

SI Appendix:

The Fast Track Intervention's Impact on
Behaviors of Despair in Adolescence and Young Adulthood

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And

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Tables S1-S5

Table S1: Complete Results for FIML Logistic Regressions Estimating Probability of Behaviors of Despair (N=891)

	Any Behavior of Despair (Age 15-20, 25)	Suicidal Ideation (Age 15-20, 25)	Suicide Attempt/Self-Harm (Age 15-20, 25)	Weekly Hazardous Drinking (Age 15-20, 25)	Weekly Opioid Use (Age 19, 20, 25)
	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
Intervention	0.59 (0.41, 0.83)	0.55 (0.37, 0.83)	0.69 (0.42, 1.16)	0.55 (0.33, 0.92)	0.39 (0.15, 0.98)
Male	0.94 (0.65, 1.36)	0.60 (0.40, 0.92)	0.51 (0.29, 0.91)	2.88 (1.50, 5.55)	1.59 (0.44, 5.71)
Cohort 1	1.30 (0.85, 1.98)	1.45 (0.85, 2.48)	1.95 (0.95, 4.03)	1.33 (0.71, 2.47)	1.35 (0.33, 5.55)
Cohort 2	1.23 (0.81, 1.86)	1.64 (0.98, 2.75)	2.97 (1.52, 5.82)	0.58 (0.29, 1.16)	2.44 (0.74, 8.05)
Durham, NC	0.47 (0.24, 0.92)	0.45 (0.20, 0.99)	0.28 (0.10, 0.82)	0.49 (0.16, 1.52)	0.39 (0.03, 5.43)
Nashville, TN	0.77 (0.41, 1.45)	1.24 (0.65, 2.36)	0.88 (0.41, 1.91)	0.38 (0.14, 1.04)	0.97 (0.22, 4.30)
Seattle, WA	0.88 (0.53, 1.45)	1.06 (0.59, 1.89)	0.61 (0.28, 1.36)	0.79 (0.39, 1.63)	0.32 (0.07, 1.50)
Black	0.70 (0.42, 1.15)	0.85 (0.48, 1.49)	0.98 (0.41, 2.37)	0.56 (0.23, 1.36)	0.57 (0.08, 4.29)
Initial Screen Score	1.03 (1.01, 1.05)	1.02 (1.01, 1.04)	1.03 (1.01, 1.05)	1.02 (1.00, 1.04)	1.03 (0.99, 1.08)
Pre-Intervention Covariates					
Parental Depression	1.02 (1.00, 1.04)	1.02 (1.00, 1.04)	0.99 (0.97, 1.02)	1.02 (0.99, 1.04)	1.01 (0.97, 1.06)
Child Hostile Attribution	1.41 (0.61, 3.28)	1.45 (0.58, 3.62)	1.66 (0.48, 5.75)	0.96 (0.33, 2.78)	6.67 (0.94, 47.5)
Child Aggressive Behavior	1.00 (0.97, 1.03)	1.01 (0.98, 1.04)	1.02 (0.99, 1.06)	1.00 (0.96, 1.04)	0.97 (0.91, 1.03)
Child Emotional Appropriateness Score	0.94 (0.76, 1.17)	0.96 (0.75, 1.23)	0.76 (0.56, 1.04)	0.83 (0.63, 1.11)	1.57 (0.70, 3.54)
Parental Family Satisfaction	1.19 (0.90, 1.57)	0.96 (0.70, 1.32)	0.81 (0.56, 1.19)	1.96 (1.22, 3.15)	1.95 (0.86, 4.41)
Parental Friendship Satisfaction	0.96 (0.66, 1.39)	0.89 (0.61, 1.29)	1.10 (0.67, 1.82)	0.92 (0.56, 1.49)	0.77 (0.43, 1.38)
Parent-Report of Physical Punishment	0.88 (0.42, 1.82)	0.72 (0.27, 1.87)	0.90 (0.28, 2.92)	1.28 (0.40, 4.10)	5.39 (0.95, 30.5)
Parent-Report of Kindergarten Stress	1.01 (0.97, 1.06)	1.00 (0.95, 1.06)	0.99 (0.93, 1.06)	1.01 (0.95, 1.08)	1.08 (0.99, 1.19)
Parent-Report of Verbal Punishment	1.04 (0.53, 2.05)	0.58 (0.31, 1.11)	0.38 (0.13, 1.12)	3.39 (1.59, 7.23)	0.21 (0.03, 1.54)
Socioeconomic Status	0.99 (0.98, 1.01)	0.99 (0.98, 1.01)	0.99 (0.97, 1.01)	0.99 (0.97, 1.02)	1.00 (0.95, 1.05)
Child Oppositional Aggressive Score	2.55 (0.77, 8.5)	2.85 (0.69, 11.7)	10.4 (1.56, 69.0)	1.32 (0.21, 8.49)	7.22 (0.14, 385)
Parental Harsh Discipline, Warmth, & Appropriate Discipline Score	2.38 (1.31, 4.31)	2.94 (1.25, 6.91)	2.36 (0.95, 5.90)	1.18 (0.40, 3.50)	2.58 (0.45, 14.8)
Child Social Competence - Parent Report	1.00 (0.71, 1.39)	1.05 (0.71, 1.54)	0.86 (0.53, 1.41)	0.81 (0.49, 1.35)	0.97 (0.42, 2.23)
Child Woodcock-Johnson Word Identification Score	1.03 (0.98, 1.09)	1.03 (0.97, 1.09)	1.03 (0.96, 1.11)	0.99 (0.93, 1.06)	0.97 (0.85, 1.10)
Child Emotional Recognition	0.99 (0.92, 1.07)	1.06 (0.96, 1.17)	0.96 (0.85, 1.08)	0.99 (0.88, 1.10)	1.00 (0.81, 1.24)
Parental Warmth	1.18 (0.92, 1.51)	1.23 (0.95, 1.59)	1.30 (0.90, 1.88)	1.32 (0.91, 1.92)	1.50 (0.75, 2.98)
Child Competent Social Problem Solving Score	0.46 (0.21, 1.01)	0.41 (0.18, 0.94)	1.19 (0.34, 4.08)	0.52 (0.14, 1.83)	0.37 (0.06, 2.29)
Parental Neighborhood Satisfaction Score	1.12 (0.80, 1.57)	1.11 (0.75, 1.64)	0.89 (0.54, 1.45)	1.19 (0.75, 1.90)	0.92 (0.46, 1.81)
Child Wechsler Intelligence Scale Average Vocab & Block Design	0.93 (0.70, 1.24)	0.86 (0.64, 1.14)	0.79 (0.50, 1.26)	0.89 (0.59, 1.34)	0.86 (0.41, 1.77)

Table S2: Complete Results for FIML Logistic Regressions Estimating Moderation of Intervention Effect by Sex (N=891)

	Any Behavior of Despair	Suicidal Ideation	Suicide Attempt/Self-Harm	Weekly Hazardous Drinking	Weekly Opioid Use
	Age 15-20, 25	Age 15-20, 25	Age 15-20, 25	Age 15-20, 25	Age 19, 20, 25
	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
Intervention	0.77 (0.44, 1.37)	0.85 (0.45, 1.60)	1.61 (0.75, 3.48)	0.57 (0.18, 1.78)	0.36 (0.04, 3.62)
Intervention*Male	0.66 (0.33, 1.31)	0.49 (0.22, 1.11)	0.22 (0.08, 0.63)	0.96 (0.27, 3.45)	1.1 (0.08, 15.27)
Male	1.13 (0.69, 1.86)	0.83 (0.50, 1.37)	1.00 (0.50, 1.97)	2.93 (1.19, 7.19)	1.55 (0.39, 6.21)
Cohort 1	1.32 (0.87, 2.00)	1.48 (0.87, 2.54)	2.07 (0.98, 4.35)	1.33 (0.71, 2.48)	1.35 (0.33, 5.55)
Cohort 2	1.25 (0.82, 1.90)	1.69 (1.01, 2.84)	3.19 (1.62, 6.29)	0.58 (0.29, 1.16)	2.43 (0.73, 8.13)
Durham, NC	0.46 (0.24, 0.90)	0.43 (0.19, 0.95)	0.25 (0.08, 0.75)	0.49 (0.16, 1.53)	0.40 (0.03, 5.50)
Nashville, TN	0.77 (0.41, 1.45)	1.24 (0.66, 2.35)	0.88 (0.40, 1.95)	0.38 (0.14, 1.04)	0.97 (0.22, 4.31)
Seattle, WA	0.86 (0.52, 1.42)	1.02 (0.57, 1.81)	0.56 (0.25, 1.26)	0.79 (0.39, 1.63)	0.32 (0.07, 1.56)
Black	0.72 (0.43, 1.18)	0.88 (0.51, 1.54)	1.08 (0.46, 2.55)	0.56 (0.23, 1.37)	0.57 (0.07, 4.41)
Initial Screen Score	1.03 (1.01, 1.05)	1.02 (1.01, 1.04)	1.03 (1.01, 1.05)	1.02 (1.00, 1.04)	1.03 (0.99, 1.08)
Pre-Intervention Covariates					
Parental Depression	1.02 (1.00, 1.04)	1.02 (1.00, 1.04)	0.99 (0.97, 1.02)	1.02 (0.99, 1.04)	1.01 (0.97, 1.06)
Child Hostile Attribution	1.4 (0.61, 3.24)	1.45 (0.59, 3.57)	1.71 (0.50, 5.88)	0.96 (0.33, 2.78)	6.67 (0.94, 47.3)
Child Aggressive Behavior	1.00 (0.97, 1.03)	1.01 (0.98, 1.04)	1.02 (0.98, 1.06)	1.00 (0.96, 1.04)	0.97 (0.91, 1.03)
Child Emotional Appropriateness Score	0.94 (0.76, 1.17)	0.95 (0.74, 1.22)	0.76 (0.56, 1.02)	0.83 (0.63, 1.11)	1.58 (0.70, 3.54)
Parental Family Satisfaction	1.19 (0.90, 1.57)	0.96 (0.71, 1.31)	0.81 (0.56, 1.17)	1.95 (1.21, 3.15)	1.95 (0.85, 4.45)
Parental Friendship Satisfaction	0.96 (0.67, 1.40)	0.89 (0.61, 1.3)	1.13 (0.68, 1.87)	0.92 (0.56, 1.49)	0.77 (0.43, 1.37)
Parent-Report of Physical Punishment	0.86 (0.42, 1.79)	0.7 (0.27, 1.81)	0.87 (0.26, 2.85)	1.28 (0.40, 4.10)	5.37 (0.96, 30.0)
Parent-Report of Kindergarten Stress	1.01 (0.97, 1.06)	1.00 (0.95, 1.06)	0.99 (0.92, 1.06)	1.01 (0.95, 1.08)	1.08 (0.99, 1.19)
Parent-Report of Verbal Punishment	1.04 (0.53, 2.06)	0.59 (0.31, 1.13)	0.40 (0.14, 1.14)	3.39 (1.59, 7.21)	0.21 (0.03, 1.55)
Socioeconomic Status	0.99 (0.98, 1.01)	0.99 (0.98, 1.01)	0.99 (0.97, 1.02)	0.99 (0.97, 1.02)	1.00 (0.95, 1.05)
Child Oppositional Aggressive Score	2.67 (0.80, 8.91)	3.06 (0.74, 12.6)	12.4 (1.81, 84.5)	1.33 (0.20, 8.68)	7.18 (0.13, 389.5)
Parental Harsh Discipline, Warmth, & Appropriate Discipline Score	2.35 (1.29, 4.27)	2.92 (1.23, 6.93)	2.45 (0.96, 6.27)	1.18 (0.39, 3.55)	2.58 (0.45, 15.0)
Child Social Competence - Parent Report	1.01 (0.73, 1.41)	1.08 (0.74, 1.59)	0.90 (0.54, 1.48)	0.82 (0.49, 1.36)	0.97 (0.43, 2.18)
Child Woodcock-Johnson Word Identification Score	1.03 (0.98, 1.09)	1.03 (0.97, 1.09)	1.03 (0.96, 1.11)	0.99 (0.93, 1.06)	0.97 (0.85, 1.10)
Child Emotional Recognition	0.99 (0.91, 1.07)	1.05 (0.95, 1.16)	0.94 (0.83, 1.07)	0.99 (0.88, 1.10)	1.00 (0.81, 1.24)
Parental Warmth	1.19 (0.93, 1.52)	1.25 (0.97, 1.62)	1.37 (0.93, 2.01)	1.32 (0.90, 1.93)	1.50 (0.75, 2.98)
Child Competent Social Problem Solving Score	0.44 (0.20, 0.98)	0.39 (0.18, 0.89)	1.10 (0.31, 3.85)	0.51 (0.14, 1.85)	0.38 (0.06, 2.33)
Parental Neighborhood Satisfaction Score	1.13 (0.81, 1.58)	1.12 (0.76, 1.65)	0.90 (0.55, 1.47)	1.19 (0.75, 1.90)	0.91 (0.46, 1.82)
Child Wechsler Intelligence Scale Average Vocab & Block Design	0.93 (0.70, 1.24)	0.86 (0.64, 1.14)	0.80 (0.50, 1.27)	0.89 (0.59, 1.34)	0.85 (0.41, 1.79)

Table S3: Complete Results for FIML Logistic Regressions Estimating Moderation of Intervention Effect by Race (N=891)

	Any Behavior of Despair	Suicidal Ideation	Suicide Attempt/Self-Harm	Weekly Hazardous Drinking	Weekly Opioid Use
	Age 15-20, 25	Age 15-20, 25	Age 15-20, 25	Age 15-20, 25	Age 19, 20, 25
	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
Intervention	0.40 (0.65, 1.06)	0.35 (0.61, 1.08)	0.42 (0.83, 1.62)	0.31 (0.59, 1.11)	0.07 (0.25, 0.95)
Intervention*Black	0.39 (0.78, 1.57)	0.33 (0.78, 1.82)	0.23 (0.66, 1.89)	0.28 (0.79, 2.28)	0.34 (3.21, 30.5)
Male	0.65 (0.95, 1.37)	0.40 (0.61, 0.92)	0.29 (0.52, 0.92)	1.50 (2.89, 5.55)	0.42 (1.55, 5.78)
Cohort 1	0.85 (1.30, 1.97)	0.85 (1.45, 2.47)	0.96 (1.95, 3.96)	0.71 (1.32, 2.46)	0.31 (1.32, 5.67)
Cohort 2	0.81 (1.23, 1.86)	0.98 (1.64, 2.74)	1.53 (2.97, 5.75)	0.29 (0.58, 1.16)	0.70 (2.49, 8.85)
Durham, NC	0.24 (0.47, 0.91)	0.20 (0.44, 0.98)	0.09 (0.27, 0.81)	0.16 (0.49, 1.51)	0.03 (0.39, 5.70)
Nashville, TN	0.41 (0.78, 1.47)	0.65 (1.24, 2.37)	0.41 (0.88, 1.92)	0.14 (0.38, 1.05)	0.20 (0.90, 4.04)
Seattle, WA	0.54 (0.89, 1.46)	0.60 (1.06, 1.89)	0.28 (0.62, 1.36)	0.39 (0.8, 1.63)	0.07 (0.31, 1.43)
Black	0.45 (0.79, 1.38)	0.50 (0.95, 1.82)	0.42 (1.18, 3.35)	0.23 (0.62, 1.68)	0.04 (0.38, 3.71)
Initial Screen Score	1.01 (1.03, 1.05)	1.01 (1.02, 1.04)	1.01 (1.03, 1.05)	1.00 (1.02, 1.04)	0.99 (1.03, 1.07)
Pre-Intervention Covariates					
Parental Depression	1.00 (1.02, 1.04)	1.00 (1.02, 1.04)	0.97 (0.99, 1.02)	0.99 (1.02, 1.04)	0.97 (1.01, 1.06)
Child Hostile Attribution	0.61 (1.41, 3.26)	0.58 (1.45, 3.6)	0.48 (1.68, 5.88)	0.33 (0.96, 2.76)	0.9 (6.41, 45.84)
Child Aggressive Behavior	0.97 (1.00, 1.03)	0.98 (1.01, 1.04)	0.99 (1.02, 1.06)	0.97 (1.00, 1.04)	0.91 (0.97, 1.03)
Child Emotional Appropriateness Score	0.76 (0.94, 1.16)	0.75 (0.96, 1.23)	0.56 (0.76, 1.04)	0.63 (0.83, 1.1)	0.71 (1.62, 3.65)
Parental Family Satisfaction	0.90 (1.18, 1.56)	0.70 (0.96, 1.31)	0.55 (0.81, 1.18)	1.21 (1.95, 3.13)	0.83 (1.93, 4.51)
Parental Friendship Satisfaction	0.66 (0.96, 1.39)	0.60 (0.88, 1.29)	0.66 (1.1, 1.81)	0.56 (0.91, 1.48)	0.43 (0.79, 1.44)
Parent-Report of Physical Punishment	0.42 (0.88, 1.82)	0.27 (0.71, 1.86)	0.28 (0.9, 2.89)	0.40 (1.29, 4.11)	0.91 (5.32, 31.2)
Parent-Report of Kindergarten Stress	0.97 (1.01, 1.06)	0.95 (1.00, 1.06)	0.93 (0.99, 1.06)	0.95 (1.01, 1.08)	0.99 (1.09, 1.20)
Parent-Report of Verbal Punishment	0.53 (1.04, 2.05)	0.31 (0.58, 1.11)	0.13 (0.38, 1.11)	1.59 (3.39, 7.21)	0.03 (0.21, 1.61)
Socioeconomic Status	0.98 (0.99, 1.01)	0.98 (0.99, 1.01)	0.97 (0.99, 1.01)	0.97 (0.99, 1.02)	0.95 (1.00, 1.05)
Child Oppositional Aggressive Score	0.76 (2.52, 8.33)	0.68 (2.80, 11.5)	1.54 (10.1, 65.9)	0.21 (1.32, 8.41)	0.12 (7.01, 406)
Parental Harsh Discipline, Warmth, & Appropriate Discipline Score	1.31 (2.37, 4.30)	1.24 (2.93, 6.92)	0.94 (2.36, 5.94)	0.40 (1.18, 3.52)	0.41 (2.42, 14.2)
Child Social Competence - Parent Report	0.71 (1.00, 1.39)	0.71 (1.05, 1.54)	0.52 (0.86, 1.41)	0.49 (0.82, 1.35)	0.43 (0.97, 2.2)
Child Woodcock-Johnson Word Identification Score	0.98 (1.03, 1.09)	0.97 (1.03, 1.09)	0.96 (1.03, 1.11)	0.93 (0.99, 1.06)	0.85 (0.96, 1.09)
Child Emotional Recognition	0.92 (0.99, 1.07)	0.96 (1.06, 1.17)	0.85 (0.95, 1.08)	0.88 (0.99, 1.10)	0.81 (1.00, 1.25)
Parental Warmth	0.92 (1.18, 1.50)	0.95 (1.23, 1.58)	0.90 (1.30, 1.90)	0.91 (1.31, 1.91)	0.75 (1.47, 2.88)
Child Competent Social Problem Solving Score	0.21 (0.45, 1.00)	0.18 (0.41, 0.93)	0.34 (1.16, 3.92)	0.14 (0.51, 1.8)	0.06 (0.37, 2.43)
Parental Neighborhood Satisfaction Score	0.8 (1.13, 1.58)	0.76 (1.11, 1.64)	0.55 (0.9, 1.47)	0.75 (1.19, 1.9)	0.45 (0.90, 1.82)
Child Wechsler Intelligence Scale Average Vocab & Block Design	0.70 (0.93, 1.24)	0.64 (0.86, 1.14)	0.50 (0.79, 1.25)	0.59 (0.89, 1.33)	0.41 (0.89, 1.91)

Table S4: Complete FIML Results Estimating Mediation of Intervention Effect by Elementary and Middle School Skills (N=891)

	Any Behavior of Despair	Suicidal Ideation	Suicide Attempt/Self-Harm	Weekly Hazardous Drinking	Weekly Opioid Use
	Age 15-20, 25	Age 15-20, 25	Age 15-20, 25	Age 15-20, 25	Age 19, 20, 25
Outcome on:	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
Intervention	0.67 (0.44, 0.98)	0.65 (0.38, 1.00)	0.79 (0.39, 1.45)	0.57 (0.25, 1.00)	0.50 (0.14, 1.24)
Interpersonal Skills Gr1-Gr8	0.66 (0.52, 0.81)	0.62 (0.47, 0.77)	0.72 (0.50, 1.02)	0.74 (0.50, 1.08)	0.67 (0.41, 1.09)
Intrapersonal Skills Gr1-Gr5	1.10 (0.88, 1.40)	1.07 (0.83, 1.40)	1.05 (0.71, 1.54)	1.41 (1.01, 2.18)	0.80 (0.56, 1.15)
Academic Skills Gr1-Gr3	1.06 (0.85, 1.36)	1.00 (0.75, 1.40)	0.96 (0.65, 1.59)	1.14 (0.83, 1.66)	1.07 (0.67, 2.23)
Male	0.81 (0.52, 1.19)	0.5 (0.29, 0.73)	0.44 (0.19, 0.77)	2.73 (1.48, 6.84)	1.27 (0.42, 6.99)
Cohort 1	1.27 (0.81, 2.17)	1.35 (0.72, 2.58)	1.90 (0.84, 5.05)	1.37 (0.72, 3.38)	1.34 (0.31, 11.16)
Cohort 2	1.25 (0.79, 1.99)	1.66 (0.92, 3.02)	3.02 (1.52, 8.36)	0.59 (0.22, 1.24)	2.15 (0.68, 16.0)
Durham, NC	0.53 (0.24, 1.07)	0.48 (0.18, 1.12)	0.30 (0.06, 0.83)	0.58 (0.14, 2.07)	0.48 (0.00, 5.24)
Nashville, TN	0.78 (0.37, 1.55)	1.25 (0.58, 2.62)	0.89 (0.28, 2.05)	0.37 (0.08, 1.08)	1.14 (0.17, 4.91)
Seattle, WA	0.80 (0.45, 1.38)	0.95 (0.49, 1.84)	0.57 (0.19, 1.31)	0.73 (0.28, 1.57)	0.33 (0.00, 1.04)
Black	0.63 (0.36, 1.10)	0.76 (0.41, 1.51)	0.94 (0.39, 2.89)	0.51 (0.16, 1.29)	0.55 (0.05, 3.25)
Initial Screen Score	1.03 (1.01, 1.05)	1.02 (1.00, 1.04)	1.02 (1.00, 1.05)	1.02 (0.99, 1.05)	1.03 (0.98, 1.07)
Pre-Intervention Covariates					
Parental Depression	1.02 (1.00, 1.04)	1.02 (1.00, 1.04)	0.99 (0.95, 1.02)	1.02 (0.99, 1.06)	
Child Hostile Attribution	1.25 (0.52, 3.20)	1.27 (0.47, 3.51)	1.49 (0.40, 7.22)	0.86 (0.26, 3.51)	
Child Aggressive Behavior	1.00 (0.97, 1.03)	1.01 (0.97, 1.04)	1.02 (0.98, 1.07)	1.00 (0.96, 1.05)	
Child Emotional Appropriateness Score	0.96 (0.75, 1.24)	0.99 (0.74, 1.34)	0.77 (0.52, 1.10)	0.84 (0.59, 1.19)	
Parental Family Satisfaction	1.20 (0.89, 1.67)	0.96 (0.67, 1.39)	0.81 (0.51, 1.29)	2.04 (1.31, 4.05)	
Parental Friendship Satisfaction	0.97 (0.64, 1.48)	0.89 (0.57, 1.37)	1.10 (0.64, 2.06)	0.95 (0.55, 1.65)	
Parent-Report of Physical Punishment	0.73 (0.30, 1.61)	0.56 (0.17, 1.62)	0.80 (0.17, 3.41)	1.29 (0.28, 5.09)	
Parent-Report of Kindergarten Stress	1.01 (0.96, 1.07)	1.00 (0.94, 1.07)	0.99 (0.91, 1.06)	1.01 (0.93, 1.09)	
Parent-Report of Verbal Punishment	1.08 (0.51, 2.36)	0.59 (0.27, 1.23)	0.38 (0.08, 1.07)	3.43 (1.55, 10.0)	
Socioeconomic Status	0.99 (0.98, 1.01)	0.99 (0.98, 1.01)	0.99 (0.97, 1.02)	1.00 (0.97, 1.02)	
Child Oppositional Aggressive Score	1.53 (0.42, 6.33)	1.57 (0.33, 8.33)	7.12 (1.02, 86.4)	0.80 (0.10, 6.13)	
Parental Harsh Discipline, Warmth, & Appropriate Discipline Score	2.29 (1.29, 4.91)	2.90 (1.22, 8.80)	2.37 (0.93, 8.65)	1.22 (0.40, 4.87)	
Child Social Competence - Parent Report	1.10 (0.74, 1.64)	1.18 (0.75, 1.89)	0.94 (0.5, 1.69)	0.84 (0.42, 1.52)	
Child Woodcock-Johnson Word Identification Score	1.03 (0.98, 1.10)	1.03 (0.97, 1.11)	1.04 (0.95, 1.13)	0.98 (0.90, 1.05)	
Child Emotional Recognition	0.98 (0.90, 1.08)	1.06 (0.95, 1.19)	0.96 (0.82, 1.11)	0.96 (0.83, 1.08)	
Parental Warmth	1.21 (0.92, 1.63)	1.28 (0.96, 1.78)	1.36 (0.88, 2.18)	1.32 (0.91, 2.16)	

Child Competent Social Problem Solving Score	0.42 (0.16, 1.02)	0.39 (0.14, 0.93)	1.18 (0.30, 5.65)	0.37 (0.07, 1.85)	
Parental Neighborhood Satisfaction Score	1.14 (0.81, 1.65)	1.14 (0.74, 1.75)	0.92 (0.51, 1.54)	1.19 (0.72, 2.14)	
Child Wechsler Intelligence Scale Average Vocab & Block Design	0.93 (0.68, 1.29)	0.88 (0.63, 1.20)	0.83 (0.45, 1.42)	0.86 (0.49, 1.39)	
Indirect Intervention Effect through:					
Interpersonal Skills Gr1-Gr8	0.84 (0.74, 0.92)	0.82 (0.71, 0.91)	0.87 (0.74, 1.01)	0.88 (0.75, 1.03)	0.82 (0.63, 1.04)
Intrapersonal Skills Gr1-Gr5	1.03 (0.95, 1.13)	1.02 (0.93, 1.12)	1.02 (0.89, 1.16)	1.12 (1.00, 1.33)	0.92 (0.79, 1.05)
Academic Skills Gr1-Gr3	1.01 (0.97, 1.04)	1.00 (0.95, 1.04)	1.00 (0.93, 1.06)	1.02 (0.97, 1.08)	1.01 (0.92, 1.18)
Interpersonal Skills Gr1-Gr8 on					
Intervention	0.42 (0.28, 0.55)	0.42 (0.28, 0.55)	0.42 (0.28, 0.55)	0.42 (0.28, 0.55)	0.48 (0.34, 0.62)
Male	-0.37 (-0.50, -0.22)	-0.37 (-0.50, -0.22)	-0.37 (-0.5, -0.22)	-0.37 (-0.51, -0.22)	-0.32 (-0.46, -0.18)
Cohort 1	-0.18 (-0.35, 0.01)	-0.18 (-0.35, 0.01)	-0.18 (-0.35, 0.01)	-0.18 (-0.35, 0.01)	-0.17 (-0.36, 0.04)
Cohort 2	-0.03 (-0.20, 0.16)	-0.03 (-0.20, 0.16)	-0.03 (-0.20, 0.16)	-0.03 (-0.02, 0.16)	0.02 (-0.17, 0.23)
Durham, NC	0.31 (0.07, 0.53)	0.31 (0.07, 0.54)	0.31 (0.07, 0.54)	0.31 (0.07, 0.54)	0.33 (0.07, 0.59)
Nashville, TN	0.14 (-0.09, 0.38)	0.14 (-0.09, 0.38)	0.14 (-0.09, 0.38)	0.13 (-0.09, 0.38)	-0.01 (-0.25, 0.25)
Seattle, WA	-0.19 (-0.37, -0.02)	-0.19 (-0.37, -0.02)	-0.19 (-0.37, -0.02)	-0.19 (-0.37, -0.02)	-0.10 (-0.29, 0.09)
Black	-0.33 (-0.51, -0.15)	-0.33 (-0.51, -0.15)	-0.33 (-0.51, -0.15)	-0.33 (-0.51, -0.15)	-0.38 (-0.55, -0.22)
Initial Screen Score	-0.01 (-0.02, 0.00)	-0.01 (-0.02, 0.00)	-0.01 (-0.02, 0.00)	-0.01 (-0.02, 0.00)	-0.02 (-0.03, -0.01)
Pre-Intervention Covariates					
Parental Depression	0.00 (-0.01, 0.00)	0.00 (-0.01, 0.00)	0.00 (-0.01, 0.00)	0.00 (-0.01, 0.00)	
Child Hostile Attribution	-0.26 (-0.50, 0.00)	-0.26 (-0.50, 0.00)	-0.26 (-0.49, 0.00)	-0.26 (-0.5, 0.00)	
Child Aggressive Behavior	-0.01 (-0.01, 0.00)	-0.01 (-0.01, 0.00)	-0.01 (-0.01, 0.00)	-0.01 (-0.01, 0.00)	
Child Emotional Appropriateness Score	0.05 (-0.04, 0.15)	0.05 (-0.04, 0.15)	0.05 (-0.04, 0.15)	0.05 (-0.04, 0.15)	
Parental Family Satisfaction	-0.01 (-0.11, 0.09)	-0.01 (-0.11, 0.09)	-0.01 (-0.11, 0.09)	-0.01 (-0.11, 0.09)	
Parental Friendship Satisfaction	0.02 (-0.09, 0.13)	0.02 (-0.09, 0.13)	0.02 (-0.09, 0.13)	0.02 (-0.09, 0.12)	
Parent-Report of Physical Punishment	-0.31 (-0.59, -0.04)	-0.31 (-0.59, -0.04)	-0.31 (-0.6, -0.04)	-0.31 (-0.59, -0.04)	
Parent-Report of Kindergarten Stress	0.00 (-0.02, 0.01)	0.00 (-0.02, 0.01)	0.00 (-0.02, 0.01)	0.00 (-0.02, 0.01)	
Parent-Report of Verbal Punishment	0.04 (-0.16, 0.25)	0.04 (-0.16, 0.25)	0.04 (-0.16, 0.25)	0.04 (-0.16, 0.25)	
Socioeconomic Status	0.01 (0.00, 0.01)	0.01 (0.00, 0.01)	0.01 (0.00, 0.01)	0.01 (0.00, 0.01)	
Child Oppositional Aggressive Score	-1.06 (-1.47, -0.64)	-1.06 (-1.47, -0.63)	-1.06 (-1.47, -0.63)	-1.06 (-1.47, -0.63)	
Parental Harsh Discipline, Warmth, & Appropriate Discipline Score	-0.09 (-0.33, 0.15)	-0.10 (-0.33, 0.15)	-0.09 (-0.33, 0.15)	-0.09 (-0.33, 0.15)	
Child Social Competence - Parent Report	0.24 (0.11, 0.35)	0.24 (0.11, 0.35)	0.24 (0.11, 0.35)	0.24 (0.11, 0.36)	
Child Woodcock-Johnson Word Identification Score	0.01 (0.00, 0.03)	0.01 (0.00, 0.03)	0.01 (0.00, 0.03)	0.01 (0.00, 0.03)	
Child Emotional Recognition	0.00 (-0.03, 0.03)	0.00 (-0.03, 0.03)	0.00 (-0.03, 0.03)	0.00 (-0.03, 0.03)	
Parental Warmth	0.02 (-0.07, 0.11)	0.02 (-0.07, 0.11)	0.02 (-0.07, 0.11)	0.02 (-0.07, 0.11)	

Child Competent Social Problem Solving Score	0.13 (-0.18, 0.44)	0.13 (-0.18, 0.44)	0.13 (-0.17, 0.44)	0.13 (-0.17, 0.45)
Parental Neighborhood Satisfaction Score	0.07 (-0.04, 0.17)	0.07 (-0.04, 0.17)	0.07 (-0.04, 0.17)	0.07 (-0.04, 0.17)
Child Wechsler Intelligence Scale Average Vocab & Block Design	0.09 (-0.01, 0.18)	0.09 (-0.01, 0.18)	0.09 (-0.01, 0.18)	0.09 (-0.01, 0.18)
Intrapersonal Skills Gr1-Gr5 on	b (95% CI)	b (95% CI)	b (95% CI)	b (95% CI)
Intervention	0.33 (0.21, 0.46)	0.33 (0.21, 0.46)	0.33 (0.21, 0.46)	0.33 (0.21, 0.46)
Male	-0.21 (-0.33, -0.10)	-0.21 (-0.33, -0.10)	-0.21 (-0.33, -0.10)	-0.21 (-0.33, -0.10)
Cohort 1	-0.13 (-0.29, 0.03)	-0.13 (-0.29, 0.02)	-0.13 (-0.29, 0.03)	-0.13 (-0.29, 0.03)
Cohort 2	-0.06 (-0.20, 0.09)	-0.06 (-0.20, 0.09)	-0.06 (-0.20, 0.09)	-0.06 (-0.20, 0.09)
Durham, NC	-0.16 (-0.38, 0.05)	-0.16 (-0.38, 0.05)	-0.16 (-0.38, 0.05)	-0.16 (-0.38, 0.05)
Nashville, TN	-0.19 (-0.40, 0.00)	-0.19 (-0.40, 0.00)	-0.19 (-0.40, 0.00)	-0.20 (-0.40, 0.00)
Seattle, WA	0.24 (0.07, 0.43)	0.24 (0.07, 0.43)	0.24 (0.07, 0.43)	0.24 (0.07, 0.43)
Black	-0.10 (-0.24, 0.04)	-0.10 (-0.24, 0.04)	-0.1 (-0.25, 0.04)	-0.10 (-0.24, 0.04)
Initial Screen Score	0.00 (-0.01, 0.00)	0.00 (-0.01, 0.00)	0.00 (-0.01, 0.00)	0.00 (-0.01, 0.00)
Pre-Intervention Covariates				
Parental Depression	0.00 (-0.01, 0.01)	0.00 (-0.01, 0.01)	0.00 (-0.01, 0.01)	0.00 (-0.01, 0.01)
Child Hostile Attribution	0.07 (-0.16, 0.33)	0.07 (-0.16, 0.33)	0.07 (-0.16, 0.33)	0.07 (-0.16, 0.33)
Child Aggressive Behavior	-0.02 (-0.02, -0.01)	-0.02 (-0.02, -0.01)	-0.02 (-0.02, -0.01)	-0.02 (-0.02, -0.01)
Child Emotional Appropriateness Score	0.07 (-0.02, 0.15)	0.07 (-0.02, 0.15)	0.07 (-0.02, 0.15)	0.07 (-0.02, 0.15)
Parental Family Satisfaction	0.01 (-0.08, 0.10)	0.01 (-0.08, 0.10)	0.01 (-0.08, 0.10)	0.01 (-0.08, 0.10)
Parental Friendship Satisfaction	0.00 (-0.12, 0.12)	0.00 (-0.12, 0.12)	0.00 (-0.12, 0.12)	0.00 (-0.12, 0.12)
Parent-Report of Physical Punishment	-0.11 (-0.39, 0.17)	-0.11 (-0.39, 0.17)	-0.11 (-0.39, 0.17)	-0.11 (-0.39, 0.17)
Parent-Report of Kindergarten Stress	0.00 (-0.02, 0.02)	0.00 (-0.02, 0.02)	0.00 (-0.02, 0.02)	0.00 (-0.02, 0.02)
Parent-Report of Verbal Punishment	-0.13 (-0.39, 0.12)	-0.13 (-0.39, 0.12)	-0.13 (-0.39, 0.12)	-0.13 (-0.39, 0.12)
Socioeconomic Status	0.00 (-0.01, 0.00)	0.00 (-0.01, 0.00)	0.00 (-0.01, 0.00)	0.00 (-0.01, 0.00)
Child Oppositional Aggressive Score	0.29 (-0.15, 0.70)	0.29 (-0.15, 0.7)	0.29 (-0.15, 0.70)	0.29 (-0.15, 0.70)
Parental Harsh Discipline, Warmth, & Appropriate Discipline Score	-0.02 (-0.26, 0.24)	-0.02 (-0.26, 0.24)	-0.02 (-0.26, 0.24)	-0.02 (-0.26, 0.24)
Child Social Competence - Parent Report	0.05 (-0.06, 0.15)	0.05 (-0.06, 0.15)	0.05 (-0.06, 0.15)	0.05 (-0.06, 0.15)
Child Woodcock-Johnson Word Identification Score	0.01 (0.00, 0.03)	0.01 (0.00, 0.03)	0.01 (0.00, 0.03)	0.01 (0.00, 0.03)
Child Emotional Recognition	0.06 (0.04, 0.09)	0.06 (0.04, 0.09)	0.06 (0.04, 0.09)	0.06 (0.04, 0.09)
Parental Warmth	0.01 (-0.07, 0.09)	0.01 (-0.07, 0.09)	0.01 (-0.07, 0.09)	0.01 (-0.07, 0.09)
Child Competent Social Problem Solving Score	0.86 (0.58, 1.16)	0.87 (0.58, 1.16)	0.86 (0.58, 1.15)	0.86 (0.58, 1.15)
Parental Neighborhood Satisfaction Score	-0.01 (-0.12, 0.10)	-0.01 (-0.12, 0.10)	-0.01 (-0.12, 0.10)	-0.01 (-0.12, 0.10)
Child Wechsler Intelligence Scale Average Vocab & Block Design	0.15 (0.06, 0.24)	0.15 (0.06, 0.24)	0.15 (0.06, 0.24)	0.15 (0.06, 0.24)

Intervention	0.12 (-0.02, 0.25)	0.12 (-0.02, 0.25)	0.12 (-0.02, 0.25)	0.12 (-0.02, 0.25)	0.19 (0.05, 0.34)
Male	-0.14 (-0.27, -0.02)	-0.14 (-0.27, -0.02)	-0.14 (-0.27, -0.01)	-0.14 (-0.27, -0.02)	-0.13 (-0.28, 0.02)
Cohort 1	0.05 (-0.11, 0.23)	0.05 (-0.11, 0.23)	0.05 (-0.11, 0.23)	0.05 (-0.12, 0.23)	0.02 (-0.16, 0.21)
Cohort 2	-0.06 (-0.24, 0.11)	-0.06 (-0.24, 0.11)	-0.06 (-0.24, 0.11)	-0.06 (-0.24, 0.11)	0.03 (-0.15, 0.22)
Durham, NC	0.04 (-0.24, 0.32)	0.04 (-0.24, 0.32)	0.04 (-0.24, 0.32)	0.04 (-0.24, 0.32)	-0.08 (-0.36, 0.21)
Nashville, TN	0.08 (-0.15, 0.34)	0.08 (-0.15, 0.34)	0.08 (-0.15, 0.34)	0.08 (-0.16, 0.34)	-0.11 (-0.36, 0.15)
Seattle, WA	0.02 (-0.20, 0.23)	0.02 (-0.20, 0.24)	0.02 (-0.2, 0.24)	0.02 (-0.20, 0.23)	0.12 (-0.1, 0.34)
Black	-0.03 (-0.24, 0.17)	-0.03 (-0.24, 0.17)	-0.03 (-0.24, 0.17)	-0.03 (-0.24, 0.17)	-0.17 (-0.38, 0.03)
Initial Screen Score	0.00 (-0.01, 0.00)	0.00 (-0.01, 0.00)	0.00 (-0.01, 0.00)	0.00 (-0.01, 0.00)	-0.01 (-0.02, 0.00)
Pre-Intervention Covariates					
Parental Depression	0.00 (-0.01, 0.01)	0.00 (-0.01, 0.01)	0.00 (-0.01, 0.01)	0.00 (-0.01, 0.01)	
Child Hostile Attribution	0.21 (-0.07, 0.50)	0.21 (-0.06, 0.5)	0.21 (-0.06, 0.5)	0.21 (-0.06, 0.5)	
Child Aggressive Behavior	0.00 (-0.01, 0.01)	0.00 (-0.01, 0.01)	0.00 (-0.01, 0.01)	0.00 (-0.01, 0.01)	
Child Emotional Appropriateness Score	0.08 (0.00, 0.18)	0.08 (0.00, 0.18)	0.08 (0.00, 0.18)	0.08 (0.00, 0.18)	
Parental Family Satisfaction	0.01 (-0.09, 0.11)	0.01 (-0.09, 0.11)	0.01 (-0.09, 0.11)	0.01 (-0.09, 0.11)	
Parental Friendship Satisfaction	0.01 (-0.11, 0.12)	0.01 (-0.11, 0.12)	0.01 (-0.11, 0.12)	0.01 (-0.11, 0.12)	
Parent-Report of Physical Punishment	0.05 (-0.22, 0.32)	0.05 (-0.22, 0.32)	0.05 (-0.22, 0.32)	0.05 (-0.22, 0.32)	
Parent-Report of Kindergarten Stress	-0.02 (-0.04, 0.00)	-0.02 (-0.04, 0.00)	-0.02 (-0.04, 0.00)	-0.02 (-0.04, 0.00)	
Parent-Report of Verbal Punishment	0.12 (-0.07, 0.30)	0.12 (-0.07, 0.30)	0.12 (-0.07, 0.30)	0.12 (-0.07, 0.30)	
Socioeconomic Status	0.00 (0.00, 0.01)	0.00 (0.00, 0.01)	0.00 (0.00, 0.01)	0.00 (0.00, 0.01)	
Child Oppositional Aggressive Score	0.10 (-0.27, 0.48)	0.10 (-0.27, 0.48)	0.10 (-0.27, 0.48)	0.10 (-0.27, 0.47)	
Parental Harsh Discipline, Warmth, & Appropriate Discipline Score	0.04 (-0.20, 0.28)	0.04 (-0.20, 0.29)	0.04 (-0.20, 0.28)	0.04 (-0.20, 0.28)	
Child Social Competence - Parent Report	0.03 (-0.09, 0.15)	0.03 (-0.09, 0.15)	0.03 (-0.09, 0.15)	0.03 (-0.09, 0.15)	
Child Woodcock-Johnson Word Identification Score	0.05 (0.04, 0.07)	0.05 (0.04, 0.07)	0.05 (0.04, 0.07)	0.05 (0.04, 0.07)	
Child Emotional Recognition	0.06 (0.03, 0.09)	0.06 (0.03, 0.09)	0.06 (0.03, 0.09)	0.06 (0.03, 0.09)	
Parental Warmth	-0.01 (-0.1, 0.08)	-0.01 (-0.10, 0.08)	-0.01 (-0.10, 0.08)	-0.01 (-0.10, 0.08)	
Child Competent Social Problem Solving Score	-0.02 (-0.32, 0.30)	-0.02 (-0.32, 0.30)	-0.02 (-0.32, 0.30)	-0.02 (-0.32, 0.30)	
Parental Neighborhood Satisfaction Score	-0.05 (-0.15, 0.05)	-0.05 (-0.15, 0.05)	-0.05 (-0.15, 0.05)	-0.05 (-0.15, 0.05)	
Child Wechsler Intelligence Scale Average Vocab & Block Design	0.20 (0.11, 0.29)	0.20 (0.11, 0.29)	0.20 (0.11, 0.29)	0.20 (0.11, 0.29)	

Table S5: FIML Results for Weekly Opioid Use excluding Pre-intervention Covariates except Initial Screen Score (N=891)

	Main Effects model OR (95% CI)	Moderation by Gender OR (95% CI)	Moderation by Race OR (95% CI)	Mediation OR (95% CI)
Intervention	0.39 (0.17, 0.94)	0.33 (0.04, 3.16)	0.26 (0.09, 0.80)	0.50 (0.14, 1.24)
Intervention*Male		1.24 (0.10, 15.6)		
Intervention*Black			3.15 (0.43, 23.1)	
Interpersonal Skills Gr1-Gr8				0.67 (0.41, 1.09)
Intrapersonal Skills Gr1-Gr5				0.80 (0.56, 1.15)
Academic Skills Gr1-Gr3				1.07 (0.67, 2.23)
Male	1.52 (0.52, 4.49)	1.44 (0.41, 5.13)	1.50 (0.50, 4.52)	1.27 (0.42, 6.99)
Cohort 1	1.43 (0.41, 4.99)	1.42 (0.41, 4.99)	1.39 (0.39, 5.02)	1.34 (0.31, 11.2)
Cohort 2	2.15 (0.71, 6.57)	2.14 (0.69, 6.63)	2.14 (0.68, 6.80)	2.15 (0.68, 16.0)
Durham, NC	0.49 (0.05, 4.77)	0.49 (0.05, 4.85)	0.50 (0.05, 5.04)	0.48 (0.00, 5.24)
Nashville, TN	1.47 (0.37, 5.90)	1.47 (0.37, 5.95)	1.38 (0.34, 5.59)	1.14 (0.17, 4.91)
Seattle, WA	0.31 (0.08, 1.28)	0.32 (0.08, 1.31)	0.31 (0.08, 1.26)	0.33 (0.00, 1.04)
Black	0.58 (0.10, 3.45)	0.57 (0.09, 3.47)	0.38 (0.05, 3.16)	0.55 (0.05, 3.25)
Initial Screen Score	1.04 (1.00, 1.08)	1.04 (1.00, 1.08)	1.04 (1.00, 1.08)	1.03 (0.98, 1.07)
Indirect Intervention Effect through:				
Interpersonal Skills Gr1-Gr8				0.82 (0.63, 1.04)
Intrapersonal Skills Gr1-Gr5				0.92 (0.79, 1.05)
Academic Skills Gr1-Gr3				1.01 (0.92, 1.18)
Interpersonal Skills Gr1-Gr8 on				
Intervention				b (95% CI)
Male				0.48 (0.34, 0.62)
Cohort 1				-0.32 (-0.46, -0.18)
Cohort 2				-0.17 (-0.36, 0.04)
Durham, NC				0.02 (-0.17, 0.23)
Nashville, TN				0.33 (0.07, 0.59)
Seattle, WA				-0.01 (-0.25, 0.25)
Black				-0.10 (-0.29, 0.09)
Initial Screen Score				-0.38 (-0.55, -0.22)
				-0.02 (-0.03, -0.01)
Intrapersonal Skills Gr1-Gr5 on				

Intervention	0.36 (0.23, 0.50)
Male	-0.19 (-0.31, -0.06)
Cohort 1	-0.16 (-0.32, 0.01)
Cohort 2	-0.04 (-0.19, 0.13)
Durham, NC	-0.24 (-0.48, 0.01)
Nashville, TN	-0.36 (-0.59, -0.13)
Seattle, WA	0.38 (0.19, 0.59)
Black	-0.26 (-0.41, -0.12)
Initial Screen Score	-0.01 (-0.01, 0.00)

Academic Skills Gr1-Gr3 on

Intervention	0.19 (0.05, 0.34)
Male	-0.13 (-0.28, 0.02)
Cohort 1	0.02 (-0.16, 0.21)
Cohort 2	0.03 (-0.15, 0.22)
Durham, NC	-0.08 (-0.36, 0.21)
Nashville, TN	-0.11 (-0.36, 0.15)
Seattle, WA	0.12 (-0.1, 0.34)
Black	-0.17 (-0.38, 0.03)
Initial Screen Score	-0.01 (-0.02, 0.00)

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