

Changes in family functioning may differentially affect outcomes for male and female adolescents in substance use and delinquency treatment



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Introduction: Juvenile Delinquency and Substance Use



- High prevalence of delinquency among juveniles (FBI, 2011)
- Juvenile substance use is rising (NIDA, 2012)
- Consequences of delinquency and substance use:
 - Injury to self or others
 - Disability
 - Death
 - Increased medical expenses
 - Physiological effects
 - Financial costs for society
 - Increase in likelihood of violence

Delinquency and Substance Use in Female Youth



- Overall decrease in juvenile arrests nationwide (FBI, 2011)
 - Increase in total female arrests
 - Slower decline in arrests related to delinquency of female adolescents
- Increase in female adolescents with substance use history since 2005 (CASA, 2011)
- Minimal literature focusing on female youth

Risk and Family Factors For Juvenile Delinquency and Substance Use



Delinquency

- Psychopathology
- Delinquent peer groups
- History of trauma & victimization
- Substance use

Substance Use

- Age of onset
- Conduct problems

Risk and Family Factors For Juvenile Delinquency and Substance Use



Family Factors

- Parenting skills/style
- Criminal activity in family system
- History of physical/emotional abuse
- Absent parent
- Lack of emotional support from parents
- Lack of communication within family unit
- Poor relationship with parents

Specific to Females

- Lack of communication with parents
- Limited emotional support from parents
- Parental history of criminal behavior and substance use
- Violence in the home
- Child abuse and neglect
- Higher levels of psychological control in parenting

Current Study



- Secondary analysis of five RCTs examining the effectiveness of MDFT in treating juvenile substance use and delinquency
- *Hypotheses:*
 1. The family environment of participants in both treatment conditions will improve over time
 2. Improvements in the family environment will predict a decrease in substance use and delinquency among justice involved youth
- *Research Questions:*
 1. Does the degree of improvement in family functioning differ by the gender of the participant?
 2. Is the association between family functioning and future substance use and delinquency moderated by gender?

Methods: Procedure and Sample



- Randomization to MDFT or comparison treatments
- Assessments:
 - Initial (pre-treatment)
 - Variable across studies (e.g., 3, 6, & 9-months post-intake, 12-months post-intake)
- Inclusion criteria:
 - Meet criteria for a substance use disorder, or
 - Referred for substance use treatment by various institutions (e.g., juvenile justice system, state department of child welfare, schools)
- Exclusion criteria:
 - SMI, Intellectual Disability, or Autism Spectrum Disorder diagnoses
 - Active suicidal ideation

Methods: Measures



- **Demographic Background**
 - Demographic Questionnaire
- **Family Functioning**
 - Family Environment Scale
 - Behavioral Affect Rating Scale (Conger et al., 2002)
- **Juvenile Substance Use**
 - Timeline Follow Back Method (Sobell & Sobell, 1992; TLFB)
 - Urine Analysis
 - Personal Experience Inventory (Winters & Henly, 1989; PEI)
- **Juvenile Offending**
 - National Youth Survey Self-Report Delinquency Scale (Elliot et al., 1983)

Participant Demographics



<i>Sample Demographics</i>			
	N	Minimum	Maximum
Age	646	11	17
Frequency (%)			
<i>Gender</i>			
Male			522 (81)
Female			124 (19)
<i>Ethnicity</i>			
African American			329 (51)
Latino			225 (35)
White (Non-Hispanic)			92 (14)
<i>Treatment Type</i>			
MDFT			323 (50)
TAU			323 (50)

Results: Change in Family Factors over Time



Self-Reported Family Factors

	Baseline		6-months		12-months	
	M	SD	M	SD	M	SD
<i>Adolescent Report</i>						
Warmth	48.37	11.75	48.46	11.73	50.62	11.05
Cohesion	6.42	2.06	6.85	1.96	6.72	1.79
Conflict	3.34	2.33	3.15	2.10	3.15	2.10
Hostility	36.32	15.72	31.34	15.79	31.13	14.33
<i>Parent Report</i>						
Warmth	51.77	8.47	52.31	9.12	28.03	11.17
Cohesion	6.57	2.04	7.01	1.92	6.83	1.69
Conflict	3.15	2.30	2.14	2.13	2.59	1.89
Hostility	34.84	12.24	28.74	11.47	28.02	11.17

Hypothesis 1: The family environment of participants in both conditions will improve over time



<i>Improvement in Family Environment Over Time</i>	
Family Factor	Estimate (β)
<i>Adolescent Rated</i>	
Warmth	-0.14
Cohesion	0.15**
Conflict	-0.16**
Moderate Hostility	-2.20**
Extreme Hostility	-0.36
<i>Parent Rated</i>	
Warmth	0.66
Cohesion	0.19
Conflict	-0.35**
Moderate Hostility	-3.75**
Extreme Hostility	0.22
* $p > .05$; ** $p > .01$	

Hypothesis 2: Improvements in the family environment predict a decrease in substance use and delinquency



<i>Family Factors Predicting Substance Use Over Time</i>	
Family Factor	Estimate (β)
<i>Adolescent Rated</i>	
Warmth	-0.07*
Cohesion	-0.53
Conflict	0.29**
Hostility	0.09*
<i>Parent Rated</i>	
Warmth	0.02
Cohesion	-0.12
Conflict	0.05
Hostility	0.04**
* p = approaching significance; ** p > .01	

Research Question 1: Does the degree of improvement in family functioning differ by the gender of the participant?



- Gender differences in improvement in adolescent reported conflict:
 - $\beta = -0.421, p < .01$
- No other significant associations identified

Research Question 2: Is the association between family functioning and substance use/delinquency moderated by gender?



Adolescent-Rated Family Factors Predicting Gender Differences in Substance Use Over Time

Family Factor	Estimate (β)
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Males

Warmth	-0.05
Cohesion	-0.70
Conflict	0.34**
Hostility	0.20

Females

Warmth	-0.07*
Cohesion	0.06
Conflict	0.00
Hostility	0.22

* $p > .10$; ** $p > .05$

Parent-Rated Family Factors Predicting Gender Differences in Substance Use Over Time

Family Factor	Estimate (β)
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Males

Warmth	-0.07
Cohesion	-0.12
Conflict	0.03
Hostility	0.04*

Females

Warmth	0.06
Cohesion	0.02
Conflict	0.22
Hostility	0.04

* $p > .10$; ** $p > .05$

Review of Results



- Both adolescent and parent rated family factors improved over time in treatment
- Decreases in levels of family hostility contributed to a reduction in substance use
 - Adolescent rated conflict and warmth
- Family conflict/hostility may be more important for the treatment of substance use in male adolescents
- Family warmth may be more important for female youth

Discussion



- Implications

- Treatment for juvenile substance use may be more effective if it is gender sensitive (i.e., targets gender-specific family factors)
- Differences in the importance of family factors for female and male youth
- Relevance of family factors in the treatment of adolescent delinquency

- Future research

- Designing and examining the effectiveness of gender-sensitive substance use and delinquency treatments
- Examining effectiveness of substance use treatments targeting family factors most relevant for male and female youth



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