# **Path Analysis**

## Models Info

Estimation Method	DWLS .
Number of observations	106
Free parameters	60
Converged	TRUE
Loglikelihood unrestricted model	-540.794
Model	`relationship violence` ~ `executive function` + `adolescent substance use` + `childhood maltreatment` + `prenatal cocaine exposure status` + `maternal race` + `maternal education` + birthweight
	`executive function` ~ `adolescent substance use` + `childhood maltreatment` + `prenatal cocaine exposure status` + `maternal race` + `maternal education` + birthweight
	`adolescent substance use` ~ `childhood maltreatment` + `prenatal cocaine exposure status` + `maternal race` + `maternal education` + birthweight
	`childhood maltreatment` ~ `prenatal cocaine exposure status` + `maternal race` + `maternal education` + birthweight

Note. lavaan WARNING: only 813 bootstrap draws were successful

# **Overall Tests**

# Model Tests

Label	Χ²	df	р
User Model	6.72	8	0.568
Baseline Model	114.92	52	< .001
Groups statistics			
Group 1	0.00	0	1.000
Group 2	0.00	0	1.000

# Fit Indices

		RMSEA	95% CI	
SRMR	RMSEA	Lower	Upper	RMSEA p
0.037	0.000	0.000	0.145	0.656

## Fit Indices

CFI	TLI	RNI	GFI	adj. GFI	pars. GFI
1.000	1.133	1.020	0.998	0.975	0.074

## **Estimates**

			95% Confide	nce Intervals			
Group	Variable	R <sup>2</sup>	Lower	Upper	Wald X <sup>2</sup>	df	р
female	relationship violence	0.0930	0.015	0.219	8.16	8	0.418
	executive function	0.1866	0.069	0.331	15.71	7	0.028
	adolescent substance use	0.2465	0.114	0.394	20.73	6	0.002
	childhood maltreatment	0.0563	0.002	0.168	4.08	5	0.538
male	relationship violence	0.3735	0.226	0.516	36.82	8	< .001
	executive function	0.2256	0.098	0.373	17.24	7	0.016
	adolescent substance use	0.1671	0.056	0.309	47.80	6	< .001
	childhood maltreatment	0.0766	0.008	0.197	7.37	5	0.194

					95% Con Inter		_		
Group	Dep	Pred	Estimate	SE	Lower	Upper	β	z	р
female	relationship violence	executive function	0.17777	0.151	-0.11601	0.47065	0.19000	1.1752	0.240
	relationship violence	adolescent substance use	-0.12646	0.142	-0.41812	0.12802	-0.14946	-0.8903	0.373
	relationship violence	childhood maltreatment	0.21496	0.184	-0.12280	0.58337	0.19627	1.1684	0.243
	relationship violence	prenatal cocaine exposure status	-0.16264	0.160	-0.50039	0.12258	-0.14443	-1.0159	0.310
	relationship violence	maternal race1	-0.19245	0.347	-0.87934	0.54087	-0.03991	-0.5546	0.579
	relationship violence	maternal race2	-0.33632	0.417	-1.31812	0.35521	-0.12393	-0.8066	0.420
	relationship violence	maternal education1	-0.12955	0.307	-0.69057	0.47315	-0.06677	-0.4215	0.67
	relationship violence	birthweight	5.08e-5	8.69e- 5	-9.26e-5	2.41e-4	0.03255	0.5846	0.55
	executive function	adolescent substance use	0.32110	0.134	0.08175	0.62059	0.35508	2.4014	0.01
	executive function	childhood maltreatment	0.17012	0.161	-0.18150	0.46055	0.14533	1.0535	0.29
	executive function	prenatal cocaine exposure status	-0.07120	0.144	-0.36600	0.21647	-0.05916	-0.4932	0.62
	executive function	maternal race1	-0.19403	0.493	-1.19057	0.79211	-0.03765	-0.3932	0.69
	executive function	maternal race2	-0.28770	0.431	-1.23868	0.50050	-0.09919	-0.6673	0.50
	executive function	maternal education1	-0.00601	0.325	-0.67255	0.61979	-0.00290	-0.0185	0.98
				9.24e-					
	executive function adolescent substance	birthweight	1.31e-4	5	-5.27e-5	3.07e-4	0.07858	1.4177	0.156
	use	childhood maltreatment	0.44841	0.180	0.12907	0.84346	0.34641	2.4892	0.01
	adolescent substance use	prenatal cocaine exposure status	0.10967	0.169	-0.22396	0.45391	0.08240	0.6472	0.51
	adolescent substance use	maternal race1	0.57053	0.421	-0.00186	1.64812	0.10011	1.3551	0.17
	adolescent substance use	maternal race2	-0.19562	0.608	-1.48916	0.87219	-0.06099	-0.3215	0.74
	adolescent substance use	maternal education1	-0.56518	0.249	-1.05063	-0.10549	-0.24647	-2.2684	0.02
	adolescent substance use	birthweight	-4.51e-5	1.01e- 4	-2.51e-4	1.43e-4	-0.02447	-0.4486	0.65
	childhood maltreatment	prenatal cocaine exposure status	0.22217	0.130	-0.03296	0.46089	0.21608	1.7058	0.08
	childhood maltreatment	maternal race1	0.13630	0.223	-0.33787	0.52351	0.03096	0.6124	0.54
	childhood maltreatment	maternal race2	0.22314	0.390	-0.50973	1.00966	0.09005	0.5715	0.56
	childhood maltreatment	maternal education1	0.02558	0.240	-0.44657	0.49520	0.01444	0.1067	0.91
	childhood maltreatment	birthweight	-1.15e-4	6.45e- 5	-2.34e-4	8.79e-6	-0.08049	-1.7784	0.07
male	relationship violence	executive function	0.40963	0.197	-0.07781	0.71862	0.37208	2.0820	0.03
	relationship violence	adolescent substance use	0.21525	0.198	-0.16494	0.62209	0.17798	1.0877	0.27
	relationship violence	childhood maltreatment	0.01703	0.151	-0.33554	0.26603	0.01812	0.1128	0.91
	relationship violence	prenatal cocaine exposure status	0.01682	0.160	-0.30977	0.28220	0.01368	0.1051	0.91
	relationship violence	maternal race1	1.06145	0.786	-0.19866	2.86291	0.23086	1.3511	0.17
	relationship violence	maternal race2	-0.47255	0.407	-1.34776	0.22774	-0.15922	-1.1599	0.24
	relationship violence	maternal education1	0.49330	0.377	-0.13909	1.33420	0.21315	1.3084	0.19
	relationship violence	birthweight	5.95e-6	1.02e- 4	-1.89e-4	1.97e-4	0.00359	0.0583	0.95
	executive function	adolescent substance use	0.32753	0.179	-0.03303	0.66044	0.29816	1.8295	0.06
	executive function	childhood maltreatment	-0.03449	0.173	-0.27421	0.32430	-0.04039	-0.2239	0.82
	executive function	prenatal cocaine exposure status	-0.07276	0.161	-0.38432	0.24984	-0.06513	-0.4508	0.65
	executive function	maternal race1	0.99895	0.659	-0.26906	2.30558	0.23919	1.5165	0.12
	executive function	maternal race2	-0.49339 0.72890	0.392	-1.33852 0.21314	0.17583	-0.18302	-1.2579 2.6196	0.20
	executive function	maternal education1	0.72890	0.278	0.21314	1.29314	0.34672	2.6196	0.00
	executive function	birthweight	-9.20e-5	9.90e- 5	-2.74e-4	1.24e-4	-0.06105	-0.9294	0.35

					95% Con Inter				
Group	Dep	Pred	Estimate	SE	Lower	Upper	β	z	р
	adolescent substance use	childhood maltreatment	-0.26043	0.142	-0.51945	0.00687	-0.33503	-1.8398	0.066
	adolescent substance use	prenatal cocaine exposure status	-0.03755	0.160	-0.36077	0.27975	-0.03692	-0.2342	0.815
	adolescent substance use	maternal race1	0.05038	0.254	-0.35338	0.62816	0.01325	0.1985	0.843
	adolescent substance use	maternal race2	-0.12807	0.315	-0.72839	0.54242	-0.05219	-0.4063	0.685
	adolescent substance use	maternal education1	-0.34865	0.205	-0.78586	0.01098	-0.18218	-1.7035	0.088
	adolescent substance use	birthweight	8.61e-5	8.91e- 5	-1.08e-4	2.39e-4	0.06278	0.9665	0.334
	childhood maltreatment	prenatal cocaine exposure status	-0.19507	0.158	-0.50867	0.10067	-0.14910	-1.2380	0.216
	childhood maltreatment	maternal race1	0.16379	0.573	-1.10356	1.24611	0.03349	0.2861	0.775
	childhood maltreatment	maternal race2	-0.38069	0.464	-1.34012	0.43954	-0.12059	-0.8211	0.412
	childhood maltreatment	maternal education1	0.47058	0.269	-0.03930	0.98952	0.19115	1.7499	0.080
	childhood maltreatment	birthweight	8.09e-5	1.14e- 4	-1.18e-4	3.22e-4	0.04585	0.7091	0.478

					95% Confide	ence Intervals	_				
Group	Variable 1	Variable 2	Estimate	SE	Lower	Upper	β	z	р	Method	Туре
female	relationship violence	relationship violence	0.78047	0.164	0.37693	1.00546	0.90699	4.76	< .001	Estim	Residuals
	executive function	executive function	0.79957	0.132	0.43896	0.97597	0.81340	6.06	< .001	Estim	Residuals
	adolescent substance use	adolescent substance use	0.90567	0.153	0.49678	1.08502	0.75346	5.90	< .001	Estim	Residuals
	childhood maltreatment	childhood maltreatment	0.67696	0.120	0.39536	0.86964	0.94370	5.65	< .001	Estim	Residuals
	prenatal cocaine exposure status	prenatal cocaine exposure status	0.67852	0.000	0.67852	0.67852	1.00000			Sample	Variables
	prenatal cocaine exposure status	maternal race1	-0.02794	0.000	-0.02794	-0.02794	-0.17631			Sample	Variables
	prenatal cocaine exposure status	maternal race2	-0.06894	0.000	-0.06894	-0.06894	-0.24485			Sample	Variables
	prenatal cocaine exposure status	maternal education1	-0.15239	0.000	-0.15239	-0.15239	-0.38695			Sample	Variables
	prenatal cocaine exposure status	birthweight	-112.81023	0.000	-112.81023	-112.81023	-0.23033			Sample	Variables
	maternal race1	maternal race1	0.03701	0.000	0.03701	0.03701	1.00000			Sample	Variables
	maternal race1	maternal race2	-0.00508	0.000	-0.00508	-0.00508	-0.07725			Sample	Variables
	maternal race1	maternal education1	-0.00617	0.000	-0.00617	-0.00617	-0.06706			Sample	Variables
	maternal race1	birthweight	0.38099	0.000	0.38099	0.38099	0.00333			Sample	Variables
	maternal race2	maternal race2	0.11684	0.000	0.11684	0.11684	1.00000			Sample	Variables
	maternal race2	maternal education1	0.00726	0.000	0.00726	0.00726	0.04440			Sample	Variables
	maternal race2	birthweight	-8.08962	0.000	-8.08962	-8.08962	-0.03980			Sample	Variables
	maternal education1	maternal education1	0.22859	0.000	0.22859	0.22859	1.00000			Sample	Variables
	maternal education1	birthweight	5.03266	0.000	5.03266	5.03266	0.01770			Sample	Variables
	birthweight	birthweight	353542.77939	0.000	353542.77939	353542.77939	1.00000			Sample	Variables
male	relationship violence	relationship violence	0.72077	0.144	0.31860	0.88285	0.62645	5.01	< .001	Estim	Residuals
	executive function	executive function	0.73516	0.152	0.35031	0.95399	0.77442	4.83	< .001	Estim	Residuals
	adolescent substance use	adolescent substance use	0.65524	0.172	0.23854	0.93671	0.83291	3.82	< .001	Estim	Residuals
	childhood maltreatment	childhood maltreatment	1.20214	0.376	0.50036	1.95137	0.92341	3.19	0.001	Estim	Residuals
	prenatal cocaine exposure status	prenatal cocaine exposure status	0.76052	0.000	0.76052	0.76052	1.00000			Sample	Variables
	prenatal cocaine exposure status	maternal race1	0.01996	0.000	0.01996	0.01996	0.09809			Sample	Variables

					95% Confide	ence Intervals					
Group	Variable 1	Variable 2	Estimate	SE	Lower	Upper	β	z	р	Method	Туре
	prenatal cocaine exposure status	maternal race2	-0.14550	0.000	-0.14550	-0.14550	-0.46163			Sample	Variables
	prenatal cocaine exposure status	maternal education1	-0.11284	0.000	-0.11284	-0.11284	-0.27919			Sample	Variables
	prenatal cocaine exposure status	birthweight	-241.19267	0.000	-241.19267	-241.19267	-0.42773			Sample	Variables
	maternal race1	maternal race1	0.05443	0.000	0.05443	0.05443	1.00000			Sample	Variables
	maternal race1	maternal race2	-0.00871	0.000	-0.00871	-0.00871	-0.10328			Sample	Variables
	maternal race1	maternal education1	-0.04028	0.000	-0.04028	-0.04028	-0.37249			Sample	Variables
	maternal race1	birthweight	0.68433	0.000	0.68433	0.68433	0.00454			Sample	Variables
	maternal race2	maternal race2	0.13062	0.000	0.13062	0.13062	1.00000			Sample	Variables
	maternal race2	maternal education1	-0.01125	0.000	-0.01125	-0.01125	-0.06715			Sample	Variables
	maternal race2	birthweight	81.69666	0.000	81.69666	81.69666	0.34959			Sample	Variables
	maternal education1	maternal education1	0.21480	0.000	0.21480	0.21480	1.00000			Sample	Variables
	maternal education1	birthweight	9.68360	0.000	9.68360	9.68360	0.03231			Sample	Variables
	birthweight	birthweight	418092.86938	0.000	418092.86938	418092.86938	1.00000			Sample	Variables

					Confi	5% dence rvals			
Label	Description	Parameter	Estimate	SE	Lower	Upper	β	z	р
IE1	(adolescent substance use $\Rightarrow$ executive function $\Rightarrow$ relationship violence) <sub>1</sub>	p9*p1	0.057	0.053	-0.055	0.174	0.067	1.068	0.285
IE2	(childhood maltreatment $\Rightarrow$ executive function $\Rightarrow$ relationship violence) <sub>1</sub>	p10*p1	0.030	0.048	-0.038	0.144	0.028	0.625	0.532
IE3	(childhood maltreatment $\Rightarrow$ adolescent substance use $\Rightarrow$ relationship violence) <sub>1</sub>	p16*p2	-0.057	0.080	-0.279	0.060	-0.052	-0.709	0.478
IE4	(childhood maltreatment $\Rightarrow$ adolescent substance use $\Rightarrow$ executive function $\Rightarrow$ relationship violence) <sub>1</sub>	p16*p9*p1	0.026	0.029	-0.022	0.099	0.023	0.881	0.378
IE5	(prenatal cocaine exposure status $\Rightarrow$ executive function $\Rightarrow$ relationship violence) <sub>1</sub>	p11*p1	-0.013	0.034	-0.079	0.058	-0.011	-0.372	0.710
IE6	(prenatal cocaine exposure status ⇒ adolescent substance use ⇒ relationship violence)₁	p17*p2	-0.014	0.036	-0.104	0.043	-0.012	-0.385	0.700
IE7	(prenatal cocaine exposure status ⇒ adolescent substance use ⇒ executive function ⇒ relationship violence) <sub>1</sub>	p17*p9*p1	0.006	0.015	-0.019	0.042	0.006	0.413	0.679
IE8	(prenatal cocaine exposure status ⇒ childhood maltreatment ⇒ relationship violence)₁	p22*p3	0.048	0.054	-0.031	0.180	0.042	0.879	0.380
IE9	(prenatal cocaine exposure status ⇒ childhood maltreatment ⇒ executive function ⇒ relationship violence) <sub>1</sub>	p22*p10*p1	0.007	0.012	-0.010	0.038	0.006	0.553	0.581
IE10	(prenatal cocaine exposure status ⇒ childhood maltreatment ⇒ adolescent substance use ⇒ relationship violence)₁	p22*p16*p2	-0.013	0.022	-0.071	0.014	-0.011	-0.576	0.565
IE11	(prenatal cocaine exposure status ⇒ childhood maltreatment ⇒ adolescent substance use ⇒ executive function ⇒ relationship violence)₁	p22*p16*p9*p1	0.006	0.008	-0.005	0.026	0.005	0.734	0.463
IE12	(maternal race1 $\Rightarrow$ executive function $\Rightarrow$ relationship violence) <sub>1</sub>	p12*p1	-0.034	0.112	-0.310	0.202	-0.007	-0.308	0.758
IE13	(maternal race1 $\Rightarrow$ adolescent substance use $\Rightarrow$ relationship violence) <sub>1</sub>	p18*p2	-0.072	0.126	-0.407	0.073	-0.015	-0.572	0.568
IE14	(maternal race1 $\Rightarrow$ adolescent substance use $\Rightarrow$ executive function $\Rightarrow$ relationship violence) <sub>1</sub>	p18*p9*p1	0.033	0.048	-0.034	0.155	0.007	0.682	0.495
IE15	(maternal race1 $\Rightarrow$ childhood maltreatment $\Rightarrow$ relationship violence) <sub>1</sub>	p23*p3	0.029	0.071	-0.109	0.183	0.006	0.414	0.679
IE16	(maternal race1 $\Rightarrow$ childhood maltreatment $\Rightarrow$ executive function $\Rightarrow$ relationship violence) <sub>1</sub>	p23*p10*p1	0.004	0.014	-0.022	0.040	0.001	0.290	0.771
IE17	(maternal race1 ⇒ childhood maltreatment ⇒ adolescent substance use ⇒ relationship violence)₁	p23*p16*p2	-0.008	0.028	-0.080	0.035	-0.002	-0.275	0.783
IE18	(maternal race1 ⇒ childhood maltreatment ⇒ adolescent substance use ⇒ executive function ⇒ relationship violence)₁	p23*p16*p9*p1	0.003	0.010	-0.013	0.031	0.001	0.334	0.738
IE19	(maternal race2 $\Rightarrow$ executive function $\Rightarrow$ relationship violence) <sub>1</sub>	p13*p1	-0.051	0.106	-0.294	0.143	-0.019	-0.480	0.631
IE20	(maternal race2 $\Rightarrow$ adolescent substance use $\Rightarrow$ relationship violence) <sub>1</sub>	p19*p2	0.025	0.131	-0.218	0.293	0.009	0.188	0.851
IE21	(maternal race2 ⇒ adolescent substance use ⇒ executive function ⇒ relationship violence) <sub>1</sub>	p19*p9*p1	-0.011	0.046	-0.089	0.093	-0.004	-0.245	0.807
IE22	(maternal race2 $\Rightarrow$ childhood maltreatment $\Rightarrow$ relationship violence) <sub>1</sub>	p24*p3	0.048	0.136	-0.181	0.405	0.018	0.353	0.724
IE23	(maternal race2 ⇒ childhood maltreatment ⇒ executive function ⇒ relationship violence) <sub>1</sub>	p24*p10*p1	0.007	0.026	-0.034	0.062	0.002	0.260	0.795
IE24	(maternal race2 ⇒ childhood maltreatment ⇒ adolescent substance use ⇒ relationship violence)₁	p24*p16*p2	-0.013	0.049	-0.139	0.059	-0.005	-0.260	0.795
IE25	(maternal race2 ⇒ childhood maltreatment ⇒ adolescent substance use ⇒ executive function ⇒ relationship violence)₁	p24*p16*p9*p1	0.006	0.015	-0.023	0.040	0.002	0.372	0.710
IE26	(maternal education1 $\Rightarrow$ executive function $\Rightarrow$ relationship violence) <sub>1</sub>	p14*p1	-0.001	0.075	-0.174	0.162	-0.001	-0.014	0.989
IE27	(maternal education1 $\Rightarrow$ adolescent substance use $\Rightarrow$ relationship violence) <sub>1</sub>	p20*p2	0.071	0.089	-0.098	0.274	0.037	0.805	0.421
IE28	(maternal education1 ⇒ adolescent substance use ⇒ executive function ⇒ relationship violence)₁	p20*p9*p1	-0.032	0.032	-0.106	0.029	-0.017	-1.004	0.316

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					Confi	i% dence rvals			
Label	Description	Parameter	Estimate	SE	Lower	Upper	β	z	р
IE29	$(maternal\ education1\Rightarrow childhood\ maltreatment\Rightarrow relationship\ violence)_1$	p25*p3	0.005	0.073	-0.140	0.177	0.003	0.075	0.940
IE30	(maternal education1 $\Rightarrow$ childhood maltreatment $\Rightarrow$ executive function $\Rightarrow$ relationship violence) <sub>1</sub>	p25*p10*p1	0.001	0.013	-0.027	0.027	0.000	0.061	0.951
IE31	(maternal education1 $\Rightarrow$ childhood maltreatment $\Rightarrow$ adolescent substance use $\Rightarrow$ relationship violence) <sub>1</sub>	p25*p16*p2	-0.001	0.027	-0.060	0.060	-0.001	-0.055	0.956
IE32	(maternal education1 ⇒ childhood maltreatment ⇒ adolescent substance use ⇒ executive function ⇒ relationship violence)₁	p25*p16*p9*p1	0.001	0.009	-0.021	0.020	0.000	0.072	0.943
IE33	(birthweight $\Rightarrow$ executive function $\Rightarrow$ relationship violence) <sub>1</sub>	p15*p1	0.000	0.000	-0.000	0.000	0.015	0.832	0.405
IE34	(birthweight ⇒ adolescent substance use ⇒ relationship violence) <sub>1</sub>	p21*p2	0.000	0.000	-0.000	0.000	0.004	0.287	0.774
IE35	(birthweight ⇒ adolescent substance use ⇒ executive function ⇒ relationship violence) <sub>1</sub>	p21*p9*p1	-0.000	0.000	-0.000	0.000	-0.002	-0.311	0.756
IE36	(birthweight $\Rightarrow$ childhood maltreatment $\Rightarrow$ relationship violence) <sub>1</sub>	p26*p3	-0.000	0.000	-0.000	0.000	-0.016	-0.903	0.366
IE37	(birthweight $\Rightarrow$ childhood maltreatment $\Rightarrow$ executive function $\Rightarrow$ relationship violence) <sub>1</sub>	p26*p10*p1	-0.000	0.000	-0.000	0.000	-0.002	-0.561	0.575
IE38	(birthweight ⇒ childhood maltreatment ⇒ adolescent substance use ⇒ relationship violence)₁	p26*p16*p2	0.000	0.000	-0.000	0.000	0.004	0.542	0.588
IE39	(birthweight ⇒ childhood maltreatment ⇒ adolescent substance use ⇒ executive function ⇒ relationship violence) <sub>1</sub>	p26*p16*p9*p1	-0.000	0.000	-0.000	0.000	-0.002	-0.709	0.478
IE40	(adolescent substance use $\Rightarrow$ executive function $\Rightarrow$ relationship violence) <sub>2</sub>	p63*p55	0.134	0.093	-0.049	0.342	0.111	1.438	0.150
IE41	(childhood maltreatment $\Rightarrow$ executive function $\Rightarrow$ relationship violence) <sub>2</sub>	p64*p55	-0.014	0.067	-0.149	0.144	-0.015	-0.211	0.833
IE42	(childhood maltreatment $\Rightarrow$ adolescent substance use $\Rightarrow$ relationship violence) <sub>2</sub>	p70*p56	-0.056	0.064	-0.220	0.045	-0.060	-0.870	0.384
IE43	(childhood maltreatment $\Rightarrow$ adolescent substance use $\Rightarrow$ executive function $\Rightarrow$ relationship violence) <sub>2</sub>	p70*p63*p55	-0.035	0.037	-0.135	0.009	-0.037	-0.946	0.344
IE44	(prenatal cocaine exposure status $\Rightarrow$ executive function $\Rightarrow$ relationship violence) <sub>2</sub>	p65*p55	-0.030	0.070	-0.194	0.105	-0.024	-0.427	0.669
IE45	(prenatal cocaine exposure status ⇒ adolescent substance use ⇒ relationship violence) <sub>2</sub>	p71*p56	-0.008	0.046	-0.094	0.103	-0.007	-0.174	0.862
IE46	(prenatal cocaine exposure status ⇒ adolescent substance use ⇒ executive function ⇒ relationship violence)₂	p71*p63*p55	-0.005	0.025	-0.063	0.042	-0.004	-0.204	0.839
IE47	(prenatal cocaine exposure status ⇒ childhood maltreatment ⇒ relationship violence)₂	p76*p57	-0.003	0.043	-0.076	0.097	-0.003	-0.077	0.938
IE48	(prenatal cocaine exposure status ⇒ childhood maltreatment ⇒ executive function ⇒ relationship violence) <sub>2</sub>	p76*p64*p55	0.003	0.019	-0.036	0.047	0.002	0.146	0.884
IE49	(prenatal cocaine exposure status ⇒ childhood maltreatment ⇒ adolescent substance use ⇒ relationship violence) <sub>2</sub>	p76*p70*p56	0.011	0.018	-0.012	0.058	0.009	0.600	0.548
IE50	(prenatal cocaine exposure status ⇒ childhood maltreatment ⇒ adolescent substance use ⇒ executive function ⇒ relationship violence) <sub>2</sub>	p76*p70*p63*p55	0.007	0.013	-0.004	0.044	0.006	0.541	0.588
IE51	(maternal race1 $\Rightarrow$ executive function $\Rightarrow$ relationship violence) <sub>2</sub>	p66*p55	0.409	0.308	-0.200	0.974	0.089	1.330	0.184
IE52	(maternal race1 ⇒ adolescent substance use ⇒ relationship violence)₂	p72*p56	0.011	0.076	-0.108	0.196	0.002	0.143	0.886
IE53	(maternal race1 ⇒ adolescent substance use ⇒ executive function ⇒ relationship violence) <sub>2</sub>	p72*p63*p55	0.007	0.038	-0.058	0.103	0.001	0.179	0.858
IE54	(maternal race1 $\Rightarrow$ childhood maltreatment $\Rightarrow$ relationship violence) <sub>2</sub>	p77*p57	0.003	0.094	-0.226	0.156	0.001	0.030	0.976
IE55	(maternal race1 $\Rightarrow$ childhood maltreatment $\Rightarrow$ executive function $\Rightarrow$ relationship violence) <sub>2</sub>	p77*p64*p55	-0.002	0.042	-0.068	0.116	-0.001	-0.055	0.956
IE56	(maternal race1 $\Rightarrow$ childhood maltreatment $\Rightarrow$ adolescent substance use $\Rightarrow$ relationship violence) <sub>2</sub>	p77*p70*p56	-0.009	0.054	-0.135	0.092	-0.002	-0.170	0.865

95%

					95% Confidence Intervals				
Label	Description	Parameter	Estimate	SE	Lower	Upper	β	z	р
IE57	(maternal race1 ⇒ childhood maltreatment ⇒ adolescent substance use ⇒ executive function ⇒ relationship violence)₂	p77*p70*p63*p55	-0.006	0.031	-0.078	0.063	-0.001	-0.186	0.852
IE58	(maternal race2 $\Rightarrow$ executive function $\Rightarrow$ relationship violence) <sub>2</sub>	p67*p55	-0.202	0.198	-0.688	0.097	-0.068	-1.021	0.307
IE59	(maternal race2 ⇒ adolescent substance use ⇒ relationship violence)₂	p73*p56	-0.028	0.092	-0.223	0.151	-0.009	-0.299	0.765
IE60	(maternal race2 ⇒ adolescent substance use ⇒ executive function ⇒ relationship violence)₂	p73*p63*p55	-0.017	0.048	-0.121	0.085	-0.006	-0.361	0.718
IE61	(maternal race2 $\Rightarrow$ childhood maltreatment $\Rightarrow$ relationship violence) <sub>2</sub>	p78*p57	-0.006	0.096	-0.208	0.192	-0.002	-0.067	0.946
IE62	(maternal race2 ⇒ childhood maltreatment ⇒ executive function ⇒ relationship violence)₂	p78*p64*p55	0.005	0.046	-0.066	0.123	0.002	0.116	0.908
IE63	(maternal race2 $\Rightarrow$ childhood maltreatment $\Rightarrow$ adolescent substance use $\Rightarrow$ relationship violence) <sub>2</sub>	p78*p70*p56	0.021	0.046	-0.042	0.150	0.007	0.467	0.640
IE64	(maternal race2 $\Rightarrow$ childhood maltreatment $\Rightarrow$ adolescent substance use $\Rightarrow$ executive function $\Rightarrow$ relationship violence) <sub>2</sub>	p78*p70*p63*p55	0.013	0.026	-0.020	0.072	0.004	0.513	0.608
IE65	(maternal education1 $\Rightarrow$ executive function $\Rightarrow$ relationship violence) <sub>2</sub>	p68*p55	0.299	0.176	-0.032	0.657	0.129	1.698	0.089
IE66	(maternal education1 ⇒ adolescent substance use ⇒ relationship violence) <sub>2</sub>	p74*p56	-0.075	0.076	-0.245	0.055	-0.032	-0.983	0.326
IE67	(maternal education1 ⇒ adolescent substance use ⇒ executive function ⇒ relationship violence) <sub>2</sub>	p74*p63*p55	-0.047	0.043	-0.146	0.016	-0.020	-1.100	0.271
IE68	$(maternal\ education1\Rightarrow childhood\ maltreatment\Rightarrow relationship\ violence)_2$	p79*p57	0.008	0.071	-0.132	0.145	0.003	0.113	0.910
IE69	(maternal education1 $\Rightarrow$ childhood maltreatment $\Rightarrow$ executive function $\Rightarrow$ relationship violence) <sub>2</sub>	p79*p64*p55	-0.007	0.028	-0.069	0.047	-0.003	-0.234	0.815
IE70	(maternal education1 ⇒ childhood maltreatment ⇒ adolescent substance use ⇒ relationship violence) <sub>2</sub>	p79*p70*p56	-0.026	0.040	-0.134	0.016	-0.011	-0.656	0.512
IE71	(maternal education1 $\Rightarrow$ childhood maltreatment $\Rightarrow$ adolescent substance use $\Rightarrow$ executive function $\Rightarrow$ relationship violence) <sub>2</sub>	p79*p70*p63*p55	-0.016	0.020	-0.071	0.005	-0.007	-0.820	0.412
IE72	(birthweight $\Rightarrow$ executive function $\Rightarrow$ relationship violence) <sub>2</sub>	p69*p55	-0.000	0.000	-0.000	0.000	-0.023	-0.915	0.360
IE73	(birthweight ⇒ adolescent substance use ⇒ relationship violence) <sub>2</sub>	p75*p56	0.000	0.000	-0.000	0.000	0.011	0.645	0.519
IE74	(birthweight ⇒ adolescent substance use ⇒ executive function ⇒ relationship violence) <sub>2</sub>	p75*p63*p55	0.000	0.000	-0.000	0.000	0.007	0.747	0.455
IE75	(birthweight $\Rightarrow$ childhood maltreatment $\Rightarrow$ relationship violence) <sub>2</sub>	p80*p57	0.000	0.000	-0.000	0.000	0.001	0.060	0.953
IE76	(birthweight $\Rightarrow$ childhood maltreatment $\Rightarrow$ executive function $\Rightarrow$ relationship violence) <sub>2</sub>	p80*p64*p55	-0.000	0.000	-0.000	0.000	-0.001	-0.111	0.912
IE77	(birthweight ⇒ childhood maltreatment ⇒ adolescent substance use ⇒ relationship violence) <sub>2</sub>	p80*p70*p56	-0.000	0.000	-0.000	0.000	-0.003	-0.401	0.689
IE78	(birthweight ⇒ childhood maltreatment ⇒ adolescent substance use ⇒ executive function ⇒ relationship violence) <sub>2</sub>	p80*p70*p63*p55	-0.000	0.000	-0.000	0.000	-0.002	-0.437	0.662

Note. Description subscripts refer to groups, with 1= group female, 2= group male

## Contrasts Definition

Name	Contrast
maternal race1	Hispanic - African American
maternal race2	Caucasian - African American
maternal education1	highschool - below highschool