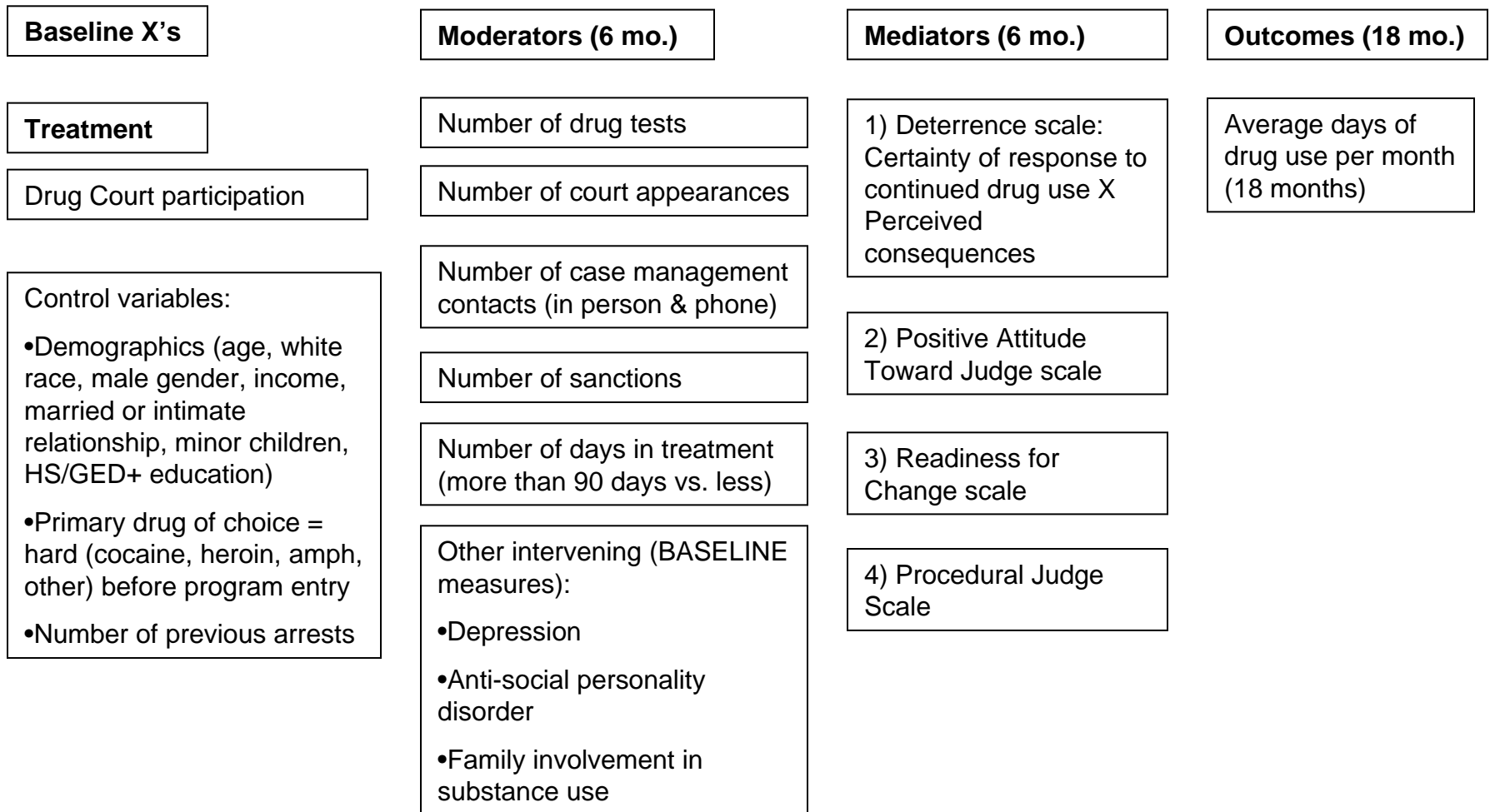
- Prior research shows drug courts work
- Few studies show how; key exception below
  - Gottfredson, Kearley, Najaka, & Rocha. 2007. How drug treatment courts work: An analysis of mediators. *Journal of Research in Crime and Delinquency*, 44(1):3-35.
  - Found evidence for both deterrence and procedural justice



# Description of Variables

- Baseline variables
  - Drug court participation
  - Controls: age, race, gender, education, income, married/relationship, income, minor children, primary drug of choice, prior arrests
- Moderators
  - Number of drug tests, court appearances, case management contacts, sanctions, days in treatment, depression, ASPD, family drug use
- Mediators
  - Deterrence, procedural justice, attitude toward judge, readiness for change
- Outcome
  - Drug use

# Proposed Model



# Analytic Strategy

- Structural equation (path) modeling in LISREL
- Start simple; build model in stages
  - Does drug court participation affect drug use?
  - What control variables affect drug use?
  - What moderators affect drug use?
  - What mediators affect drug use?
  - What affects mediators?
- After obtaining final model, examine interactions between drug court & moderators

# Results

- Does drug court participation affect drug use?
  - Yes, significant effect in every model
  - Indirectly affects drug use in final model (via attitude toward judge)
- What control variables affect drug use?
  - Age, income, primary drug of choice (hard)
  - No other demographic or criminal history effects in multivariate model incl. drug court
- What moderators affect drug use?
  - Drug tests, court appearances, sanctions, ASPD
  - No other moderator effects in multivariate model incl. drug court

# Results (continued)

- What mediators affect drug use?
  - Examined one at a time: deterrence, attitude toward judge and readiness for change
  - Examined collectively in model incl. drug court, only attitude toward judge

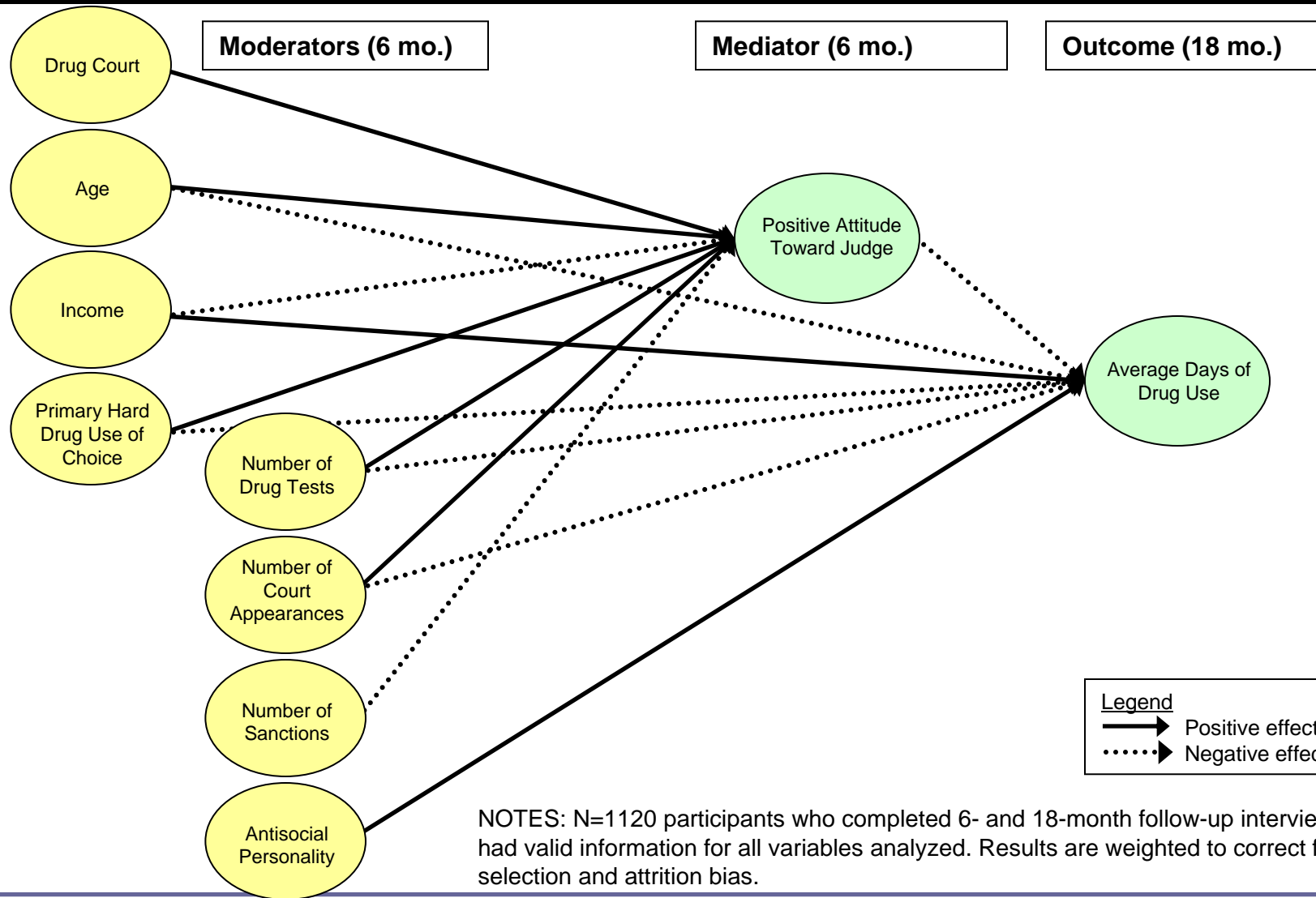
Mediator	Bivariate Effect on Drug Use	Multivariate Effect on Drug Use
Deterrence	-0.05	-0.01
Positive Attitude Toward Judge	-0.19***	-0.14***
Procedural Justice Score	-0.11***	-0.07**
Readiness for Change	-0.07**	0.00

NOTE: Table entries are standardized coefficients in structural equation model. \*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

## Results (continued)

- What affects mediator (attitude toward judge)?
  - Drug court participation (+)
  - Age, drug tests, primary drug of choice (hard) (+)
  - Court appearances, sanctions (-)

# Final Model



NOTES: N=1120 participants who completed 6- and 18-month follow-up interviews and had valid information for all variables analyzed. Results are weighted to correct for selection and attrition bias.

# Decomposition of Effects

Predictor	Positive Attitude Toward Judge			Average Days of Drug Use		
	Total	Direct	Indirect	Total	Direct	Indirect
Drug Court	0.33***	0.33***	—	-0.03**		-0.03**
Age	0.14***	0.14***	—	-0.08**	-0.07**	-0.01*
Income (natural log)	-0.10**	-0.10**	—	0.08**	0.07*	0.01*
Primary Hard Drug Use of Choice	0.08**	0.08**	—	-0.09**	-0.09**	-0.01*
Number of Drug Tests	0.08**	0.08**	—	-0.13**	-0.12**	-0.01*
Number of Court Appearances	0.22***	0.22***	—	-0.11**	-0.09**	-0.02**
Number of Sanctions	-0.08**	-0.08**	—	0.01*		0.01*
Antisocial Personality Disorder			—	0.15***	0.15***	
Positive Attitude Toward Judge	—	—	—	-0.08**	-0.08**	—
$R^2$	0.34			0.11		

NOTES: Table entries are standardized coefficients in the final structural equations model. Blank entries denote paths fixed to zero on the basis of Wald test results. Dashes denote paths not possible according to the model. The following pairs of predictors were allowed to correlate based on LISREL's modification indices: drug court and drug tests, drug court and court appearances, age and hard drug use, age and sanctions, age and antisocial personality, income and drug tests, income and court appearances, drug tests and court appearances, sanctions and antisocial personality.

\*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$



# Does the Model Fit the Data?

- Used same criteria as Gottfredson et al. 2007
- Everything indicates good model fit

Criterion	Best if:	Model's:
Chi-square / Degrees of Freedom	3 or less	3.3
Comparative Fit Index (CFI)	0.9 or more	0.98
Non-Normed Fit Index (NNFI)	0.9 or more	0.96
Root Mean Square Error of Approx. (RMSEA)	Less than 0.05	0.04

# Conclusions from the Final Model

- **Deterrence** never affected drug use (whether tested as certainty X severity, certainty alone, or severity alone).
- **Readiness to change** never affected drug use (whether tested as scale 1, scale 2, or the average of scales 1 & 2).

# Conclusions from the Final Model

- **Procedural justice** affected drug use – but not as much as the attitude toward judge measure – and when both were tested simultaneously, only attitude toward judge mattered.
  - When tested alone without attitude toward judge, procedural justice didn't affect drug use when all other significant controls & moderators were included.
  - However, drug court continued to affect BOTH measures such that those in drug court always thought things were better (better procedural justice, more positive attitude toward judge).

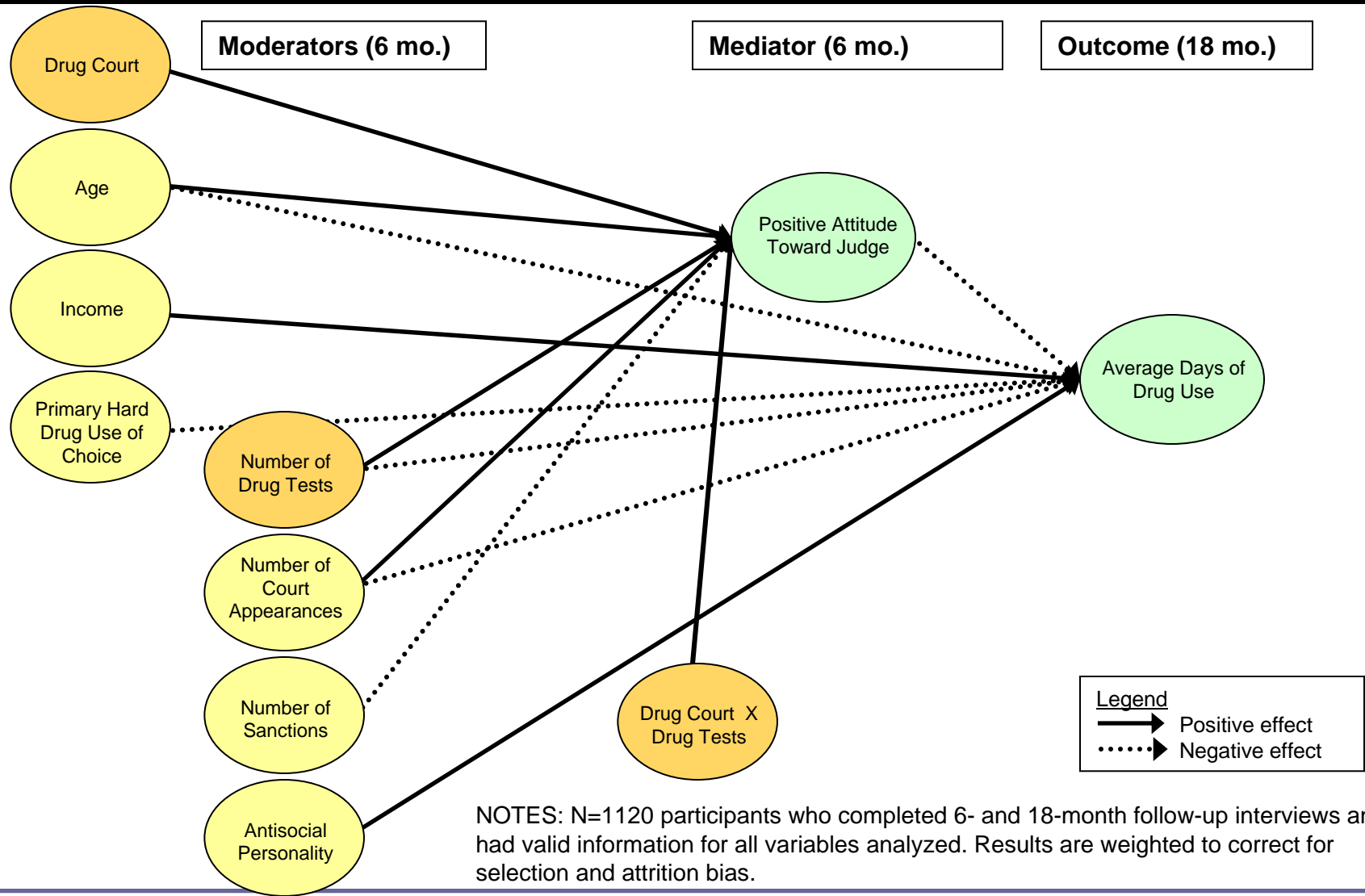
# Conclusions from the Final Model

- **Distributive Justice** (fairness of outcome) affected drug use – but not as much as attitude toward judge (above). So conclusion was similar to procedural justice.
  - When tested with attitude toward judge, distributive justice was no longer significant.
  - However, people in drug court always thought the outcome was more fair than those not in drug court.

# Examining Interactions in Final Model

- In final model, does effect of drug court participation interact with moderators below?
  - Number of drug tests
  - Number of court appearances
  - Number of sanctions
  - Antisocial personality disorder
- Tested interactions one at a time
- Results: Each was significant ( $p < .10$ )

# Interaction 1: Drug Tests Increased Positive Attitude Toward Judge Most Among Those **Not** in Drug Court

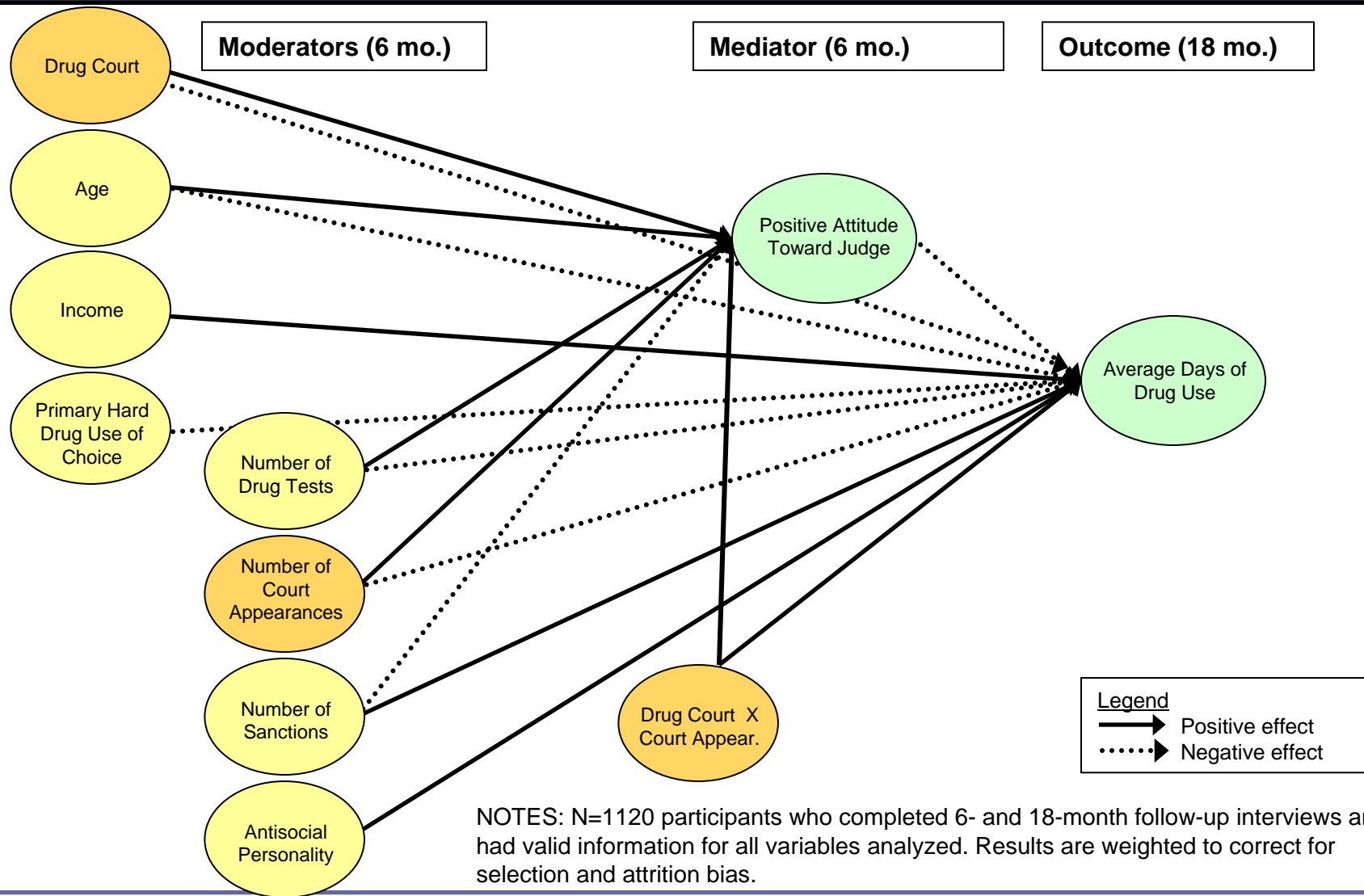


# Interaction 1: Drug Tests Increased Positive Attitude Toward Judge Most Among Those **Not** in Drug Court

Number of Drug Tests	Change in Total Effect on Positive Attitude Toward Judge	
	Comparison Participant	Drug Court Participant
0	0	0.5
5	2.6	0.7
10	5.1	0.9

NOTE: Based on standardized total effects of drug court, drug tests, and interaction on attitude toward judge, holding all else constant.

# Interaction 2: Court Appearances Increased Positive Attitude Toward Judge and Decreased Drug Use Most Among Those **Not** in Drug Court



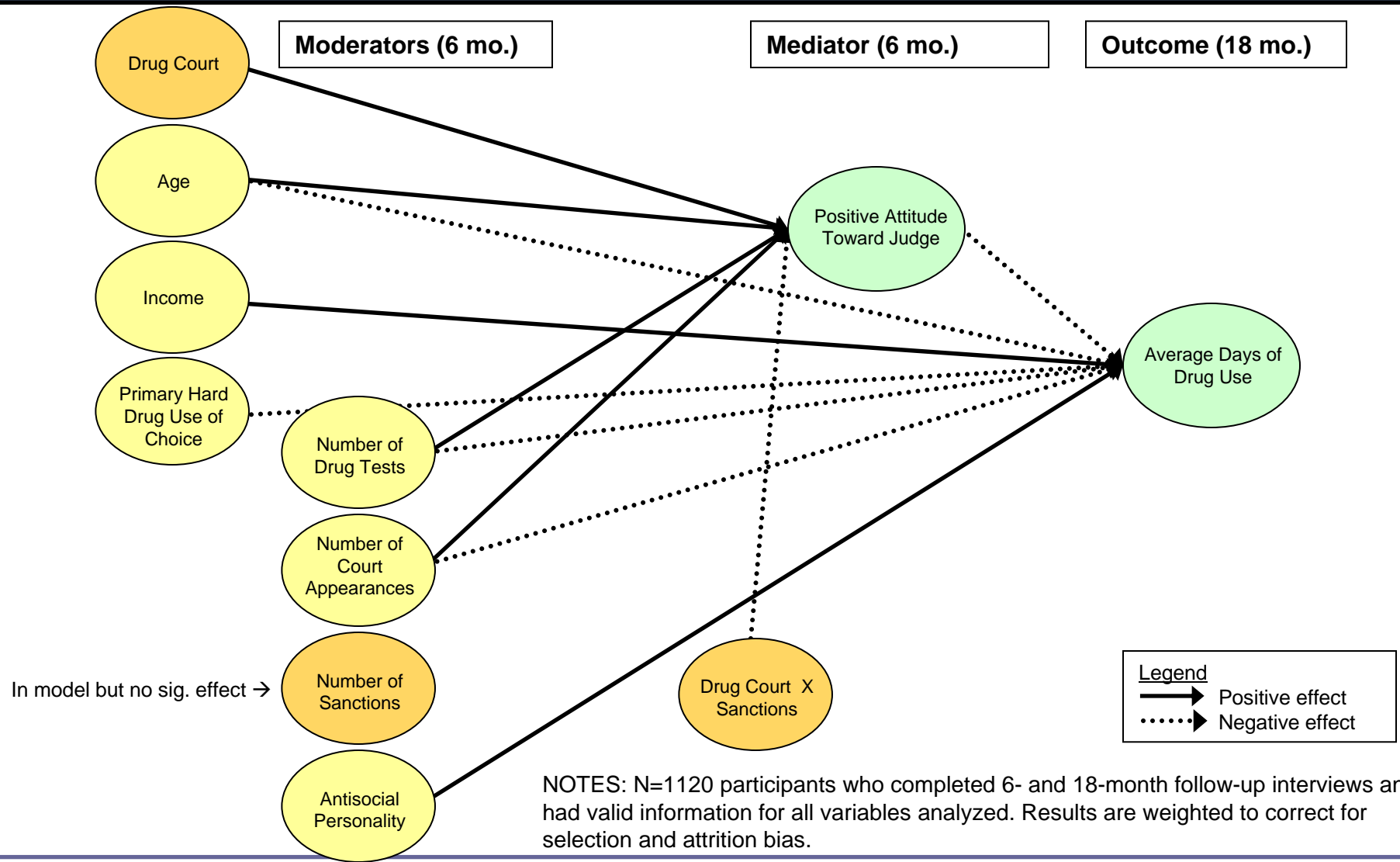


## Interaction 2: Court Appearances Increased Positive Attitude Toward Judge and Decreased Drug Use Most Among Those **Not** in Drug Court

Number of Court Appearances	Change in Total Effect on Positive Attitude Toward Judge		Change in Total Effect on Drug Use	
	Comparison Participant	Drug Court Participant	Comparison Participant	Drug Court Participant
0	0	0.4	0	-0.1
5	2.0	1.1	-1.5	-0.4
10	4.0	1.8	-2.9	-0.7

NOTE: Based on standardized total effects of drug court, court appearances, and interaction on attitude toward judge and on drug use, holding all else constant.

# Interaction 3: Increasing Sanctions Decreased Positive Attitude Toward Judge **Only** Among Those in Drug Court

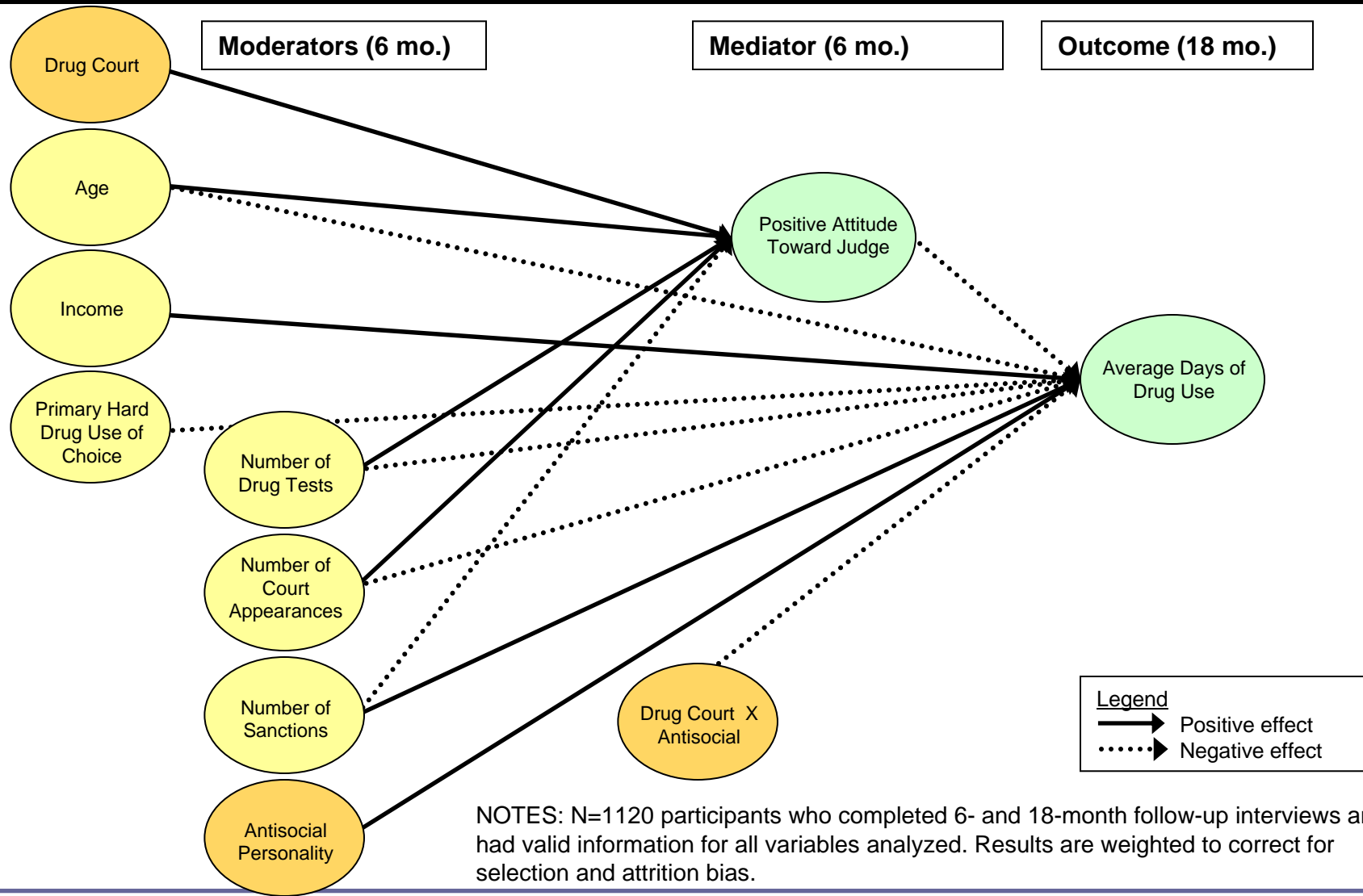


## Interaction 3: Increasing Sanctions Decreased Positive Attitude Toward Judge **Only** Among Those in Drug Court

Number of Sanctions	Change in Total Effect on Positive Attitude Toward Judge	
	Comparison Participant	Drug Court Participant
0	0	0.4
5	0.2 (not significant)	-0.1
10	0.4 (not significant)	-0.6

NOTE: Based on standardized total effects of drug court, sanctions, and interaction on attitude toward judge, holding all else constant.

# Interaction 4: Having Antisocial Personality Increased Drug Use Most Among Those **Not** in Drug Court



## Interaction 4: Having Antisocial Personality Increased Drug Use Most Among Those **Not** in Drug Court

Antisocial Personality Disorder?	Change in Total Effect on Drug use	
	Comparison Participant	Drug Court Participant
No	0	0
Yes	0.23	0.10

NOTE: Based on standardized total effects of drug court, antisocial personality disorder, and interaction on drug use, holding all else constant.

# Next Steps

- Conduct multi-level analysis
  - Do drug court effects vary across courts?
- Examine additional outcomes
  - E.g., criminal activity, drug use variety/severity