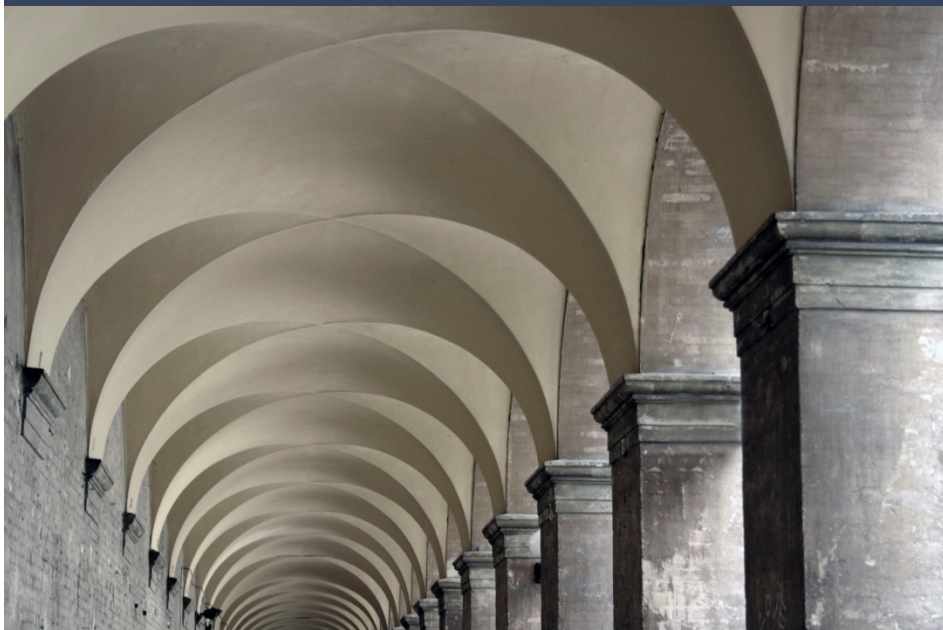


How Do Drug Courts Work?



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Presentation Overview

- Background
- Present Study (NIJ's MADCE)
- Proposed Model
- Analytic Strategy
- Results
- Next Steps

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.

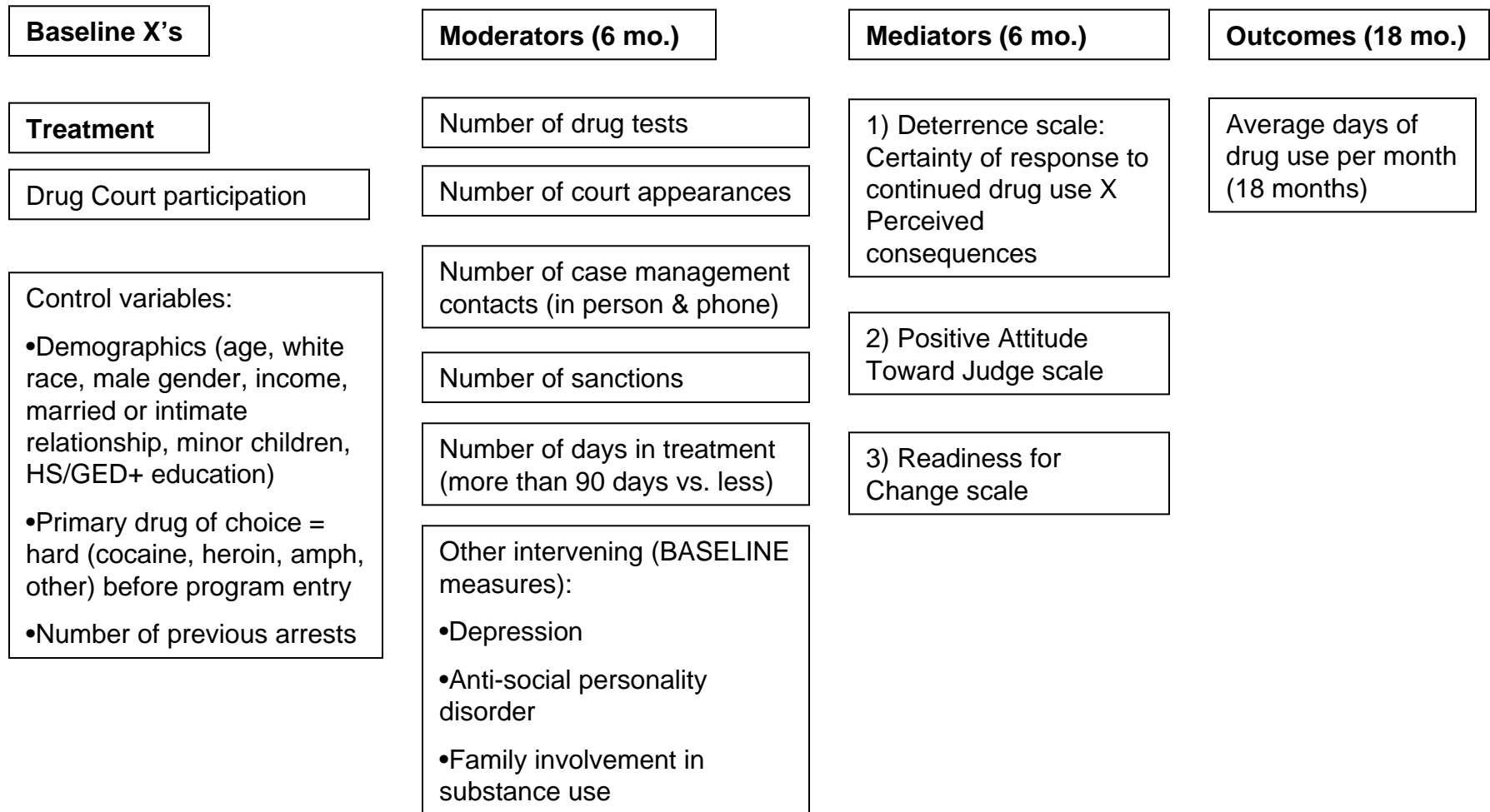
NIJ's Multisite Adult Drug Court Evaluation

- Study overview

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, 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***
Readiness for Change	-0.07**	0.00

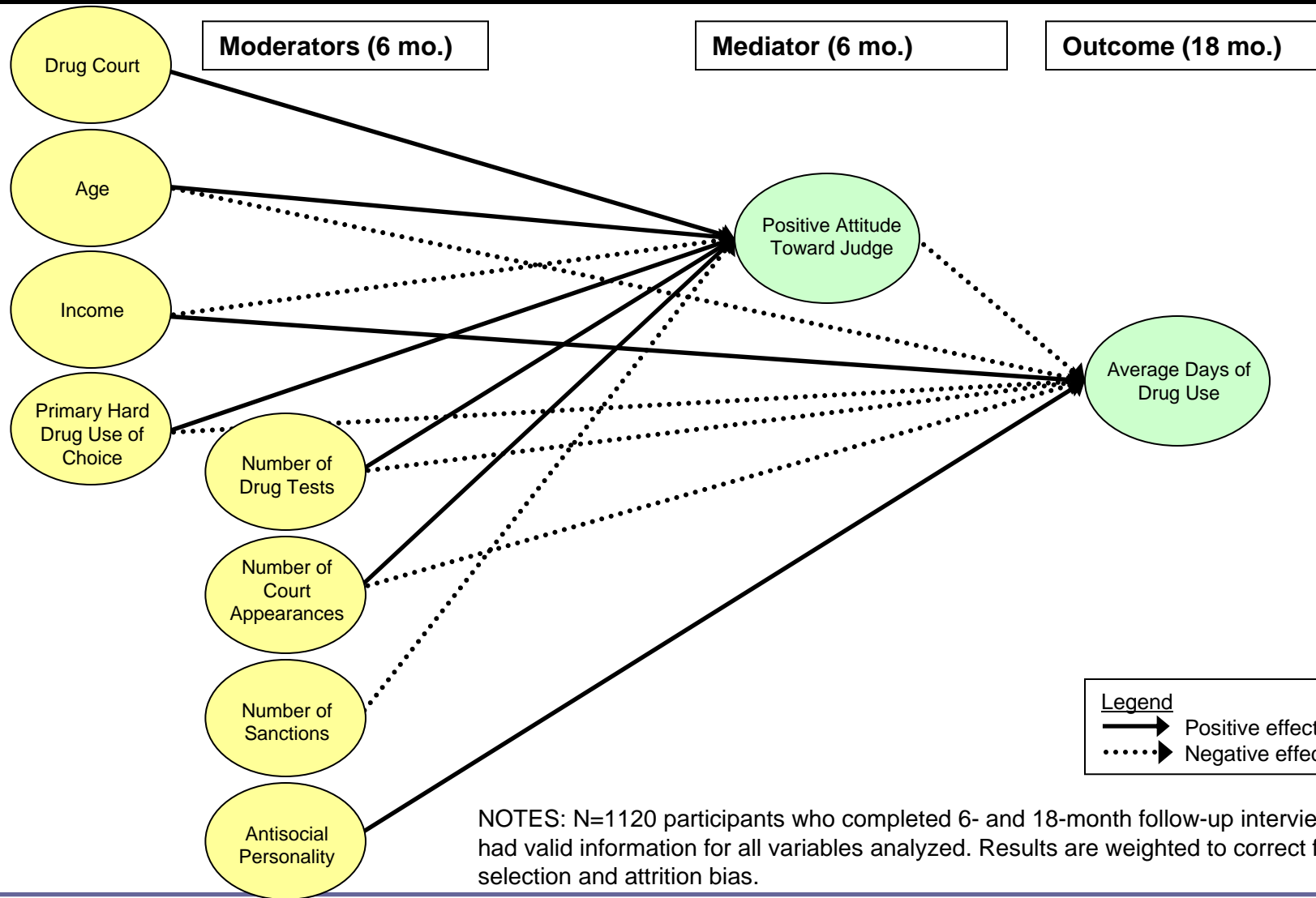
NOTE: Table entries are standardized coefficients in structural equation model.

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

Results (continued)

- What affects mediator (attitude toward judge)?
 - Drug court participation
 - Age, income, primary drug of choice (hard)
 - Drug tests, 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**	—
<i>R</i> 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?

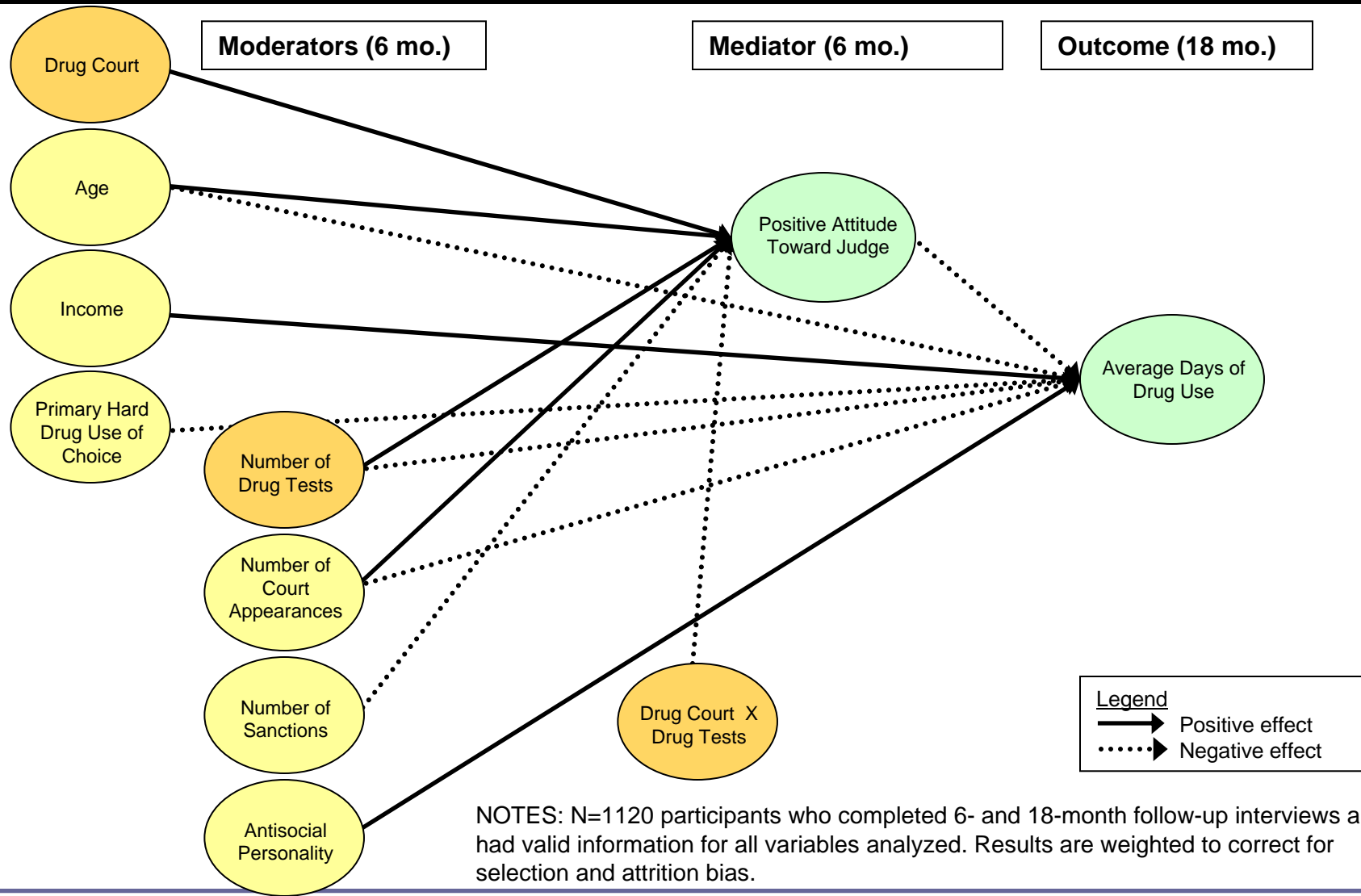
- Used same criteria as Gottfredson et al. 2007
- Everything indicates good model fit

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

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



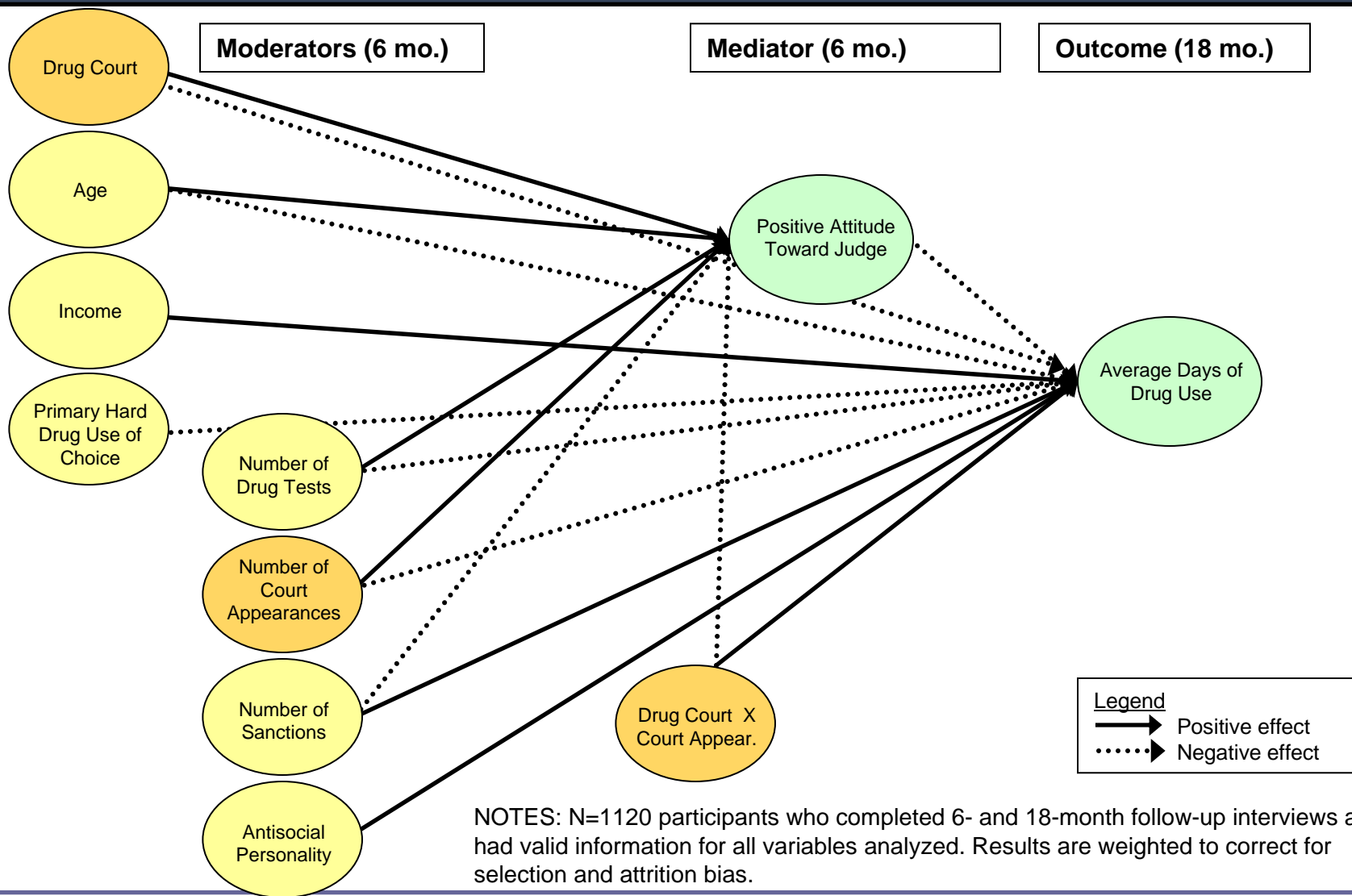
NOTES: N=1120 participants who completed 6- and 18-month follow-up interviews and had valid information for all variables analyzed. Results are weighted to correct for selection and attrition bias.

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

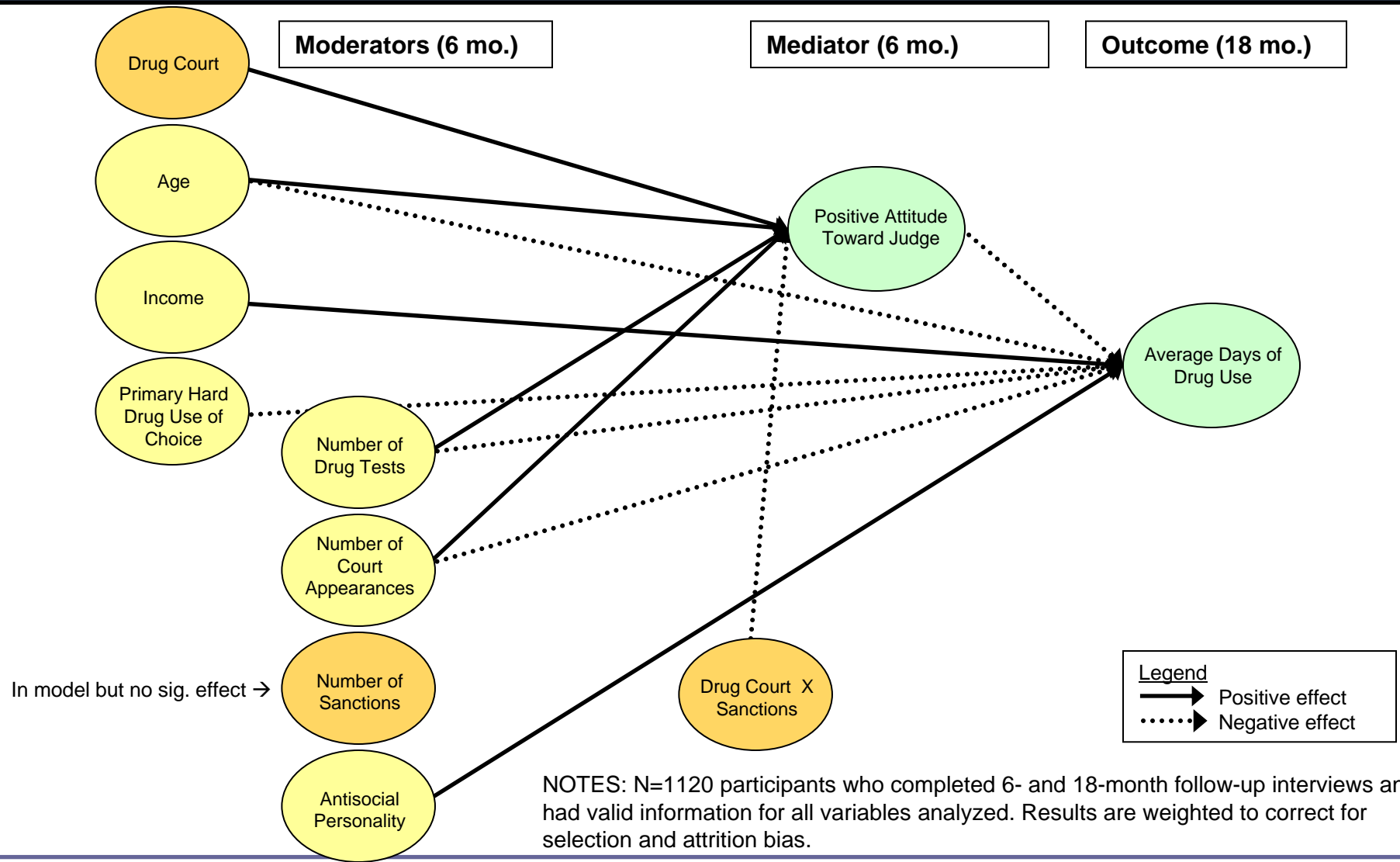


Interaction 2: Court Appearances Increased Positive Attitude Toward Judge and Decreased Drug Use Most Among Those **Not** in Drug Court

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



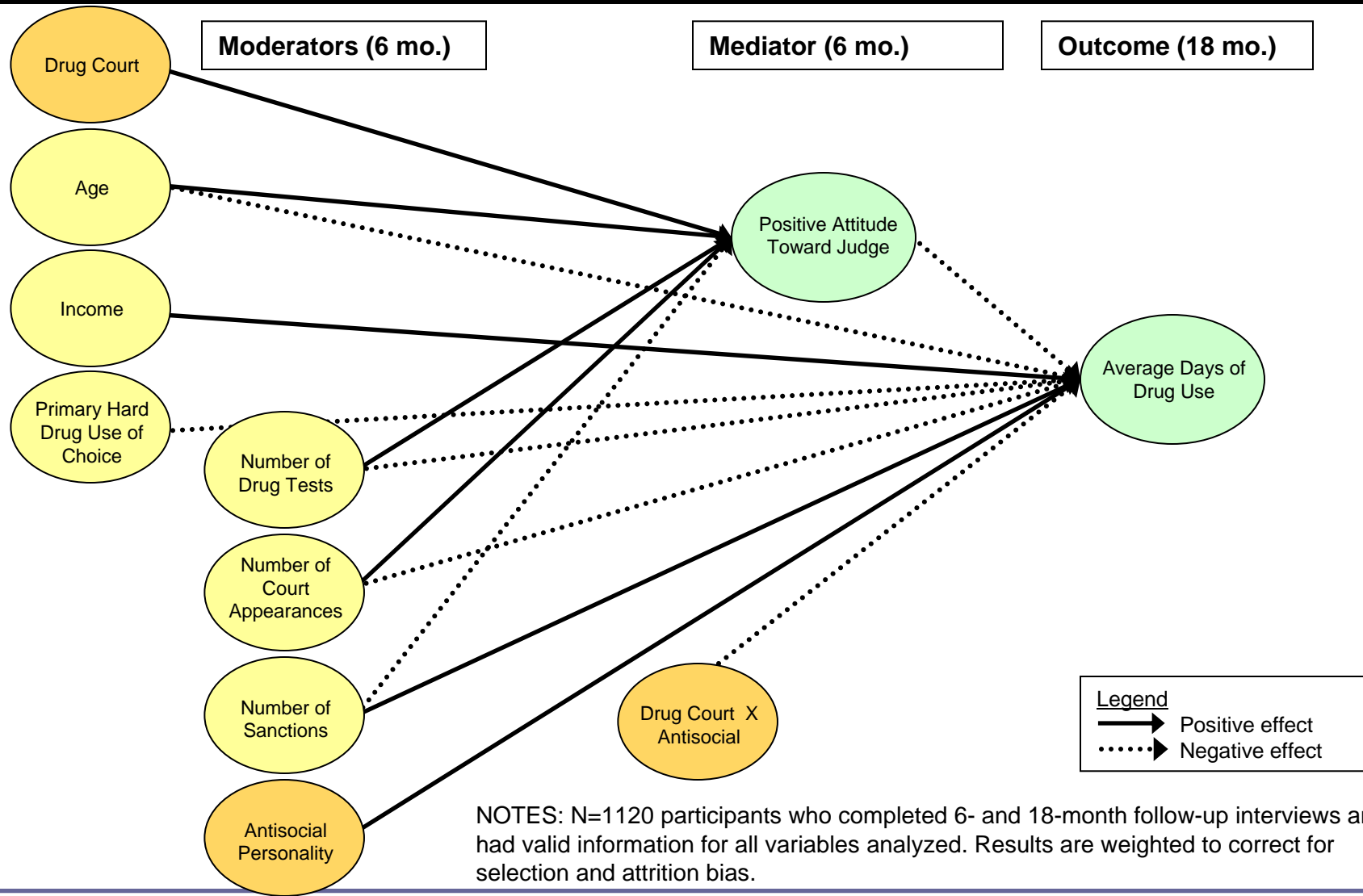
NOTES: N=1120 participants who completed 6- and 18-month follow-up interviews and had valid information for all variables analyzed. Results are weighted to correct for selection and attrition bias.

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