Appendix -
Increased Threat Learning After Social Isolation in Human Adolescents

E. Towner[1], K. Thomas[1], L. Tomova[1,2], and S-J. Blakemore[1]

[1]University of Cambridge, Department of Psychology

[2]Cardiff University Brain Research Imaging Centre (CUBRIC), Cardiff University

Contents

Appendix A

Statistical Tables

Table A1

Threat Learning - ANOVA

Arousal Rating	*df1*	*df2*	*F-ratio*	*eta-squared*	*p*
Session	2	877.46	4.95	0.01 (0.00, 1.00)	.007
Cue	1	877.00	96.51	0.10 (0.07, 1.00)	**< .001**
Phase	3	877.00	8.38	0.03 (0.01, 1.00)	**< .001**
Session * Cue	2	877.00	8.63	0.02 (0.01, 1.00)	**< .001**
Session * Phase	6	877.00	1.54	0.01 (0.00, 1.00)	.163
Cue * Phase	3	877.00	17.19	0.06 (0.03, 1.00)	**< .001**
Session * Cue * Phase	6	877.00	0.85	0.01 (0.00, 1.00)	.534

Note. This table contains the results of the ANOVA test of the fixed effects of session, cue and phase (and all two-way and three-way interactions) for the regression model of arousal ratings. Degrees of freedom (*df*), F-ratios (*F-ratio*), effect sizes (*eta-squared* [partial]) and *p*-values (*p*) are reported. Effect sizes (*eta-squared* [partial]) include 95% confidence intervals (in parentheses). Statistics in bold represent significant results with a Bonferroni multiple comparison correction of $p < .005$.

Table A2

Threat Learning - Model Coefficients

Arousal Rating	*Estimate*	*SE*	*Beta*	*df*	*t*	*p*
Intercept	2.82 (2.21, 3.44)	0.31	-0.05 (-0.34, 0.24)	220.78	9.00	**< .001**
Session (ISO-with-media)	-0.12 (-0.80, 0.57)	0.35	-0.06 (-0.39, 0.27)	877.11	-0.33	.740
Session (ISO-total)	-0.07 (-0.76, 0.61)	0.35	-0.04 (-0.37, 0.29)	877.14	-0.21	.832
Cue (Threat)	-0.38 (-1.06, 0.31)	0.35	-0.18 (-0.51, 0.15)	877.01	-1.07	.286
Phase (Acquisition)	-0.23 (-0.91, 0.46)	0.35	-0.11 (-0.44, 0.22)	877.01	-0.64	.522
Phase (Extinction)	-0.55 (-1.23, 0.13)	0.35	-0.26 (-0.59, 0.07)	877.01	-1.57	.118
Phase (Retention)	-0.32 (-1.00, 0.37)	0.35	-0.15 (-0.48, 0.18)	877.10	-0.89	.372
Session (ISO-with-media) * Cue (Threat)	0.40 (-0.57, 1.37)	0.50	0.19 (-0.28, 0.66)	877.01	0.80	.423
Session (ISO-total) * Cue (Threat)	0.09 (-0.88, 1.06)	0.50	0.04 (-0.42, 0.51)	877.01	0.19	.853
Session (ISO-with-media) * Phase (Acquisition)	-0.08 (-1.05, 0.89)	0.50	-0.04 (-0.51, 0.43)	877.01	-0.17	.869
Session (ISO-total) * Phase (Acquisition)	0.02 (-0.95, 0.99)	0.50	0.01 (-0.46, 0.48)	877.01	0.04	.968
Session (ISO-with-media) * Phase (Extinction)	-0.35 (-1.32, 0.62)	0.50	-0.17 (-0.63, 0.30)	877.01	-0.69	.487
Session (ISO-total) * Phase (Extinction)	0.27 (-0.70, 1.24)	0.50	0.13 (-0.34, 0.59)	877.01	0.54	.592
Session (ISO-with-media) * Phase (Retention)	-0.47 (-1.44, 0.50)	0.50	-0.22 (-0.69, 0.24)	877.06	-0.94	.347
Session (ISO-total) * Phase (Retention)	-0.13 (-1.11, 0.84)	0.50	-0.06 (-0.53, 0.41)	877.09	-0.26	.796
Cue (Threat) * Phase (Acquisition)	1.03 (0.06, 1.99)	0.50	0.49 (0.02, 0.95)	877.01	2.06	.039
Cue (Threat) * Phase (Extinction)	1.22 (0.26, 2.19)	0.50	0.58 (0.12, 1.05)	877.01	2.47	.014
Cue (Threat) * Phase (Retention)	0.89 (-0.08, 1.86)	0.50	0.42 (-0.04, 0.89)	877.01	1.78	.076
Session (ISO-with-media) * Cue (Threat) * Phase (Acquisition)	1.05 (-0.32, 2.42)	0.71	0.50 (-0.16, 1.16)	877.01	1.49	.137
Session (ISO-total) * Cue (Threat) * Phase (Acquisition)	1.44 (0.07, 2.81)	0.71	0.68 (0.02, 1.34)	877.01	2.03	.042
Session (ISO-with-media) * Cue (Threat) * Phase (Extinction)	0.78 (-0.59, 2.14)	0.71	0.37 (-0.29, 1.03)	877.01	1.10	.274
Session (ISO-total) * Cue (Threat) * Phase (Extinction)	0.75 (-0.62, 2.12)	0.71	0.36 (-0.30, 1.02)	877.01	1.06	.290
Session (ISO-with-media) * Cue (Threat) * Phase (Retention)	0.34 (-1.03, 1.72)	0.71	0.16 (-0.50, 0.83)	877.01	0.48	.629
Session (ISO-total) * Cue (Threat) * Phase (Retention)	0.84 (-0.54, 2.22)	0.71	0.40 (-0.26, 1.07)	877.01	1.18	.237

Note. This table contains estimates of the coefficients for the model in which arousal ratings were regressed on session (iso-with-media, iso-total), cue (threat, safety), and phase (pre-acquisition, acquisition, extinction, retention), including all two-way and three-way interactions. The reference group for the session variable is baseline, for the cue variable is safety and for the phase variable is pre-acquisition. Regression coefficients (*Estimate*), standard errors (*SE*), standardised regression coefficients (*Beta*), degrees of freedom (*df*), *t*-values (*t*) and *p*-values (*p*) are reported. Regression coefficients (*Estimate*) and standardised regression coefficients (*Beta*) include 95% confidence intervals (in parentheses). Statistics in bold represent significant results with a Bonferroni multiple comparison correction of $p < .005$.

Table A3

Threat Learning - ANOVA

Valence Rating	*df1*	*df2*	*F-ratio*	*eta-squared*	*p*
Session	2	819.87	6.51	0.02 (0.00, 1.00)	**.002**
Cue	1	813.01	15.99	0.02 (0.01, 1.00)	< **.001**
Phase	3	813.01	5.41	0.02 (0.01, 1.00)	**.001**
Session * Cue	2	813.01	12.68	0.03 (0.01, 1.00)	< **.001**
Session * Phase	6	813.01	1.28	0.01 (0.00, 1.00)	.263
Cue * Phase	3	813.01	7.11	0.03 (0.01, 1.00)	< **.001**
Session * Cue * Phase	6	813.01	0.94	0.01 (0.00, 1.00)	.467

Note. This table contains the results of the ANOVA test of the fixed effects of session, cue and phase (and all two-way and three-way interactions) for the regression model valence ratings. Degrees of freedom (*df*), F-ratios (*F-ratio*), effect sizes (*eta-squared* [partial]) and *p*-values (*p*) are reported. Effect sizes (*eta-squared* [partial]) include 95% confidence intervals (in parentheses). Statistics in bold represent significant results with a Bonferroni multiple comparison correction of $p < .005$.

Table A4

Threat Learning - Model Coefficients

Valence Rating	*Estimate*	*SE*	*Beta*	*df*	*t*	*p*
Intercept	4.25 (3.64, 4.87)	0.31	0.15 (-0.18, 0.47)	269.51	13.52	**< .001**
Session (ISO-with-media)	-0.02 (-0.69, 0.66)	0.35	-0.01 (-0.36, 0.35)	814.26	-0.04	.965
Session (ISO-total)	0.08 (-0.59, 0.76)	0.35	0.04 (-0.31, 0.40)	814.70	0.24	.810
Cue (Threat)	-0.59 (-1.30, 0.11)	0.36	-0.31 (-0.68, 0.06)	813.37	-1.64	.102
Phase (Acquisition)	-0.22 (-0.92, 0.48)	0.36	-0.11 (-0.49, 0.26)	813.37	-0.60	.546
Phase (Extinction)	-0.53 (-1.23, 0.17)	0.36	-0.28 (-0.65, 0.09)	813.37	-1.47	.143
Phase (Retention)	-0.43 (-1.14, 0.27)	0.37	-0.23 (-0.60, 0.15)	813.47	-1.19	.235
Session (ISO-with-media) * Cue (Threat)	0.31 (-0.63, 1.26)	0.49	0.16 (-0.34, 0.67)	813.37	0.64	.524
Session (ISO-total) * Cue (Threat)	0.39 (-0.56, 1.34)	0.49	0.20 (-0.30, 0.71)	813.37	0.79	.427
Session (ISO-with-media) * Phase (Acquisition)	-0.32 (-1.27, 0.63)	0.49	-0.17 (-0.67, 0.34)	813.37	-0.65	.514
Session (ISO-total) * Phase (Acquisition)	-0.29 (-1.24, 0.65)	0.49	-0.15 (-0.66, 0.35)	813.37	-0.60	.548
Session (ISO-with-media) * Phase (Extinction)	-0.67 (-1.62, 0.27)	0.49	-0.35 (-0.86, 0.15)	813.37	-1.38	.169
Session (ISO-total) * Phase (Extinction)	-0.08 (-1.03, 0.86)	0.49	-0.04 (-0.55, 0.46)	813.37	-0.17	.864
Session (ISO-with-media) * Phase (Retention)	-0.59 (-1.54, 0.36)	0.49	-0.31 (-0.82, 0.19)	813.50	-1.21	.228
Session (ISO-total) * Phase (Retention)	-0.37 (-1.33, 0.58)	0.49	-0.20 (-0.70, 0.31)	813.46	-0.76	.449
Cue (Threat) * Phase (Acquisition)	0.25 (-0.74, 1.24)	0.51	0.13 (-0.40, 0.66)	813.37	0.49	.626
Cue (Threat) * Phase (Extinction)	0.63 (-0.37, 1.62)	0.51	0.33 (-0.20, 0.85)	813.37	1.22	.223
Cue (Threat) * Phase (Retention)	0.17 (-0.83, 1.17)	0.52	0.09 (-0.44, 0.62)	813.37	0.34	.736
Session (ISO-with-media) * Cue (Threat) * Phase (Acquisition)	1.52 (0.18, 2.86)	0.69	0.80 (0.08, 1.51)	813.37	2.20	.028
Session (ISO-total) * Cue (Threat) * Phase (Acquisition)	1.16 (-0.18, 2.50)	0.69	0.61 (-0.10, 1.32)	813.37	1.68	.094
Session (ISO-with-media) * Cue (Threat) * Phase (Extinction)	0.71 (-0.63, 2.05)	0.69	0.37 (-0.34, 1.08)	813.37	1.02	.306
Session (ISO-total) * Cue (Threat) * Phase (Extinction)	0.63 (-0.71, 1.97)	0.69	0.33 (-0.38, 1.04)	813.37	0.91	.362
Session (ISO-with-media) * Cue (Threat) * Phase (Retention)	0.90 (-0.44, 2.25)	0.69	0.47 (-0.24, 1.19)	813.37	1.30	.194
Session (ISO-total) * Cue (Threat) * Phase (Retention)	0.98 (-0.37, 2.33)	0.70	0.51 (-0.20, 1.23)	813.37	1.40	.161

Note. This table contains estimates of the coefficients for the model in which valence ratings were regressed on session (iso-with-media, iso-total), cue (threat, safety), and phase (pre-acquisition, acquisition, extinction, retention), including all two-way and three-way interactions. The reference group for the session variable is baseline, for the cue variable is safety and for the phase variable is pre-acquisition. Regression coefficients (*Estimate*), standard errors (*SE*), standardised regression coefficients (*Beta*), degrees of freedom (*df*), *t*-values (*t*) and *p*-values (*p*) are reported. Regression coefficients (Estimate) and standardised regression coefficients (Beta) include 95% confidence intervals (in parentheses). Statistics in bold represent significant results with a Bonferroni multiple comparison correction of $p < .005$.

Table A5

Threat Learning - ANOVA

Electrodermal Activity	*df1*	*df2*	*F-ratio*	*eta-squared*	*p*
Session	2	646.23	3.43	0.01 (0.00, 1.00)	.033
Cue	1	645.01	1.77	0.00 (0.00, 1.00)	.184
Phase	2	645.01	3.35	0.01 (0.00, 1.00)	.036
Session * Cue	2	645.01	0.03	0.00 (0.00, 1.00)	.967
Session * Phase	4	645.01	4.38	0.03 (0.01, 1.00)	**.002**
Cue * Phase	2	645.01	0.44	0.00 (0.00, 1.00)	.644
Session * Cue * Phase	4	645.01	0.51	0.00 (0.00, 1.00)	.725

Note. This table contains the results of the ANOVA test of the fixed effects of session, cue and phase (and all two-way and three-way interactions) for the regression model of electrodermal activity. Degrees of freedom (*df*), F-ratios (*F-ratio*), effect sizes (*eta-squared* partial) and *p*-values (*p*) are reported. Effect sizes (*eta-squared* partial) include 95% confidence intervals (in parentheses). Statistics in bold represent significant results with a Bonferroni multiple comparison correction of $p < .005$.

Table A6

Threat Learning - Model Coefficients

Electrodermal Activity	*Estimate*	*SE*	*Beta*	*df*	*t*	*p*
Intercept	0.12 (0.07, 0.16)	0.02	-0.16 (-0.47, 0.15)	269.84	4.75	**< .001**
Session (ISO-with-media)	0.02 (-0.04, 0.07)	0.03	0.11 (-0.25, 0.48)	645.40	0.60	.547
Session (ISO-total)	-0.01 (-0.06, 0.05)	0.03	-0.05 (-0.42, 0.32)	645.61	-0.26	.792
Cue (Threat)	0.00 (-0.06, 0.05)	0.03	-0.02 (-0.39, 0.34)	645.20	-0.13	.896
Phase (Extinction)	-0.03 (-0.09, 0.02)	0.03	-0.22 (-0.58, 0.14)	645.20	-1.20	.232
Phase (Retention)	0.04 (-0.01, 0.10)	0.03	0.26 (-0.10, 0.63)	645.20	1.43	.155
Session (ISO-with-media) * Cue (Threat)	0.02 (-0.06, 0.10)	0.04	0.10 (-0.42, 0.62)	645.20	0.38	.706
Session (ISO-total) * Cue (Threat)	0.03 (-0.05, 0.11)	0.04	0.18 (-0.34, 0.70)	645.20	0.69	.488
Session (ISO-with-media) * Phase (Extinction)	0.07 (-0.01, 0.15)	0.04	0.46 (-0.06, 0.97)	645.20	1.73	.084
Session (ISO-total) * Phase (Extinction)	0.10 (0.02, 0.18)	0.04	0.64 (0.12, 1.17)	645.20	2.43	.015
Session (ISO-with-media) * Phase (Retention)	-0.04 (-0.12, 0.04)	0.04	-0.25 (-0.76, 0.27)	645.20	-0.94	.348
Session (ISO-total) * Phase (Retention)	-0.01 (-0.09, 0.07)	0.04	-0.09 (-0.61, 0.43)	645.20	-0.34	.736
Cue (Threat) * Phase (Extinction)	0.02 (-0.06, 0.10)	0.04	0.13 (-0.38, 0.64)	645.20	0.50	.621
Cue (Threat) * Phase (Retention)	0.03 (-0.05, 0.11)	0.04	0.17 (-0.34, 0.69)	645.20	0.66	.506
Session (ISO-with-media) * Cue (Threat) * Phase (Extinction)	-0.01 (-0.13, 0.10)	0.06	-0.08 (-0.81, 0.65)	645.20	-0.23	.822
Session (ISO-total) * Cue (Threat) * Phase (Extinction)	-0.07 (-0.19, 0.04)	0.06	-0.46 (-1.20, 0.28)	645.20	-1.23	.220
Session (ISO-with-media) * Cue (Threat) * Phase (Retention)	-0.02 (-0.13, 0.09)	0.06	-0.13 (-0.86, 0.60)	645.20	-0.35	.727
Session (ISO-total) * Cue (Threat) * Phase (Retention)	-0.02 (-0.13, 0.09)	0.06	-0.12 (-0.86, 0.61)	645.20	-0.33	.744

Note. This table contains estimates of the coefficients for the model in which electrodermal activity was regressed on session (iso-with-media, iso-total), cue (threat, safety), and phase (pre-acquisition, acquisition, extinction, retention), including all two-way and three-way interactions. The reference group for the session variable is baseline, for the cue variable is safety and for the phase variable is acquisition. Regression coefficients (*Estimate*), standard errors (*SE*), standardised regression coefficients (*Beta*), degrees of freedom (*df*), *t*-values (*t*) and *p*-values (*p*) are reported. Regression coefficients (*Estimate*) and standardised regression coefficients (*Beta*) include 95% confidence intervals (in parentheses). Statistics in bold represent significant results with a Bonferroni multiple comparison correction of $p < .005$.

Table A7

Threat Learning - Threat Responding

	Baseline						ISO-With-Media						ISO-Total					
	Threat			Safety			Threat			Safety			Threat			Safety		
Response	*Estimate*	*SE*	*df*	*Estimate*	*SE*	*df*	*Estimate*	*SE*	*df*	*Estimate*	*SE*	*df*	*Estimate*	*SE*	*df*	*Estimate*	*SE*	*df*
Pre-Acquisition																		
Arousal	2.45 (1.83, 3.07)	0.31	220.74	2.83 (2.21, 3.44)	0.31	220.74	2.73 (2.11, 3.36)	0.32	227.01	2.71 (2.08, 3.33)	0.32	227.01	2.47 (1.84, 3.09)	0.32	227.02	2.75 (2.13, 3.37)	0.32	227.02
Valence	3.66 (3.04, 4.28)	0.31	267.72	4.25 (3.63, 4.87)	0.31	267.72	3.96 (3.38, 4.54)	0.29	215.63	4.24 (3.66, 4.82)	0.29	215.63	4.13 (3.55, 4.71)	0.29	215.57	4.34 (3.76, 4.92)	0.29	215.57
Acquisition																		
Arousal	3.25 (2.63, 3.87)	0.31	220.74	2.60 (1.98, 3.22)	0.31	220.74	4.50 (3.88, 5.13)	0.32	227.01	2.40 (1.78, 3.02)	0.32	227.01	4.72 (4.10, 5.35)	0.32	227.02	2.55 (1.92, 3.17)	0.32	227.02
Valence	3.69 (3.07, 4.31)	0.31	267.72	4.04 (3.42, 4.66)	0.31	267.72	5.19 (4.61, 5.77)	0.29	215.63	3.70 (3.12, 4.28)	0.29	215.63	5.03 (4.45, 5.61)	0.29	215.57	3.83 (3.25, 4.40)	0.29	215.57
Electrodermal Activity	0.11 (0.06, 0.16)	0.02	269.01	0.12 (0.07, 0.17)	0.02	269.01	0.15 (0.10, 0.19)	0.02	276.18	0.13 (0.09, 0.18)	0.02	276.18	0.13 (0.08, 0.18)	0.03	283.68	0.11 (0.06, 0.16)	0.03	283.68
Extinction																		
Arousal	3.13 (2.51, 3.74)	0.31	220.74	2.28 (1.66, 2.89)	0.31	220.74	3.84 (3.21, 4.46)	0.32	227.01	1.81 (1.19, 2.43)	0.32	227.01	4.16 (3.54, 4.78)	0.32	227.02	2.47 (1.84, 3.09)	0.32	227.02
Valence	3.75 (3.13, 4.37)	0.31	267.72	3.72 (3.10, 4.34)	0.31	267.72	4.09 (3.51, 4.67)	0.29	215.63	3.03 (2.45, 3.61)	0.29	215.63	4.77 (4.19, 5.35)	0.29	215.57	3.72 (3.14, 4.30)	0.29	215.57
Electrodermal Activity	0.10 (0.05, 0.15)	0.02	269.01	0.08 (0.03, 0.13)	0.02	269.01	0.19 (0.14, 0.24)	0.02	276.18	0.17 (0.12, 0.22)	0.02	276.18	0.15 (0.10, 0.20)	0.03	283.68	0.18 (0.13, 0.22)	0.03	283.68
Retention																		
Arousal	3.02 (2.40, 3.65)	0.32	226.99	2.51 (1.89, 3.13)	0.32	226.99	3.18 (2.55, 3.80)	0.32	226.99	1.92 (1.30, 2.54)	0.32	226.99	3.75 (3.12, 4.38)	0.32	233.61	2.30 (1.67, 2.93)	0.32	233.61
Valence	3.40 (2.77, 4.03)	0.32	277.06	3.82 (3.19, 4.45)	0.32	277.06	4.01 (3.43, 4.59)	0.29	215.53	3.21 (2.63, 3.79)	0.29	215.53	4.48 (3.89, 5.06)	0.30	221.74	3.53 (2.95, 4.12)	0.30	221.74
Electrodermal Activity	0.18 (0.13, 0.23)	0.02	269.01	0.16 (0.11, 0.21)	0.02	269.01	0.16 (0.11, 0.20)	0.02	276.18	0.14 (0.09, 0.19)	0.02	276.18	0.17 (0.12, 0.22)	0.03	283.68	0.14 (0.09, 0.19)	0.03	283.68

Note. This table contains estimates of mean threat responding (*Estimate*) at each session (baseline, iso-with-media, iso-total) separated by phase (pre-acquisition, acquisition, extinction, retention) and measure (arousal, valence, electrodermal activity). These means (*Estimate*) include 95% confidence intervals (in parentheses). Standard errors (*SE*) and degrees of freedom (*df*) are also reported. Reported statistics are derived from estimated marginal means.

Table A8

Threat Learning - Contrasts in Threat Responding

	ISO-With-Media > Baseline											
	Threat						Safety					
Response	*Estimate*	*SE*	*df*	*t*	*p*	*d*	*Estimate*	*SE*	*df*	*t*	*p*	*d*
Pre-Acquisition												
Arousal	0.28 (-0.41, 0.98)	0.35	877.10	0.80	.424	0.18	-0.12 (-0.81, 0.58)	0.35	877.10	-0.33	.740	-0.07
Valence	0.30 (-0.38, 0.98)	0.35	813.91	0.86	.393	0.20	-0.02 (-0.70, 0.67)	0.35	813.91	-0.04	.965	-0.01
Acquisition												
Arousal	1.25 (0.56, 1.95)	0.35	877.10	3.54	**< .001**	0.80	-0.20 (-0.89, 0.49)	0.35	877.10	-0.57	.572	-0.13
Valence	1.50 (0.82, 2.18)	0.35	813.91	4.31	**< .001**	1.03	-0.33 (-1.02, 0.35)	0.35	813.91	-0.97	.335	-0.23
Electrodermal Activity	0.03 (-0.02, 0.09)	0.03	645.21	1.14	.256	0.26	0.02 (-0.04, 0.07)	0.03	645.21	0.60	.547	0.14
Extinction												
Arousal	0.71 (0.02, 1.40)	0.35	877.10	2.01	.045	0.45	-0.46 (-1.16, 0.23)	0.35	877.10	-1.31	.189	-0.30
Valence	0.33 (-0.35, 1.01)	0.35	813.91	0.95	.340	0.23	-0.69 (-1.37, -0.01)	0.35	813.91	-1.99	.047	-0.48
Electrodermal Activity	0.09 (0.03, 0.15)	0.03	645.21	3.14	**.002**	0.71	0.09 (0.03, 0.15)	0.03	645.21	3.05	**.002**	0.69
Retention												
Arousal	0.15 (-0.54, 0.85)	0.36	877.00	0.43	.666	0.10	-0.59 (-1.29, 0.11)	0.36	877.00	-1.66	.098	-0.38
Valence	0.61 (-0.08, 1.29)	0.35	814.19	1.73	.084	0.42	-0.61 (-1.30, 0.08)	0.35	814.19	-1.74	.083	-0.42
Electrodermal Activity	-0.03 (-0.08, 0.03)	0.03	645.21	-0.89	.374	-0.20	-0.02 (-0.08, 0.04)	0.03	645.21	-0.73	.468	-0.16

Note. This table contains estimates (*Estimate*) of the difference in estimated mean threat responding between the iso-with-media and the baseline sessions. Estimates are separated by cue (threat, safety), phase (pre-acquisition, acquisition, extinction, retention) and measure (arousal, valence, electrodermal activity). Standard errors (*SE*), degrees of freedom (*df*), *t*-values (*t*), *p*-values (*p*) and effect sizes (*d*) of these contrasts are reported. Reported statistics are derived from estimated marginal means. Statistics in bold represent significant results with a Bonferroni multiple comparison correction of $p < .005$

Table A9

Threat Learning - Contrasts in Threat Responding

	ISO-Total > Baseline											
	Threat						Safety					
Response	*Estimate*	*SE*	*df*	*t*	*p*	*d*	*Estimate*	*SE*	*df*	*t*	*p*	*d*
Pre-Acquisition												
Arousal	0.02 (-0.68, 0.71)	0.35	877.13	0.05	.959	0.01	-0.07 (-0.77, 0.62)	0.35	877.13	-0.21	.832	-0.05
Valence	0.47 (-0.21, 1.15)	0.35	814.35	1.36	.174	0.33	0.08 (-0.60, 0.77)	0.35	814.35	0.24	.810	0.06
Acquisition												
Arousal	1.47 (0.78, 2.17)	0.35	877.13	4.17	**< .001**	0.94	-0.05 (-0.75, 0.64)	0.35	877.13	-0.16	.877	-0.03
Valence	1.34 (0.66, 2.02)	0.35	814.35	3.85	**< .001**	0.92	-0.21 (-0.89, 0.47)	0.35	814.35	-0.61	.544	-0.15
Electrodermal Activity	0.02 (-0.04, 0.08)	0.03	645.43	0.72	.474	0.16	-0.01 (-0.07, 0.05)	0.03	645.43	-0.26	.792	-0.06
Extinction												
Arousal	1.04 (0.34, 1.73)	0.35	877.13	2.93	**.004**	0.66	0.19 (-0.50, 0.89)	0.35	877.13	0.55	.585	0.12
Valence	1.02 (0.34, 1.70)	0.35	814.35	2.94	**.003**	0.70	-0.00 (-0.68, 0.68)	0.35	814.35	-0.00	.998	-0.00
Electrodermal Activity	0.05 (-0.01, 0.11)	0.03	645.43	1.70	.090	0.39	0.09 (0.04, 0.15)	0.03	645.43	3.17	**.002**	0.72
Retention												
Arousal	0.73 (0.03, 1.43)	0.36	877.29	2.03	.042	0.46	-0.21 (-0.91, 0.50)	0.36	877.29	-0.57	.567	-0.13
Valence	1.08 (0.39, 1.77)	0.35	814.55	3.06	**.002**	0.74	-0.29 (-0.98, 0.40)	0.35	814.55	-0.82	.412	-0.20
Electrodermal Activity	-0.01 (-0.07, 0.05)	0.03	645.43	-0.41	.682	-0.09	-0.02 (-0.08, 0.04)	0.03	645.43	-0.74	.460	-0.17

Note. This table contains estimates (*Estimate*) of the difference in estimated mean threat responding between the iso-total and the baseline sessions. Estimates are separated by cue (threat, safety), phase (pre-acquisition, acquisition, extinction, retention) and measure (arousal, valence, electrodermal activity). Standard errors (*SE*), degrees of freedom (*df*), *t*-values (*t*), *p*-values (*p*) and effect sizes (*d*) of these contrasts are reported. Reported statistics are derived from estimated marginal means. Statistics in bold represent significant results with a Bonferroni multiple comparison correction of $p < .005$

Table A10

Threat Learning - Contrasts in Threat Responding

	ISO-Total > ISO-With-Media											
	Threat						Safety					
Response	*Estimate*	*SE*	*df*	*t*	*p*	*d*	*Estimate*	*SE*	*df*	*t*	*p*	*d*
Pre-Acquisition												
Arousal	-0.27 (-0.96, 0.43)	0.36	877.24	-0.74	.457	-0.17	0.04 (-0.66, 0.74)	0.36	877.24	0.12	.905	0.03
Valence	0.18 (-0.47, 0.82)	0.33	813.41	0.53	.594	0.12	0.10 (-0.55, 0.74)	0.33	813.41	0.30	.764	0.07
Acquisition												
Arousal	0.22 (-0.48, 0.92)	0.36	877.24	0.62	.533	0.14	0.15 (-0.55, 0.84)	0.36	877.24	0.41	.684	0.09
Valence	-0.16 (-0.80, 0.49)	0.33	813.41	-0.48	.631	-0.11	0.12 (-0.52, 0.77)	0.33	813.41	0.38	.706	0.09
Electrodermal Activity	-0.01 (-0.07, 0.05)	0.03	645.66	-0.41	.683	-0.09	-0.03 (-0.08, 0.03)	0.03	645.66	-0.86	.392	-0.20
Extinction												
Arousal	0.32 (-0.37, 1.02)	0.36	877.24	0.91	.362	0.21	0.66 (-0.04, 1.36)	0.36	877.24	1.85	.065	0.42
Valence	0.69 (0.04, 1.33)	0.33	813.41	2.09	.037	0.47	0.69 (0.04, 1.33)	0.33	813.41	2.09	.037	0.47
Electrodermal Activity	-0.04 (-0.10, 0.02)	0.03	645.66	-1.40	.161	-0.32	0.00 (-0.05, 0.06)	0.03	645.66	0.14	.887	0.03
Retention												
Arousal	0.58 (-0.13, 1.28)	0.36	877.29	1.61	.109	0.37	0.38 (-0.32, 1.09)	0.36	877.29	1.07	.284	0.24
Valence	0.47 (-0.18, 1.12)	0.33	813.28	1.42	.155	0.32	0.32 (-0.33, 0.97)	0.33	813.28	0.96	.336	0.22
Electrodermal Activity	0.01 (-0.04, 0.07)	0.03	645.66	0.47	.639	0.11	-0.00 (-0.06, 0.06)	0.03	645.66	-0.02	.986	-0.00

Note. This table contains estimates (*Estimate*) of the difference in estimated mean threat responding between the iso-total and the iso-with-media sessions. Estimates are separated by cue (threat, safety), phase (pre-acquisition, acquisition, extinction, retention) and measure (arousal, valence, electrodermal activity). Standard errors (*SE*), degrees of freedom (*df*), t-values (*t*), *p*-values (*p*) and effect sizes (*d*) of these contrasts are reported. Reported statistics are derived from estimated marginal means. Statistics in bold represent significant results with a Bonferroni multiple comparison correction of $p < .005$

Table A11

Threat Learning - Threat Discrimination

	Baseline			ISO-With-Media			ISO-Total		
Response	*Estimate*	*SE*	*df*	*Estimate*	*SE*	*df*	*Estimate*	*SE*	*df*
Pre-Acquisition									
Arousal	-0.38 (-1.06, 0.31)	0.35	877.00	0.03 (-0.67, 0.72)	0.36	877.00	-0.28 (-0.98, 0.42)	0.36	877.00
Valence	-0.59 (-1.31, 0.12)	0.36	813.01	-0.28 (-0.93, 0.36)	0.33	813.01	-0.21 (-0.85, 0.44)	0.33	813.01
Acquisition									
Arousal	0.65 (-0.04, 1.34)	0.35	877.00	2.10 (1.40, 2.80)	0.36	877.00	2.18 (1.48, 2.88)	0.36	877.00
Valence	-0.34 (-1.06, 0.37)	0.36	813.01	1.49 (0.84, 2.13)	0.33	813.01	1.21 (0.56, 1.85)	0.33	813.01
Electrodermal Activity	-0.00 (-0.06, 0.05)	0.03	645.01	0.01 (-0.05, 0.07)	0.03	645.01	0.03 (-0.03, 0.08)	0.03	645.01
Extinction									
Arousal	0.85 (0.16, 1.54)	0.35	877.00	2.03 (1.33, 2.72)	0.36	877.00	1.69 (0.99, 2.39)	0.36	877.00
Valence	0.03 (-0.68, 0.74)	0.36	813.01	1.05 (0.41, 1.70)	0.33	813.01	1.05 (0.41, 1.70)	0.33	813.01
Electrodermal Activity	0.02 (-0.04, 0.07)	0.03	645.01	0.02 (-0.04, 0.08)	0.03	645.01	-0.03 (-0.09, 0.03)	0.03	645.01
Retention									
Arousal	0.51 (-0.19, 1.21)	0.36	877.00	1.26 (0.56, 1.95)	0.36	877.00	1.45 (0.74, 2.15)	0.36	877.00
Valence	-0.42 (-1.14, 0.30)	0.37	813.01	0.79 (0.15, 1.44)	0.33	813.01	0.95 (0.29, 1.60)	0.33	813.01
Electrodermal Activity	0.02 (-0.03, 0.08)	0.03	645.01	0.02 (-0.04, 0.08)	0.03	645.01	0.03 (-0.03, 0.09)	0.03	645.01

Note. This table contains estimates of mean threat discrimination (*Estimate*)(threat cue minus safety cue) at each session (baseline, iso-with-media, iso-total) separated by phase (pre-acquisition, acquisition, extinction, retention) and measure (arousal, valence, electrodermal activity). These mean differences (*Estimate*) include 95% confidence intervals (in parentheses). Standard errors (*SE*) and degrees of freedom (*df*) are also reported. Reported statistics are derived from estimated marginal means.

Table A12

Threat Learning - Contrasts in Threat Discrimination

	ISO-With-Media > Baseline					
Response	*Estimate*	*SE*	*df*	*t-ratio*	*p*	*d*
Pre-Acquisition						
Arousal	0.40 (-0.58, 1.38)	0.50	877.00	0.80	.423	0.25
Valence	0.31 (-0.65, 1.27)	0.49	813.01	0.64	.524	0.21
Acquisition						
Arousal	1.45 (0.47, 2.43)	0.50	877.00	2.90	**.004**	0.92
Valence	1.83 (0.87, 2.79)	0.49	813.01	3.74	**< .001**	1.26
Electrodermal Activity	0.02 (-0.07, 0.10)	0.04	645.01	0.38	.706	0.12
Extinction						
Arousal	1.18 (0.19, 2.16)	0.50	877.00	2.35	.019	0.75
Valence	1.02 (0.06, 1.98)	0.49	813.01	2.09	.037	0.70
Electrodermal Activity	0.00 (-0.08, 0.08)	0.04	645.01	0.06	.953	0.02
Retention						
Arousal	0.74 (-0.24, 1.73)	0.50	877.00	1.48	.140	0.47
Valence	1.21 (0.25, 2.18)	0.49	813.01	2.46	.014	0.84
Electrodermal Activity	-0.00 (-0.09, 0.08)	0.04	645.01	-0.12	.908	-0.04

Note. This table contains estimates (*Estimate*) of the difference in estimated mean threat discrimination (threat cue minus safety cue) between the iso-with-media and the baseline sessions. Estimates are separated by cue (threat, safety), phase (pre-acquisition, acquisition, extinction, retention) and measure (arousal, valence, electrodermal activity). Standard errors (*SE*), degrees of freedom (*df*), *t*-values (*t*), *p*-values (*p*) and effect sizes (*d*) of these contrasts are reported. Reported statistics are derived from estimated marginal means. Statistics in bold represent significant results with a Bonferroni multiple comparison correction of $p < .005$.

Table A13

Threat Learning - Contrasts in Threat Discrimination

	ISO-Total > Baseline					
Response	*Estimate*	*SE*	*df*	*t-ratio*	*p*	*d*
Pre-Acquisition						
Arousal	0.09 (-0.89, 1.07)	0.50	877.00	0.19	.853	0.06
Valence	0.39 (-0.57, 1.35)	0.49	813.01	0.79	.427	0.27
Acquisition						
Arousal	1.53 (0.55, 2.51)	0.50	877.00	3.06	**.002**	0.97
Valence	1.55 (0.59, 2.51)	0.49	813.01	3.17	**.002**	1.07
Electrodermal Activity	0.03 (-0.05, 0.11)	0.04	645.01	0.69	.488	0.22
Extinction						
Arousal	0.84 (-0.14, 1.82)	0.50	877.00	1.68	.092	0.54
Valence	1.02 (0.06, 1.98)	0.49	813.01	2.09	.037	0.70
Electrodermal Activity	-0.04 (-0.12, 0.04)	0.04	645.01	-1.04	.298	-0.33
Retention						
Arousal	0.93 (-0.06, 1.93)	0.51	877.00	1.84	.065	0.59
Valence	1.37 (0.39, 2.34)	0.50	813.01	2.75	.006	0.94
Electrodermal Activity	0.01 (-0.07, 0.09)	0.04	645.01	0.23	.816	0.07

Note. This table contains estimates (*Estimate*) of the difference in estimated mean threat discrimination (threat cue minus safety cue) between the iso-total and the baseline sessions. Estimates are separated by cue (threat, safety), phase (pre-acquisition, acquisition, extinction, retention) and measure (arousal, valence, electrodermal activity). Standard errors (*SE*), degrees of freedom (*df*), *t*-values (*t*), *p*-values (*p*) and effect sizes (*d*) of these contrasts are reported. Reported statistics are derived from estimated marginal means. Statistics in bold represent significant results with a Bonferroni multiple comparison correction of $p < .005$.

Table A14

Threat Learning - Contrasts in Threat Discrimination

	ISO-Total > ISO-With-Media					
Response	*Estimate*	*SE*	*df*	*t-ratio*	*p*	*d*
Pre-Acquisition						
Arousal	-0.31 (-1.30, 0.68)	0.50	877.00	-0.61	.541	-0.20
Valence	0.08 (-0.83, 0.99)	0.46	813.01	0.17	.868	0.05
Acquisition						
Arousal	0.08 (-0.91, 1.06)	0.50	877.00	0.15	.878	0.05
Valence	-0.28 (-1.19, 0.63)	0.46	813.01	-0.61	.544	-0.19
Electrodermal Activity	0.01 (-0.07, 0.10)	0.04	645.01	0.32	.751	0.10
Extinction						
Arousal	-0.33 (-1.32, 0.65)	0.50	877.00	-0.66	.508	-0.21
Valence	0.00 (-0.91, 0.91)	0.46	813.01	0.00	> .999	0.00
Electrodermal Activity	-0.05 (-0.13, 0.04)	0.04	645.01	-1.09	.274	-0.35
Retention						
Arousal	0.19 (-0.80, 1.19)	0.51	877.00	0.38	.706	0.12
Valence	0.15 (-0.77, 1.07)	0.47	813.01	0.33	.744	0.11
Electrodermal Activity	0.01 (-0.07, 0.10)	0.04	645.01	0.35	.730	0.11

Note. This table contains estimates (*Estimate*) of the difference in estimated mean threat discrimination (threat cue minus safety cue) between the iso-total and the iso-with-media sessions. Estimates are separated by cue (threat, safety), phase (pre-acquisition, acquisition, extinction, retention) and measure (arousal, valence, electrodermal activity). Standard errors (*SE*), degrees of freedom (*df*), *t*-values (*t*), *p*-values (*p*) and effect sizes (*d*) of these contrasts are reported. Reported statistics are derived from estimated marginal means. Statistics in bold represent significant results with a Bonferroni multiple comparison correction of $p < .005$

Appendix B

Deviations from Preregistration

The preregistration for this study can be found at https://doi.org/10.17605/OSF.IO/KBGSV. Please note that while we used the term 'fear learning' in the preregistration, we use the more updated term 'threat learning' throughout the manuscript (see LeDoux, 2014 for a discussion of terminology). All mentions of 'fear learning' in the preregistration refer to the tasks, materials, data and analyses discussed in this paper. We use the term 'iso-media' in the preregistration for the isolation session where participants were allowed virtual social interactions, but we call this 'iso-with-media' in the manuscript.

Hypotheses

The preregistered hypotheses relating to this paper were as follows:

- **H5 – Fear learning:** Isolation will heighten fear learning and attenuate fear extinction and fear extinction retention, as measured by skin conductance responses (SCR; electrodermal activity [EDA]) responses and self report ratings during a fear conditioning task.
- **H7 – Social media use:** Social media use during isolation will remediate the effects of isolation on fear learning.

Analyses

Planned

The planned analyses relating to this paper were as follows (organised according to hypothesis):

- **H5 and H7 – Fear learning (behavioural):** In the fear learning task, participants provide subjective reports (valence and arousal ratings; markers of fear learning) for each condition (threat versus safety cue) across each phase of the task

(pre-acquisition, post-acquisition, post-extinction and extinction retention [10 mins post-extinction]) and across each session (baseline, iso-total, and iso-media). To compare differences in these responses associated with our experimental manipulations, we will use separate mixed effects models (for valence and arousal ratings as separate outcomes). We will test for differences between sessions by estimating the fixed effects of condition (threat and safety), phase (acquisition, extinction and extinction retention) and session (baseline, iso-total and iso-media) with subject included as a random effect. We will also investigate condition by phase by session interactions to determine whether isolation differentially influences responses to threat and safety cues across acquisition, extinction and extinction retention.

- **H5 and H7 – Fear learning (physiological):** Fear Learning (physiological). We will use a model based approach to estimate sympathetic arousal (SA; a marker of fear learning) from skin conductance response (SCR; Bach, 2014). We will employ a general linear convolution model (GLM) approach using PsychoPhysiologicalModelling software (PsPM) on the data from the last half of each learning phase (acquisition, extinction and extinction retention; Bach et al., 2018). To compare differences in these responses to our experimental manipulation, we will use mixed effects models to test for differences between sessions by estimating the fixed effects of condition (threat and safety), phase (acquisition, extinction and extinction retention) and session (baseline, iso-total and iso-media) with subject included as a random effect. We will also investigate condition by phase by session interactions to determine whether isolation differentially influences responses to threat and safety cues across acquisition, extinction, and extinction retention.

Completed

The completed analyses relating to this paper were as follows (organised according to hypothesis):

- **H5 and H7 - Fear Learning (behavioural):** These planned analyses were adhered to as preregistered.
- **H5 and H7 – Fear learning (physiological):** The analysis plan regarding the physiological data deviated only in the preprocessing method. In our preregistration, we stated that we planned to preprocess the physiological data using a model based approach. However, a more traditional peak scoring method worked better with our data. Therefore, Instead of PsPM we utilised NeuroKit2 (Makowski et al., 2021) to preprocess the data. Otherwise, the statistical analyses were adhered to as preregistered.

Appendix C

Task Information

Threat Learning Task (Shapes Task)

In this study, participants completed a threat learning task comprised of three parts — acquisition, extinction, and retention. CS stimuli were comprised of shape pairs. Shape pairs were either be a blue rectangle (350 px by 250 px) and yellow triangle (250 px by 250 px), a green star (250 px by 250 px) and red oval (250 px by 350 px), or a purple hexagon (250 px by 250 px) and an orange square (250 px by 250 px). Pairs were held stable across participants and selected for their discriminability in shape and color. Opacity of the shapes was set to 80% to reduce eyestrain. Which shape was assigned as CS+ and CS- was counterbalanced. As this study was repeated over three sessions the order of the pairs was counterbalanced across participants. The US stimulus was an aversive metal scraping sound set at each participant's maximum tolerable volume. Participants made valence and arousal ratings of the CS at several points in the task. Participants made valence and arousal ratings of the US at the end of the task. CS ratings were made before conditioning, after conditioning, after extinction, and before retention. For valence, participants were asked "How unpleasant/pleasant do you find this shape (sound)?". Participants rated valence from 1, very pleasant, to 9, very unpleasant. For arousal, participants were asked "How anxious does this shape (sound) make you feel?". Participants rated arousal from 1, not anxious, to 9, very anxious. Just above the rating scales, tick marks were accompanied by figures from the Self-Assessment Manikin (Bradley and Lang, 1994) for anchors 1,3,5,7, and 9. Several studies have used the Self-Assessment Manikin figures to accompany rating scales (Craske et al., 2008; Tzschoppe et al., 2014; Waters and Pine, 2016). The majority of studies which used these figures did so accompanying a 9-point likert scale. Between acquisition trials, an intertrial interval with a fixation cross was displayed. A minimum intertrial interval of 7 seconds is typically necessary (using traditional peak scoring methods) as the skin conductance response is relatively slow, though it is possible to

reduce the necessary intertrial interval by deconvolving responses using more novel methods (Bach et al., 2013; Staib et al., 2015). Stimuli blocks were presented in a randomized order so that no CS would be presented more than twice in a row. After acquisition, participants were asked about contingency awareness — they were shown both CS's on the screen side-by-side and asked to select which shape was followed by the sound (pressed either 1 to indicate the left shape, or 0 to indicate the right shape). Whether arousal or valence was rated first for the CS and US ratings, whether the CS+ or the CS- was rated first for the CS ratings, and which side the CS+ was displayed on for the contingency rating were random.

The task was constructed based on recommendations from a review on the design of differential threat conditioning and extinction experiments in youth (Ryan et al., 2019). The task was most closely based on the design by (Meyer et al., 2019). Neutral stimuli — geometric figures of varying shape and color — were chosen as the conditioned stimuli (CS). The unconditioned stimulus (US) was a metal scraping on slate sound that has been used successfully in various studies with adolescent populations (Neumann Waters, 2006). The aversive sound (US) was calibrated to each participant's maximum tolerable volume using Audacity. We asked participants to indicate when the sound was loud and aversive — but not painful. Computer volume remained on the maximum tolerable volume throughout the session and maximum volume was entered into the task setup code for recording purposes. To minimize participant contact for the isolation study — this maximum volume was calculated at baseline and was used for the remaining two sessions (set up before participant arrival).

Two dependent measures, electrodermal activity and subjective responses, were included. Electrodermal activity is the most common 'objective' measure of threat conditioning used in the research literature, and subjective responses are often paired with more objective measures.

The tasks were built in Python using PsychoPy version 2020.2.5 (Peirce et al.,

2019). Electrodermal activity was measured from the participant's left hand.

Task Flow

- Part 0
  - US calibration
- Part 1
  - Instructions 1 - Participants were welcomed to the shapes task. Told that they would answer a few questions and to press the spacebar to begin.
  - CS ratings
  - Instructions 2 - Participants were told they would see different colored shapes, and that some of the shapes would be followed by a sound. They were told that after some time, a grey dot would appear in the centre of the shape. We told them that we wanted to see how fast they could respond, so when they saw the grey dot, to press the spacebar as quickly as possible. They were told that their button press did not affect whether or not they heard the sound. They were then instructed to press the spacebar to start.
  - Trials - acquisition 8 Blocks of 3 trials (24 trials in total; 8 CS+, 8 CS+ no sound, and 8 CS-). The CS was presented for 1.5 seconds and for CS+ trials, coterminated with a 0.5 second presentation of the US. The first and last presentation of the CS+ was always accompanied by the US. Intertrial intervals were set at 7 seconds.
  - Contingency rating
  - CS ratings
- Part 2
  - Trials - recall 4 trials total (2 CS+ and 2 CS-) were presented after ratings as a brief recall section

  - Trials - extinction 16 trials total (8 CS+ no sound and 8 CS-)
  - CS ratings

- Part 3
  - CS ratings
  - Trials - retention 16 trials total (8 CS+ no sound and 8 CS-)
  - Trials - renewal 4 trials total (2 CS+ and 2 CS-) were presented after ratings as a brief renewal section
  - US ratings

Task Settings

- For shapes_part_1:
  - Acquisition loop was set to 24
  - Recall loop should was set to 2
  - Extinction loop should was set to 8

- For shapes_part_2:
  - Retention loop was set to 8
  - Renewal loop was set to 2

- For both:
  - ITI is set to 7s
  - ISI (SOA) is 1.5s
  - US is 0.5s

Physiology

- Channel 1 - Other (start/stop, instructions, cs & us ratings, contingency)
- Channel 2 - CS+ (sound)
- Channel 3 - CS+ (no sound)
- Channel 4 - CS-
- Channel 5 - US
- Channel 6 - iti
- Channel 7 - break / fixation

Task Diagrams

Figure C1

Task Diagram (Simplified)

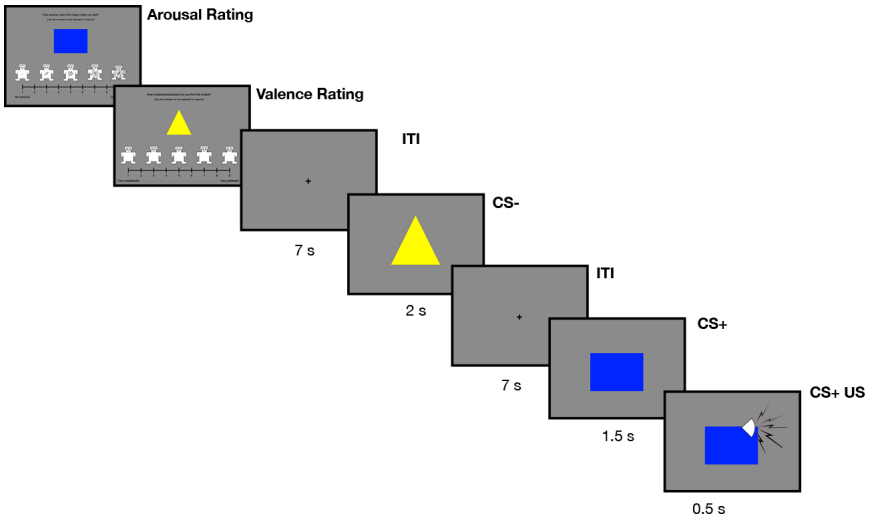
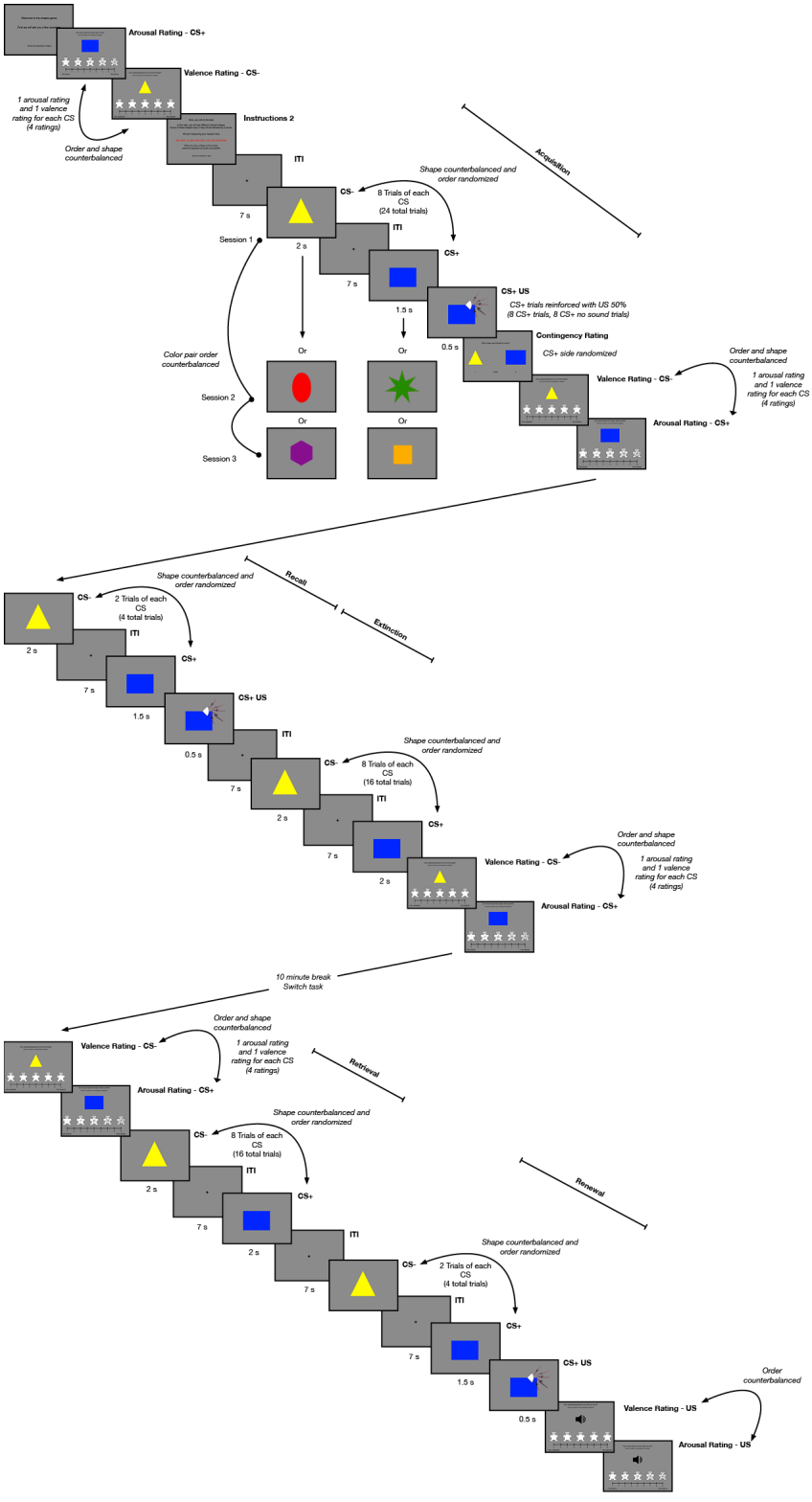


Figure C2

Task Diagram (Full)



Appendix D

Virtual Social Interactions

Most participants used social media (35 out of 40), with texting being the most common form of interaction (37 out of 40). Other popular platforms included Snapchat, Instagram, and WhatsApp. Participants mainly connected virtually with friends (38), followed by family (19), romantic partners (13), and acquaintances (4).

Appendix E

Unconditioned Stimulus

To determine whether increases in threat responding were specific to threat learning and not to threat perception (i.e., perceiving the aversive sound itself as more threatening after isolation), at each session we also collected data on the aversive sound (unconditioned stimulus [US]) on its own. Participants rated the aversive sound (unconditioned stimulus [US]) as moderately anxiety provoking and unpleasant in all three sessions (arousal: $M_{baseline} = 5.98, SD = 2.39, M_{iso-with-media} = 6.46, SD = 2.01, M_{iso-total} = 6.67, SD = 2.29$; valence: $M_{baseline} = 7.39, SD = 1.20, M_{iso-with-media} = 7.59, SD = 1.14, M_{iso-total} = 7.90, SD = 1.25$). There were no significant differences in ratings of the aversive sound (arousal ratings nor valence ratings) between the three sessions. Electrodermal activity to the aversive sound was also similar across the three sessions (unconditioned stimulus [US]; $M_{baseline} = 0.26, SD = 0.20, M_{iso-with-media} = 0.31, SD = 0.38, M_{iso-total} = 0.25, SD = 0.26$) and there were no significant differences in electrodermal activity to the aversive sound between any of the sessions.

Appendix F

Sensitivity Analyses

Order Effects

In this study, there were three sessions (baseline, iso-with-media and iso-total). Baseline was always the first session and the order of iso-total and iso-with-media was counterbalanced across participants. Thus, iso-with-media was session two for half the participants and session three for the other half (and vice versa for iso-total). We added session number as a variable (factor) in our original models (arousal ratings, valence ratings, electrodermal activity) as a sensitivity analysis to assess potential order effects. The command for this model was: lmer(response = session number + session*phase*cue + (1 | participant)). We did not find any effect of session number on any of our three responses, while all other reported effects remained. As a second check, we ran our original models with session number instead of session type included in the three-way interaction. As baseline was always completed first, session number one was excluded from the model in order to assess potential order effects between the two counterbalanced sessions. The command for this model was: lmer(response = session number*phase*cue + (1 | participant)). We did not find any effect of session number on any of our three responses. Further, threat learning tasks have shown test-retest reliability (particularly at shorter retest intervals such as those implemented in the current study; Cooper et al., 2023) and there is reason to believe that repeating a threat learning task might theoretically reduce (not heighten – as we observed in the current study) the learned threat response due to exposure and habituation (Lonsdorf et al., 2017).

Attention Checks

Two attention checks were included in the threat learning task (see methods for details). The first required participants to press the spacebar when a grey dot appeared in the centre of the shape stimuli. The second attention check required participants to correctly identify which shape stimulus was followed by the aversive sound. Participants

displayed high levels of attention throughout the task, responding to over 85% of attention checks in all sessions ($M_{baseline} = 86.50\%, SD = 10.73\%, M_{iso-with-media} = 85.47\%, SD = 7.79\%, M_{iso-total} = 85.56\%, SD = 9.43\%$). Further, over 85% of participants correctly identified which shape was followed by the aversive sound at each session ($M_{baseline} = 85.71\%, SD = 35.42\%, M_{iso-with-media} = 100\%, SD = 0\%, M_{iso-total} = 95\%, SD = 22.07\%$). Participants were not excluded from the main analyses based on their performance on these attention checks. We performed sensitivity analyses where we excluded participants who did not correctly identify which shape stimulus was followed by the aversive sound and those who responded significantly less frequently than the group average when seeing the grey dot. Excluding data based on either of these attention check criteria did not change the overall pattern of results.

Appendix G

Software

Questionnaires were administered using Qualtrics (Qualtrics, 2005) and REDCap (Harris et al., 2009; Harris et al., 2019). The threat learning task programmed using PsychoPy (Peirce et al., 2019). Electrodermal activity data was preprocessed using NeuroKit2 (Makowski et al., 2021). Statistical analyses were carried out using R (R Core Team, 2019) and SPSS (IBM Corp., 2021). Data were cleaned and processed using the package 'tidyverse' (Wickham et al., 2019). Linear mixed effects models were calculated using the packages 'lme4' and 'lmerTest' (Bates et al., 2015; Kuznetsova et al., 2017). Estimated marginal means and errors were calculated using the package 'Emmeans' (Lenth et al., 2018). Tables and figures were created using the packages 'ggplot2', 'kableExtra' and 'papaja' (Aust and Barth, 2023; Wickham, 2016; Zhu et al., 2021). Data were exported for analysis in SPSS using the packages 'haven' and 'expss' (Demin et al., 2023; Wickham et al., 2023).

Appendix H

Mechanisms

The following pages contain the SPSS outputs from the parallel multiple mediation analyses using MEMORE (Montoya and Hayes, 2017). Mediators are labelled M1 - M6.

M1 = loneliness

M2 = boredom

M3 = social activity craving

M4 = positive mood

M5 = negative mood

M6 = state anxiety

preacquisition arousal threat

```
Run MATRIX procedure:

***************** MEMORE Procedure for SPSS Version 2.1 *********************

                        Written by Amanda Montoya

                  Documentation available at akmontoya.com

**************************************************************************************

Model:
  1

Variables:
Y =   tpa_t    mpa_t
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =          tpa_t     -       mpa_t
M1diff =         t_l       -       m_l
M2diff =         t_b       -       m_b
M3diff =         t_sc      -       m_sc
M4diff =         t_mp      -       m_mp
M5diff =         t_mn      -       m_mn
M6diff =         t_sa      -       m_sa
M1avg  = (       t_l       +       m_l      )       /2       Centered
M2avg  = (       t_b       +       m_b      )       /2       Centered
M3avg  = (       t_sc      +       m_sc     )       /2       Centered
M4avg  = (       t_mp      +       m_mp     )       /2       Centered
M5avg  = (       t_mn      +       m_mn     )       /2       Centered
M6avg  = (       t_sa      +       m_sa     )       /2       Centered

Sample Size:
  35

**************************************************************************************
Outcome: Ydiff =  tpa_t     -       mpa_t

Model
```

```
------
        Effect         SE          t          p       LLCI       ULCI
'X'      -.286       .300      -.952       .348      -.896       .324

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M1diff = t_l       -       m_l
```

```
Model
        Effect         SE          t          p       LLCI       ULCI
'X'     11.543      3.520      3.279       .002      4.389     18.697

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     16.371      4.638      3.530       .001      6.945     25.798

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .171      3.644       .047       .963     -7.234      7.577

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -1.000       .831     -1.203       .237     -2.689       .689

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************
Outcome: M5diff = t_mn      -       m_mn

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .143       .221       .645       .523      -.307       .593

Degrees of freedom for all regression coefficient estimates:
  34
```

```
**************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'        .571      1.367       .418       .678     -2.206      3.349

Degrees of freedom for all regression coefficient estimates:
```

```
  34

*************************************************************************
Outcome: Ydiff =  tpa_t     -       mpa_t

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .546       .298      3.417       .780     12.000     22.000       .665

Model
            coeff         SE          t          p       LLCI       ULCI
'X'         -.089       .409      -.217       .830      -.938       .760
M1diff       .013       .021       .643       .527      -.029       .056
M2diff      -.010       .016      -.598       .556      -.044       .024
M3diff      -.018       .021      -.878       .390      -.061       .025
M4diff       .227       .107      2.123       .045       .005       .449
M5diff      -.027       .273      -.100       .921      -.595       .540
M6diff       .077       .051      1.495       .149      -.030       .183
M1avg       -.001       .022      -.062       .951      -.046       .043
M2avg       -.002       .026      -.090       .929      -.055       .051
M3avg        .004       .015       .263       .795      -.027       .035
M4avg       -.020       .065      -.311       .758      -.155       .114
M5avg        .070       .327       .214       .833      -.607       .747
M6avg       -.065       .078      -.833       .414      -.226       .096

Degrees of freedom for all regression coefficient estimates:
  22

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      -.286       .300      -.952     34.000       .348      -.896       .324

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      -.089       .409      -.217     22.000       .830      -.938       .760

Indirect Effect of X on Y through M
          Effect     BootSE   BootLLCI   BootULCI
Ind1        .153       .359      -.378      1.039
Ind2       -.160       .415     -1.139       .529
Ind3       -.003       .125      -.326       .218
Ind4       -.227       .245      -.780       .211
Ind5       -.004       .110      -.189       .253
Ind6        .044       .137      -.210       .361
Total      -.197       .441     -1.051       .764
```

```
Indirect Key
Columns   1 -  14
Ind1   'X'      ->       M1diff   ->       Ydiff
Ind2   'X'      ->       M2diff   ->       Ydiff
Ind3   'X'      ->       M3diff   ->       Ydiff
Ind4   'X'      ->       M4diff   ->       Ydiff
Ind5   'X'      ->       M5diff   ->       Ydiff
Ind6   'X'      ->       M6diff   ->       Ydiff
```

```
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6

***************************** ANALYSIS NOTES AND WARNINGS ******************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  5

Bootstrap confidence interval method used: Percentile bootstrap.

Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

preacquisition arousal safety

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 **********************

                          Written by Amanda Montoya

                   Documentation available at akmontoya.com

***************************************************************************************

Model:
  1
```

```
Variables:
Y =   tpa_s    mpa_s
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
```

```
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           tpa_s     -       mpa_s
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l      )        /2       Centered
M2avg  = (        t_b       +       m_b      )        /2       Centered
M3avg  = (        t_sc      +       m_sc     )        /2       Centered
M4avg  = (        t_mp      +       m_mp     )        /2       Centered
M5avg  = (        t_mn      +       m_mn     )        /2       Centered
M6avg  = (        t_sa      +       m_sa     )        /2       Centered

Sample Size:
  35

*************************************************************************************
Outcome: Ydiff =  tpa_s     -       mpa_s

Model
        Effect         SE          t          p       LLCI       ULCI
'X'      -.057       .335      -.170       .866      -.739       .625

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************************
Outcome: M1diff = t_l       -       m_l

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     11.543      3.520      3.279       .002      4.389     18.697

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     16.371      4.638      3.530       .001      6.945     25.798

Degrees of freedom for all regression coefficient estimates:
```

34

```
*************************************************************************
Outcome: M3diff = t_sc       -       m_sc

Model
        Effect          SE           t           p        LLCI        ULCI
'X'        .171       3.644        .047        .963      -7.234       7.577
```

```
Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -1.000       .831     -1.203       .237     -2.689       .689

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M5diff = t_mn      -       m_mn

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .143       .221       .645       .523      -.307       .593

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .571      1.367       .418       .678     -2.206      3.349

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: Ydiff =  tpa_s     -       mpa_s

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .519       .269      4.446       .676     12.000     22.000       .756

Model
            coeff         SE          t          p       LLCI       ULCI
'X'         -.294       .467      -.629       .536     -1.262       .675
M1diff      -.026       .024     -1.116       .276      -.075       .023
M2diff       .039       .019      2.079       .050       .000       .077
M3diff      -.008       .024      -.339       .738      -.057       .041
M4diff       .094       .122       .771       .449      -.159       .347
```

M5diff	-.209	.312	-.669	.510	-.856	.438
M6diff	.055	.059	.946	.354	-.066	.177
M1avg	.002	.025	.085	.933	-.049	.053
M2avg	-.002	.029	-.060	.953	-.062	.059
M3avg	-.012	.017	-.693	.496	-.048	.024
M4avg	-.024	.074	-.318	.753	-.177	.130
M5avg	-.101	.372	-.270	.789	-.873	.672
M6avg	-.061	.089	-.688	.499	-.245	.123

```
Degrees of freedom for all regression coefficient estimates:
  22

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      -.057       .335      -.170     34.000       .866      -.739       .625

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      -.294       .467      -.629     22.000       .536     -1.262       .675

Indirect Effect of X on Y through M
          Effect     BootSE   BootLLCI   BootULCI
Ind1       -.303       .339     -1.105       .264
Ind2        .633       .382      -.096      1.403
Ind3       -.001       .107      -.241       .210
Ind4       -.094       .191      -.570       .200
Ind5       -.030       .165      -.489       .165
Ind6        .032       .135      -.238       .326
Total       .237       .497     -1.004       .993

Indirect Key
Columns   1 -  14
Ind1  'X'      ->       M1diff   ->       Ydiff
Ind2  'X'      ->       M2diff   ->       Ydiff
Ind3  'X'      ->       M3diff   ->       Ydiff
Ind4  'X'      ->       M4diff   ->       Ydiff
Ind5  'X'      ->       M5diff   ->       Ydiff
Ind6  'X'      ->       M6diff   ->       Ydiff
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6

***************************** ANALYSIS NOTES AND WARNINGS *****************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  5

Bootstrap confidence interval method used: Percentile bootstrap.
```

```
Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
```

```
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

preacquisition arousal discrimination

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 **********************

                          Written by Amanda Montoya

                    Documentation available at akmontoya.com

***************************************************************************************

Model:
  1

Variables:
Y =   tpa_d    mpa_d
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           tpa_d     -       mpa_d
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l      )        /2       Centered
M2avg  = (        t_b       +       m_b      )        /2       Centered
M3avg  = (        t_sc      +       m_sc     )        /2       Centered
M4avg  = (        t_mp      +       m_mp     )        /2       Centered
M5avg  = (        t_mn      +       m_mn     )        /2       Centered
M6avg  = (        t_sa      +       m_sa     )        /2       Centered
```

Sample Size:
  35

****
Outcome: Ydiff = tpa_d   -   mpa_d

Model

```
        Effect         SE          t          p       LLCI       ULCI
'X'      -.229       .492      -.464       .645     -1.229       .772

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M1diff = t_l       -       m_l

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     11.543      3.520      3.279       .002      4.389     18.697

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     16.371      4.638      3.530       .001      6.945     25.798

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .171      3.644       .047       .963     -7.234      7.577

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -1.000       .831     -1.203       .237     -2.689       .689

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M5diff = t mn      -       m mn
```

Model

	Effect	SE	t	p	LLCI	ULCI
'X'	.143	.221	.645	.523	-.307	.593

Degrees of freedom for all regression coefficient estimates:
34

```
*************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .571      1.367       .418       .678     -2.206      3.349

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: Ydiff =  tpa_d     -       mpa_d

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .512       .262      9.668       .651     12.000     22.000       .778

Model
            coeff         SE          t          p       LLCI       ULCI
'X'          .205       .689       .297       .769     -1.224      1.633
M1diff       .039       .035      1.139       .267      -.032       .111
M2diff      -.048       .027     -1.765       .091      -.105       .008
M3diff      -.010       .035      -.292       .773      -.082       .062
M4diff       .133       .180       .740       .467      -.240       .506
M5diff       .181       .460       .394       .697      -.773      1.135
M6diff       .021       .086       .247       .807      -.158       .200
M1avg       -.003       .036      -.095       .926      -.078       .072
M2avg       -.001       .043      -.013       .990      -.090       .089
M3avg        .016       .025       .626       .538      -.037       .068
M4avg        .003       .109       .031       .976      -.223       .229
M5avg        .170       .549       .310       .759      -.969      1.309
M6avg       -.004       .131      -.029       .977      -.275       .267

Degrees of freedom for all regression coefficient estimates:
  22

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      -.229       .492      -.464     34.000       .645     -1.229       .772

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
       .205       .689       .297     22.000       .769     -1.224      1.633

Indirect Effect of X on Y through M
          Effect     BootSE   BootLLCI   BootULCI
```

Ind1	.456	.531	-.212	1.847
Ind2	-.792	.568	-2.043	.192
Ind3	-.002	.157	-.382	.293
Ind4	-.133	.281	-.730	.446
Ind5	.026	.219	-.233	.635
Ind6	.012	.144	-.248	.358
Total	-.433	.695	-1.551	1.257

```
Indirect Key
Columns   1 -  14
Ind1   'X'      ->       M1diff   ->       Ydiff
Ind2   'X'      ->       M2diff   ->       Ydiff
Ind3   'X'      ->       M3diff   ->       Ydiff
Ind4   'X'      ->       M4diff   ->       Ydiff
Ind5   'X'      ->       M5diff   ->       Ydiff
Ind6   'X'      ->       M6diff   ->       Ydiff
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6

***************************** ANALYSIS NOTES AND WARNINGS *****************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  5

Bootstrap confidence interval method used: Percentile bootstrap.

Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

preacquisition valence threat

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 **********************
```

Written by Amanda Montoya

Documentation available at akmontoya.com

```
********************************************************************************

Model:
  1
```

```
Variables:
Y =   tpv_t    mpv_t
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           tpv_t     -       mpv_t
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l      )        /2       Centered
M2avg  = (        t_b       +       m_b      )        /2       Centered
M3avg  = (        t_sc      +       m_sc     )        /2       Centered
M4avg  = (        t_mp      +       m_mp     )        /2       Centered
M5avg  = (        t_mn      +       m_mn     )        /2       Centered
M6avg  = (        t_sa      +       m_sa     )        /2       Centered

Sample Size:
  35

*************************************************************************************
Outcome: Ydiff =  tpv_t     -       mpv_t

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .229       .398       .575       .569      -.580      1.037

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************************
Outcome: M1diff = t_l       -       m_l

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     11.543      3.520      3.279       .002      4.389     18.697

Degrees of freedom for all regression coefficient estimates:
  34
```

```
**************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     16.371      4.638      3.530       .001      6.945     25.798

Degrees of freedom for all regression coefficient estimates:
```

```
  34

*************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .171      3.644       .047       .963     -7.234      7.577

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -1.000       .831     -1.203       .237     -2.689       .689

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M5diff = t_mn      -       m_mn

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .143       .221       .645       .523      -.307       .593

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .571      1.367       .418       .678     -2.206      3.349

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: Ydiff =  tpv_t     -       mpv_t

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .498       .248      6.432       .604     12.000     22.000       .816
```

Model

	coeff	SE	t	p	LLCI	ULCI
'X'	.462	.562	.822	.420	-.703	1.627
M1diff	-.003	.028	-.123	.903	-.062	.055
M2diff	-.002	.022	-.097	.924	-.049	.044
M3diff	-.020	.028	-.701	.491	-.079	.039
M4diff	.213	.147	1.455	.160	-.091	.518

```
M5diff       .200       .375       .532       .600      -.579       .978
M6diff       .053       .070       .758       .457      -.093       .199
M1avg        .036       .030      1.235       .230      -.025       .098
M2avg       -.036       .035     -1.031       .314      -.109       .037
M3avg        .006       .021       .268       .791      -.037       .048
M4avg       -.009       .089      -.099       .922      -.193       .176
M5avg        .092       .448       .206       .839      -.837      1.021
M6avg       -.003       .107      -.030       .977      -.224       .218

Degrees of freedom for all regression coefficient estimates:
  22

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
       .229       .398       .575     34.000       .569      -.580      1.037

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
       .462       .562       .822     22.000       .420      -.703      1.627

Indirect Effect of X on Y through M
         Effect     BootSE   BootLLCI   BootULCI
Ind1       -.040       .486     -1.177       .694
Ind2       -.035       .550      -.953      1.283
Ind3       -.003       .152      -.334       .336
Ind4       -.213       .256      -.759       .259
Ind5        .029       .195      -.373       .460
Ind6        .030       .125      -.251       .282
Total      -.233       .523     -1.366       .739

Indirect Key
Columns   1 -  14
Ind1   'X'      ->       M1diff   ->       Ydiff
Ind2   'X'      ->       M2diff   ->       Ydiff
Ind3   'X'      ->       M3diff   ->       Ydiff
Ind4   'X'      ->       M4diff   ->       Ydiff
Ind5   'X'      ->       M5diff   ->       Ydiff
Ind6   'X'      ->       M6diff   ->       Ydiff
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6
```

```
***************************** ANALYSIS NOTES AND WARNINGS ******************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  5

Bootstrap confidence interval method used: Percentile bootstrap.
```

```
Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

preacquisition valence safety

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 **********************

                           Written by Amanda Montoya

                     Documentation available at akmontoya.com

***************************************************************************************

Model:
  1

Variables:
Y =   tpv_s    mpv_s
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           tpv_s     -       mpv_s
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
```

```
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l       )       /2      Centered
M2avg  = (        t_b       +       m_b       )       /2      Centered
M3avg  = (        t_sc      +       m_sc      )       /2      Centered
M4avg  = (        t_mp      +       m_mp      )       /2      Centered
M5avg  = (        t_mn      +       m_mn      )       /2      Centered
M6avg  = (        t_sa      +       m_sa      )       /2      Centered
```

```
Sample Size:
  35

*************************************************************************
Outcome: Ydiff =  tpv_s     -       mpv_s

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .086       .392       .219       .828      -.711       .882

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M1diff = t_l       -       m_l

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     11.543      3.520      3.279       .002      4.389     18.697

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     16.371      4.638      3.530       .001      6.945     25.798

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .171      3.644       .047       .963     -7.234      7.577

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
```

```
        Effect         SE          t          p       LLCI       ULCI
'X'     -1.000       .831     -1.203       .237     -2.689       .689

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M5diff = t_mn      -       m_mn
```

```
Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .143       .221       .645       .523      -.307       .593

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .571      1.367       .418       .678     -2.206      3.349

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: Ydiff =  tpv_s     -       mpv_s

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .460       .211      6.551       .491     12.000     22.000       .898

Model
            coeff         SE          t          p       LLCI       ULCI
'X'          .257       .567       .454       .654       -.918      1.433
M1diff      -.049       .029     -1.731       .098       -.109       .010
M2diff       .028       .023      1.232       .231       -.019       .075
M3diff      -.016       .029      -.574       .572       -.076       .043
M4diff       .109       .148       .735       .470       -.198       .416
M5diff       .036       .379       .096       .924       -.749       .822
M6diff       .086       .071      1.217       .237       -.061       .234
M1avg        .009       .030       .303       .765       -.053       .071
M2avg       -.022       .035      -.634       .533       -.096       .051
M3avg        .001       .021       .052       .959       -.042       .044
M4avg       -.025       .090      -.278       .784       -.211       .161
M5avg       -.354       .452      -.784       .441      -1.292       .583
M6avg        .037       .108       .340       .737       -.186       .259

Degrees of freedom for all regression coefficient estimates:
  22

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
```

```
      .086       .392       .219     34.000       .828      -.711       .882

Direct effect of X on Y
    Effect         SE          t         df          p       LLCI       ULCI
      .257       .567       .454     22.000       .654      -.918      1.433

Indirect Effect of X on Y through M
         Effect     BootSE   BootLLCI   BootULCI
```

```
Ind1       -.570       .502     -1.848       .097
Ind2        .455       .536      -.309      1.835
Ind3       -.003       .166      -.327       .381
Ind4       -.109       .243      -.680       .340
Ind5        .005       .187      -.515       .268
Ind6        .049       .160      -.262       .421
Total      -.172       .586     -1.442       .900

Indirect Key
Columns   1 -  14
Ind1   'X'      ->       M1diff   ->       Ydiff
Ind2   'X'      ->       M2diff   ->       Ydiff
Ind3   'X'      ->       M3diff   ->       Ydiff
Ind4   'X'      ->       M4diff   ->       Ydiff
Ind5   'X'      ->       M5diff   ->       Ydiff
Ind6   'X'      ->       M6diff   ->       Ydiff
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6

***************************** ANALYSIS NOTES AND WARNINGS ******************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  5

Bootstrap confidence interval method used: Percentile bootstrap.

Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

preacquisition valence discrimination

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 ***********************
```

Written by Amanda Montoya

Documentation available at akmontoya.com

```
**************************************************************************

Model:
  1

Variables:
Y =   tpv_d    mpv_d
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           tpv_d     -       mpv_d
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l      )        /2       Centered
M2avg  = (        t_b       +       m_b      )        /2       Centered
M3avg  = (        t_sc      +       m_sc     )        /2       Centered
M4avg  = (        t_mp      +       m_mp     )        /2       Centered
M5avg  = (        t_mn      +       m_mn     )        /2       Centered
M6avg  = (        t_sa      +       m_sa     )        /2       Centered

Sample Size:
  35

**************************************************************************
Outcome: Ydiff =  tpv_d     -       mpv_d

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .143       .391       .365       .717      -.653       .938

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************
Outcome: M1diff = t_l       -       m_l
```

Model

	Effect	SE	t	p	LLCI	ULCI
'X'	11.543	3.520	3.279	.002	4.389	18.697

Degrees of freedom for all regression coefficient estimates:
34

```
**************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     16.371      4.638      3.530       .001      6.945     25.798

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .171      3.644       .047       .963     -7.234      7.577

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -1.000       .831     -1.203       .237     -2.689       .689

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************
Outcome: M5diff = t_mn      -       m_mn

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .143       .221       .645       .523      -.307       .593

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .571      1.367       .418       .678     -2.206      3.349

Degrees of freedom for all regression coefficient estimates:
```

34

```
*************************************************************************
Outcome: Ydiff =  tpv_d     -       mpv_d

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .582       .338      5.482       .938     12.000     22.000       .530
```

Model

	coeff	SE	t	p	LLCI	ULCI
'X'	.205	.519	.395	.697	-.871	1.280
M1diff	.046	.026	1.759	.092	-.008	.100
M2diff	-.030	.021	-1.452	.161	-.073	.013
M3diff	-.003	.026	-.132	.896	-.058	.051
M4diff	.105	.135	.772	.448	-.176	.386
M5diff	.163	.346	.471	.642	-.555	.882
M6diff	-.033	.065	-.509	.616	-.168	.102
M1avg	.027	.027	1.006	.325	-.029	.084
M2avg	-.014	.032	-.423	.676	-.081	.054
M3avg	.004	.019	.234	.817	-.035	.044
M4avg	.016	.082	.196	.846	-.154	.186
M5avg	.447	.414	1.080	.292	-.411	1.304
M6avg	-.040	.098	-.404	.690	-.244	.164

Degrees of freedom for all regression coefficient estimates:
22

********** TOTAL, DIRECT, AND INDIRECT EFFECTS **********

Total effect of X on Y

Effect	SE	t	df	p	LLCI	ULCI
.143	.391	.365	34.000	.717	-.653	.938

Direct effect of X on Y

Effect	SE	t	df	p	LLCI	ULCI
.205	.519	.395	22.000	.697	-.871	1.280

Indirect Effect of X on Y through M

	Effect	BootSE	BootLLCI	BootULCI
Ind1	.530	.356	-.107	1.295
Ind2	-.491	.491	-1.605	.345
Ind3	-.001	.132	-.289	.247
Ind4	-.105	.188	-.487	.291
Ind5	.023	.174	-.197	.506
Ind6	-.019	.126	-.360	.173
Total	-.062	.512	-1.150	.882

Indirect Key
Columns 1 - 14

Ind1	'X'	->	M1diff	->	Ydiff
Ind2	'X'	->	M2diff	->	Ydiff
Ind3	'X'	->	M3diff	->	Ydiff
Ind4	'X'	->	M4diff	->	Ydiff
Ind5	'X'	->	M5diff	->	Ydiff
Ind6	'X'	->	M6diff	->	Ydiff

```
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6
```

```
***************************** ANALYSIS NOTES AND WARNINGS *****************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  5

Bootstrap confidence interval method used: Percentile bootstrap.

Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

acquisition arousal threat

```
Run MATRIX procedure:

******************** MEMORE Procedure for SPSS Version 2.1 **********************

                          Written by Amanda Montoya

                    Documentation available at akmontoya.com

***************************************************************************************

Model:
  1

Variables:
Y =   taa_t    maa_t
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
```

```
                _          _
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           taa_t     -       maa_t
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
```

```
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l       )       /2       Centered
M2avg  = (        t_b       +       m_b       )       /2       Centered
M3avg  = (        t_sc      +       m_sc      )       /2       Centered
M4avg  = (        t_mp      +       m_mp      )       /2       Centered
M5avg  = (        t_mn      +       m_mn      )       /2       Centered
M6avg  = (        t_sa      +       m_sa      )       /2       Centered

Sample Size:
  35

**************************************************************************************
Outcome: Ydiff =  taa_t     -       maa_t

Model
        Effect         SE          t          p       LLCI       ULCI
'X'      -.029       .305      -.094       .926      -.649       .592

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M1diff = t_l       -       m_l

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     11.543      3.520      3.279       .002      4.389     18.697

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     16.371      4.638      3.530       .001      6.945     25.798

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .171      3.644       .047       .963     -7.234      7.577
```

```
Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
```

```
        Effect         SE          t          p       LLCI       ULCI
'X'     -1.000       .831     -1.203       .237     -2.689       .689

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************************
Outcome: M5diff = t_mn      -       m_mn

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .143       .221       .645       .523      -.307       .593

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .571      1.367       .418       .678     -2.206      3.349

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************************
Outcome: Ydiff =  taa_t     -       maa_t

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .593       .351      3.273       .992     12.000     22.000       .486

Model
            coeff         SE          t          p       LLCI       ULCI
'X'         -.188       .401      -.470       .643     -1.019       .643
M1diff       .044       .020      2.188       .040       .002       .086
M2diff      -.021       .016     -1.303       .206      -.054       .012
M3diff       .005       .020       .238       .814      -.037       .047
M4diff       .074       .105       .703       .489      -.143       .291
M5diff       .204       .268       .763       .454      -.351       .759
M6diff       .060       .050      1.193       .246      -.044       .164
M1avg        .009       .021       .448       .658      -.034       .053
M2avg       -.001       .025      -.047       .963      -.053       .051
M3avg       -.010       .015      -.672       .509      -.041       .021
M4avg        .028       .063       .440       .664      -.104       .160
M5avg        .481       .320      1.505       .146      -.182      1.144
M6avg       -.086       .076     -1.128       .271      -.243       .072
```

```
Degrees of freedom for all regression coefficient estimates:
  22

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
```

```
      -.029       .305      -.094     34.000       .926      -.649       .592

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      -.188       .401      -.470     22.000       .643     -1.019       .643

Indirect Effect of X on Y through M
          Effect     BootSE   BootLLCI   BootULCI
Ind1        .509       .358      -.113      1.335
Ind2       -.340       .336     -1.046       .329
Ind3        .001       .102      -.211       .226
Ind4       -.074       .173      -.353       .366
Ind5        .029       .124      -.214       .281
Ind6        .034       .120      -.244       .256
Total       .160       .414      -.588      1.047

Indirect Key
Columns   1 -  14
Ind1  'X'      ->       M1diff   ->       Ydiff
Ind2  'X'      ->       M2diff   ->       Ydiff
Ind3  'X'      ->       M3diff   ->       Ydiff
Ind4  'X'      ->       M4diff   ->       Ydiff
Ind5  'X'      ->       M5diff   ->       Ydiff
Ind6  'X'      ->       M6diff   ->       Ydiff
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6

***************************** ANALYSIS NOTES AND WARNINGS *****************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  5

Bootstrap confidence interval method used: Percentile bootstrap.

Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l       )        /2
 (        t_b       +       m_b       )        /2
 (        t_sc      +       m_sc      )        /2
 (        t_mp      +       m_mp      )        /2
```

```
(         t_mn       +       m_mn      )         /2
(         t_sa       +       m_sa      )         /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

acquisition arousal safety

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 **********************

                          Written by Amanda Montoya

                    Documentation available at akmontoya.com

***************************************************************************************

Model:
  1

Variables:
Y =   taa_s    maa_s
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =          taa_s     -       maa_s
M1diff =         t_l       -       m_l
M2diff =         t_b       -       m_b
M3diff =         t_sc      -       m_sc
M4diff =         t_mp      -       m_mp
M5diff =         t_mn      -       m_mn
M6diff =         t_sa      -       m_sa
M1avg  = (       t_l       +       m_l      )       /2       Centered
M2avg  = (       t_b       +       m_b      )       /2       Centered
M3avg  = (       t_sc      +       m_sc     )       /2       Centered
M4avg  = (       t_mp      +       m_mp     )       /2       Centered
M5avg  = (       t_mn      +       m_mn     )       /2       Centered
M6avg  = (       t_sa      +       m_sa     )       /2       Centered

Sample Size:
  35

***************************************************************************************
Outcome: Ydiff =  taa_s     -       maa_s

Model
```

```
------
        Effect         SE          t          p       LLCI       ULCI
'X'       .257       .282       .912       .368      -.316       .830

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************
Outcome: M1diff = t_l       -       m_l
```

```
Model
        Effect         SE          t          p       LLCI       ULCI
'X'     11.543      3.520      3.279       .002      4.389     18.697

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     16.371      4.638      3.530       .001      6.945     25.798

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .171      3.644       .047       .963     -7.234      7.577

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -1.000       .831     -1.203       .237     -2.689       .689

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************
Outcome: M5diff = t_mn      -       m_mn

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .143       .221       .645       .523      -.307       .593

Degrees of freedom for all regression coefficient estimates:
  34
```

```
**************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'        .571      1.367       .418       .678     -2.206      3.349

Degrees of freedom for all regression coefficient estimates:
```

```
  34

*************************************************************************
Outcome: Ydiff =  taa_s     -       maa_s

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .517       .267      3.154       .669     12.000     22.000       .762

Model
            coeff         SE          t          p       LLCI       ULCI
'X'         -.128       .393      -.326       .747      -.944       .688
M1diff      -.007       .020      -.342       .735      -.048       .034
M2diff       .023       .016      1.468       .156      -.010       .055
M3diff       .010       .020       .509       .616      -.031       .051
M4diff      -.069       .103      -.669       .510      -.282       .144
M5diff       .081       .263       .310       .760      -.463       .626
M6diff       .009       .049       .184       .856      -.093       .111
M1avg        .009       .021       .436       .667      -.034       .052
M2avg        .005       .025       .192       .850      -.046       .056
M3avg        .002       .014       .107       .916      -.028       .032
M4avg        .005       .062       .074       .941      -.125       .134
M5avg        .197       .314       .627       .537      -.454       .847
M6avg       -.006       .075      -.084       .934      -.161       .148

Degrees of freedom for all regression coefficient estimates:
  22

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
       .257       .282       .912     34.000       .368      -.316       .830

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      -.128       .393      -.326     22.000       .747      -.944       .688

Indirect Effect of X on Y through M
          Effect     BootSE   BootLLCI   BootULCI
Ind1       -.078       .334      -.765       .540
Ind2        .376       .340      -.162      1.158
Ind3        .002       .126      -.196       .336
Ind4        .069       .173      -.155       .525
Ind5        .012       .092      -.158       .207
Ind6        .005       .091      -.225       .161
Total       .385       .479      -.383      1.458
```

```
Indirect Key
Columns   1 -  14
Ind1   'X'      ->       M1diff   ->       Ydiff
Ind2   'X'      ->       M2diff   ->       Ydiff
Ind3   'X'      ->       M3diff   ->       Ydiff
Ind4   'X'      ->       M4diff   ->       Ydiff
Ind5   'X'      ->       M5diff   ->       Ydiff
Ind6   'X'      ->       M6diff   ->       Ydiff
```

```
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6

***************************** ANALYSIS NOTES AND WARNINGS ******************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  5

Bootstrap confidence interval method used: Percentile bootstrap.

Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

acquisition arousal discrimination

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 **********************

                          Written by Amanda Montoya

                   Documentation available at akmontoya.com

***************************************************************************************

Model:
  1
```

```
Variables:
Y =   taa_d    maa_d
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
```

```
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           taa_d     -       maa_d
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l      )        /2       Centered
M2avg  = (        t_b       +       m_b      )        /2       Centered
M3avg  = (        t_sc      +       m_sc     )        /2       Centered
M4avg  = (        t_mp      +       m_mp     )        /2       Centered
M5avg  = (        t_mn      +       m_mn     )        /2       Centered
M6avg  = (        t_sa      +       m_sa     )        /2       Centered

Sample Size:
  35

*************************************************************************************
Outcome: Ydiff =  taa_d     -       maa_d

Model
        Effect         SE          t          p       LLCI       ULCI
'X'      -.286       .377      -.758       .454     -1.052       .480

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************************
Outcome: M1diff = t_l       -       m_l

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     11.543      3.520      3.279       .002      4.389     18.697

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     16.371      4.638      3.530       .001      6.945     25.798

Degrees of freedom for all regression coefficient estimates:
```

34

```
*************************************************************************
Outcome: M3diff = t_sc       -       m_sc

Model
        Effect          SE           t           p        LLCI        ULCI
'X'        .171       3.644        .047        .963      -7.234       7.577
```

```
Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -1.000       .831     -1.203       .237     -2.689       .689

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M5diff = t_mn      -       m_mn

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .143       .221       .645       .523      -.307       .593

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .571      1.367       .418       .678     -2.206      3.349

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: Ydiff =  taa_d     -       maa_d

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .668       .446      4.259      1.476     12.000     22.000       .207

Model
            coeff         SE          t          p       LLCI       ULCI
'X'         -.060       .457      -.131       .897     -1.008       .888
M1diff       .051       .023      2.213       .038       .003       .099
M2diff      -.044       .018     -2.405       .025      -.082      -.006
M3diff      -.005       .023      -.229       .821      -.053       .042
M4diff       .142       .119      1.192       .246      -.105       .390
```

M5diff	.123	.305	.402	.692	-.511	.756
M6diff	.051	.057	.887	.384	-.068	.170
M1avg	.000	.024	.018	.986	-.049	.050
M2avg	-.006	.029	-.206	.838	-.065	.053
M3avg	-.011	.017	-.681	.503	-.046	.023
M4avg	.023	.072	.322	.751	-.127	.173
M5avg	.284	.365	.780	.444	-.472	1.040
M6avg	-.080	.087	-.917	.369	-.259	.100

```
Degrees of freedom for all regression coefficient estimates:
  22

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      -.286       .377      -.758     34.000       .454     -1.052       .480

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      -.060       .457      -.131     22.000       .897     -1.008       .888

Indirect Effect of X on Y through M
          Effect     BootSE   BootLLCI   BootULCI
Ind1        .588       .363       .035      1.474
Ind2       -.717       .408     -1.657      -.057
Ind3       -.001       .109      -.290       .151
Ind4       -.142       .195      -.584       .206
Ind5        .018       .125      -.262       .259
Ind6        .029       .112      -.195       .280
Total      -.226       .464     -1.181       .674

Indirect Key
Columns   1 -  14
Ind1  'X'       ->       M1diff   ->       Ydiff
Ind2  'X'       ->       M2diff   ->       Ydiff
Ind3  'X'       ->       M3diff   ->       Ydiff
Ind4  'X'       ->       M4diff   ->       Ydiff
Ind5  'X'       ->       M5diff   ->       Ydiff
Ind6  'X'       ->       M6diff   ->       Ydiff
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6

***************************** ANALYSIS NOTES AND WARNINGS *****************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  5

Bootstrap confidence interval method used: Percentile bootstrap.
```

```
Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
```

```
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

acquisition valence threat

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 **********************

                          Written by Amanda Montoya

                    Documentation available at akmontoya.com

***************************************************************************************

Model:
  1

Variables:
Y =   tav_t    mav_t
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           tav_t     -       mav_t
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l      )        /2       Centered
M2avg  = (        t_b       +       m_b      )        /2       Centered
M3avg  = (        t_sc      +       m_sc     )        /2       Centered
M4avg  = (        t_mp      +       m_mp     )        /2       Centered
M5avg  = (        t_mn      +       m_mn     )        /2       Centered
M6avg  = (        t_sa      +       m_sa     )        /2       Centered
```

```
Sample Size:
  35

********************************************************************************
Outcome: Ydiff =  tav_t     -       mav_t

Model
```

```
        Effect         SE          t          p       LLCI       ULCI
'X'      -.343       .307     -1.118       .271      -.966       .280

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M1diff = t_l       -       m_l

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     11.543      3.520      3.279       .002      4.389     18.697

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     16.371      4.638      3.530       .001      6.945     25.798

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .171      3.644       .047       .963     -7.234      7.577

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -1.000       .831     -1.203       .237     -2.689       .689

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M5diff = t mn      -       m mn
```

Model

	Effect	SE	t	p	LLCI	ULCI
'X'	.143	.221	.645	.523	-.307	.593

Degrees of freedom for all regression coefficient estimates:
34

```
*************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .571      1.367       .418       .678     -2.206      3.349

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: Ydiff =  tav_t     -       mav_t

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .727       .529      2.396      2.058     12.000     22.000       .069

Model
            coeff         SE          t          p       LLCI       ULCI
'X'         -.021       .343      -.061       .952      -.732       .690
M1diff       .031       .017      1.809       .084      -.005       .067
M2diff      -.029       .014     -2.151       .043      -.058      -.001
M3diff       .005       .017       .303       .765      -.031       .041
M4diff       .169       .090      1.886       .073      -.017       .355
M5diff      -.279       .229     -1.218       .236      -.754       .196
M6diff       .011       .043       .262       .795      -.078       .100
M1avg       -.018       .018      -.972       .342      -.055       .020
M2avg        .021       .021       .996       .330      -.023       .066
M3avg        .022       .013      1.731       .097      -.004       .048
M4avg        .020       .054       .377       .710      -.092       .133
M5avg       -.181       .273      -.662       .515      -.748       .386
M6avg       -.009       .065      -.135       .894      -.144       .126

Degrees of freedom for all regression coefficient estimates:
  22

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      -.343       .307     -1.118     34.000       .271      -.966       .280

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      -.021       .343      -.061     22.000       .952      -.732       .690

Indirect Effect of X on Y through M
          Effect     BootSE   BootLLCI   BootULCI
```

Ind1	.360	.282	-.134	1.022
Ind2	-.481	.299	-1.171	.038
Ind3	.001	.086	-.236	.122
Ind4	-.169	.179	-.549	.161
Ind5	-.040	.096	-.239	.159
Ind6	.006	.079	-.158	.179
Total	-.322	.375	-1.086	.422

```
Indirect Key
Columns   1 -  14
Ind1   'X'      ->       M1diff   ->       Ydiff
Ind2   'X'      ->       M2diff   ->       Ydiff
Ind3   'X'      ->       M3diff   ->       Ydiff
Ind4   'X'      ->       M4diff   ->       Ydiff
Ind5   'X'      ->       M5diff   ->       Ydiff
Ind6   'X'      ->       M6diff   ->       Ydiff
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6

***************************** ANALYSIS NOTES AND WARNINGS *****************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  5

Bootstrap confidence interval method used: Percentile bootstrap.

Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

acquisition valence safety

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 **********************
```

Written by Amanda Montoya

Documentation available at akmontoya.com

```
*******************************************************************************

Model:
  1
```

```
Variables:
Y =   tav_s    mav_s
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           tav_s     -       mav_s
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l      )        /2       Centered
M2avg  = (        t_b       +       m_b      )        /2       Centered
M3avg  = (        t_sc      +       m_sc     )        /2       Centered
M4avg  = (        t_mp      +       m_mp     )        /2       Centered
M5avg  = (        t_mn      +       m_mn     )        /2       Centered
M6avg  = (        t_sa      +       m_sa     )        /2       Centered

Sample Size:
  35

*************************************************************************************
Outcome: Ydiff =  tav_s     -       mav_s

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .200       .347       .576       .569      -.506       .906

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************************
Outcome: M1diff = t_l       -       m_l

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     11.543      3.520      3.279       .002      4.389     18.697

Degrees of freedom for all regression coefficient estimates:
  34
```

```
**************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     16.371      4.638      3.530       .001      6.945     25.798

Degrees of freedom for all regression coefficient estimates:
```

```
  34

*************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .171      3.644       .047       .963     -7.234      7.577

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -1.000       .831     -1.203       .237     -2.689       .689

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M5diff = t_mn      -       m_mn

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .143       .221       .645       .523      -.307       .593

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .571      1.367       .418       .678     -2.206      3.349

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: Ydiff =  tav_s     -       mav_s

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .517       .267      4.785       .668     12.000     22.000       .763
```

Model

	coeff	SE	t	p	LLCI	ULCI
'X'	.191	.484	.394	.698	-.814	1.196
M1diff	-.024	.024	-.970	.343	-.074	.027
M2diff	.022	.019	1.118	.276	-.018	.062
M3diff	-.017	.024	-.712	.484	-.068	.033
M4diff	.065	.127	.513	.613	-.198	.327

```
M5diff      -.287       .324      -.886       .385      -.958       .384
M6diff       .066       .061      1.092       .287      -.060       .192
M1avg        .029       .025      1.134       .269      -.024       .082
M2avg       -.042       .030     -1.400       .176      -.105       .020
M3avg        .019       .018      1.046       .307      -.018       .056
M4avg       -.012       .077      -.155       .878      -.171       .147
M5avg       -.404       .386     -1.046       .307     -1.206       .397
M6avg        .049       .092       .534       .598      -.141       .240

Degrees of freedom for all regression coefficient estimates:
  22

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
       .200       .347       .576     34.000       .569      -.506       .906

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
       .191       .484       .394     22.000       .698      -.814      1.196

Indirect Effect of X on Y through M
         Effect     BootSE   BootLLCI   BootULCI
Ind1      -.273       .396     -1.128       .467
Ind2       .353       .399      -.292      1.328
Ind3      -.003       .155      -.162       .470
Ind4      -.065       .231      -.566       .420
Ind5      -.041       .146      -.415       .182
Ind6       .038       .141      -.231       .354
Total      .009       .556     -1.052      1.188

Indirect Key
Columns   1 -  14
Ind1   'X'      ->       M1diff   ->       Ydiff
Ind2   'X'      ->       M2diff   ->       Ydiff
Ind3   'X'      ->       M3diff   ->       Ydiff
Ind4   'X'      ->       M4diff   ->       Ydiff
Ind5   'X'      ->       M5diff   ->       Ydiff
Ind6   'X'      ->       M6diff   ->       Ydiff
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6
```

```
***************************** ANALYSIS NOTES AND WARNINGS ******************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  5

Bootstrap confidence interval method used: Percentile bootstrap.
```

```
Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

acquisition valence discrimination

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 **********************

                           Written by Amanda Montoya

                     Documentation available at akmontoya.com

***************************************************************************************

Model:
  1

Variables:
Y =   tav_d    mav_d
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           tav_d     -       mav_d
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
```

```
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l       )       /2      Centered
M2avg  = (        t_b       +       m_b       )       /2      Centered
M3avg  = (        t_sc      +       m_sc      )       /2      Centered
M4avg  = (        t_mp      +       m_mp      )       /2      Centered
M5avg  = (        t_mn      +       m_mn      )       /2      Centered
M6avg  = (        t_sa      +       m_sa      )       /2      Centered
```

```
Sample Size:
  35

*************************************************************************
Outcome: Ydiff =  tav_d     -       mav_d

Model
        Effect         SE          t          p       LLCI       ULCI
'X'      -.543       .509     -1.066       .294     -1.578       .492

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M1diff = t_l       -       m_l

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     11.543      3.520      3.279       .002      4.389     18.697

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     16.371      4.638      3.530       .001      6.945     25.798

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .171      3.644       .047       .963     -7.234      7.577

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
```

```
        Effect         SE          t          p       LLCI       ULCI
'X'     -1.000       .831     -1.203       .237     -2.689       .689

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************
Outcome: M5diff = t_mn      -       m_mn
```

```
Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .143       .221       .645       .523      -.307       .593

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .571      1.367       .418       .678     -2.206      3.349

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: Ydiff =  tav_d     -       mav_d

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .636       .405      8.350      1.247     12.000     22.000       .314

Model
            coeff         SE          t          p       LLCI       ULCI
'X'          -.212       .640      -.331       .744     -1.539      1.116
M1diff        .055       .032      1.703       .103      -.012       .122
M2diff       -.051       .025     -1.999       .058      -.104       .002
M3diff        .023       .032       .701       .490      -.044       .089
M4diff        .104       .167       .622       .540      -.243       .451
M5diff        .008       .427       .018       .986      -.879       .894
M6diff       -.055       .080      -.686       .500      -.221       .111
M1avg        -.046       .034     -1.379       .182      -.116       .023
M2avg         .064       .040      1.593       .125      -.019       .147
M3avg         .003       .024       .136       .893      -.046       .052
M4avg         .032       .101       .319       .753      -.178       .243
M5avg         .223       .510       .437       .666      -.835      1.282
M6avg        -.058       .121      -.477       .638      -.310       .194

Degrees of freedom for all regression coefficient estimates:
  22

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
```

```
      -.543       .509     -1.066     34.000       .294     -1.578       .492

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      -.212       .640      -.331     22.000       .744     -1.539      1.116

Indirect Effect of X on Y through M
          Effect     BootSE   BootLLCI   BootULCI
```

```
Ind1        .633       .533      -.326      1.835
Ind2       -.834       .522     -2.118      -.033
Ind3        .004       .204      -.615       .210
Ind4       -.104       .271      -.724       .422
Ind5        .001       .163      -.249       .428
Ind6       -.031       .163      -.392       .281
Total      -.331       .745     -1.907      1.011

Indirect Key
Columns   1 -  14
Ind1   'X'      ->       M1diff   ->       Ydiff
Ind2   'X'      ->       M2diff   ->       Ydiff
Ind3   'X'      ->       M3diff   ->       Ydiff
Ind4   'X'      ->       M4diff   ->       Ydiff
Ind5   'X'      ->       M5diff   ->       Ydiff
Ind6   'X'      ->       M6diff   ->       Ydiff
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6

***************************** ANALYSIS NOTES AND WARNINGS ******************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  5

Bootstrap confidence interval method used: Percentile bootstrap.

Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

acquisition eda threat

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 ***********************
```

Written by Amanda Montoya

Documentation available at akmontoya.com

```
**************************************************************************************

Model:
  1

Variables:
Y =   tae_t    mae_t
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           tae_t     -       mae_t
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l      )        /2       Centered
M2avg  = (        t_b       +       m_b      )        /2       Centered
M3avg  = (        t_sc      +       m_sc     )        /2       Centered
M4avg  = (        t_mp      +       m_mp     )        /2       Centered
M5avg  = (        t_mn      +       m_mn     )        /2       Centered
M6avg  = (        t_sa      +       m_sa     )        /2       Centered

Sample Size:
  34

**************************************************************************************
Outcome: Ydiff =  tae_t     -       mae_t

Model
        Effect         SE          t          p       LLCI       ULCI
'X'      -.017       .030      -.567       .575      -.078       .044

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************************
Outcome: M1diff = t_l       -       m_l
```

Model

	Effect	SE	t	p	LLCI	ULCI
'X'	11.029	3.587	3.075	.004	3.732	18.327

Degrees of freedom for all regression coefficient estimates:
33

```
**************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     15.676      4.723      3.319       .002      6.067     25.286

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .206      3.753       .055       .957     -7.429      7.841

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
        Effect         SE          t          p       LLCI       ULCI
'X'      -.882       .847     -1.041       .305     -2.606       .842

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************
Outcome: M5diff = t_mn      -       m_mn

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .118       .226       .520       .607      -.343       .578

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .559      1.407       .397       .694     -2.305      3.422

Degrees of freedom for all regression coefficient estimates:
```

33

```
*************************************************************************
Outcome: Ydiff =  tae_t     -       mae_t

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .550       .302       .033       .759     12.000     21.000       .683
```

Model

	coeff	SE	t	p	LLCI	ULCI
'X'	-.023	.041	-.567	.577	-.108	.062
M1diff	.000	.002	-.206	.839	-.005	.004
M2diff	-.001	.002	-.310	.759	-.004	.003
M3diff	.002	.002	.754	.459	-.003	.006
M4diff	-.025	.011	-2.330	.030	-.048	-.003
M5diff	.003	.027	.114	.911	-.054	.060
M6diff	-.008	.005	-1.447	.163	-.019	.003
M1avg	.000	.002	-.022	.983	-.004	.004
M2avg	.001	.003	.296	.770	-.005	.006
M3avg	-.002	.001	-1.418	.171	-.005	.001
M4avg	.005	.006	.774	.447	-.008	.018
M5avg	.032	.033	.985	.336	-.036	.101
M6avg	.009	.008	1.065	.299	-.008	.026

Degrees of freedom for all regression coefficient estimates:
21

********** TOTAL, DIRECT, AND INDIRECT EFFECTS **********

Total effect of X on Y

Effect	SE	t	df	p	LLCI	ULCI
-.017	.030	-.567	33.000	.575	-.078	.044

Direct effect of X on Y

Effect	SE	t	df	p	LLCI	ULCI
-.023	.041	-.567	21.000	.577	-.108	.062

Indirect Effect of X on Y through M

	Effect	BootSE	BootLLCI	BootULCI
Ind1	-.005	.037	-.090	.059
Ind2	-.008	.036	-.098	.048
Ind3	.000	.013	-.029	.025
Ind4	.022	.026	-.025	.080
Ind5	.000	.012	-.021	.028
Ind6	-.004	.015	-.044	.020
Total	.006	.046	-.101	.085

Indirect Key
Columns 1 - 14

Ind1	'X'	->	M1diff	->	Ydiff
Ind2	'X'	->	M2diff	->	Ydiff
Ind3	'X'	->	M3diff	->	Ydiff
Ind4	'X'	->	M4diff	->	Ydiff
Ind5	'X'	->	M5diff	->	Ydiff
Ind6	'X'	->	M6diff	->	Ydiff

```
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6
```

```
***************************** ANALYSIS NOTES AND WARNINGS *****************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  6

Bootstrap confidence interval method used: Percentile bootstrap.

Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

acquisition eda safety

```
Run MATRIX procedure:

******************** MEMORE Procedure for SPSS Version 2.1 **********************

                         Written by Amanda Montoya

                    Documentation available at akmontoya.com

***************************************************************************************

Model:
  1

Variables:
Y =   tae_s    mae_s
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
```

```
                _          _
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           tae_s     -       mae_s
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
```

```
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l       )        /2       Centered
M2avg  = (        t_b       +       m_b       )        /2       Centered
M3avg  = (        t_sc      +       m_sc      )        /2       Centered
M4avg  = (        t_mp      +       m_mp      )        /2       Centered
M5avg  = (        t_mn      +       m_mn      )        /2       Centered
M6avg  = (        t_sa      +       m_sa      )        /2       Centered

Sample Size:
  34

**************************************************************************************
Outcome: Ydiff =  tae_s     -       mae_s

Model
        Effect         SE          t          p       LLCI       ULCI
'X'      -.030       .028     -1.074       .291      -.086       .026

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************************
Outcome: M1diff = t_l       -       m_l

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     11.029      3.587      3.075       .004      3.732     18.327

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     15.676      4.723      3.319       .002      6.067     25.286

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .206      3.753       .055       .957     -7.429      7.841
```

```
Degrees of freedom for all regression coefficient estimates:
  33

************************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
```

```
        Effect         SE          t          p       LLCI       ULCI
'X'      -.882       .847     -1.041       .305     -2.606       .842

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************************
Outcome: M5diff = t_mn      -       m_mn

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .118       .226       .520       .607      -.343       .578

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .559      1.407       .397       .694     -2.305      3.422

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************************
Outcome: Ydiff =  tae_s     -       mae_s

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .586       .343       .027       .913     12.000     21.000       .550

Model
            coeff         SE          t          p       LLCI       ULCI
'X'          -.008       .037      -.218       .829      -.084       .068
M1diff        .000       .002      -.012       .991      -.004       .004
M2diff       -.002       .001     -1.242       .228      -.005       .001
M3diff        .000       .002       .078       .938      -.004       .004
M4diff       -.008       .010      -.837       .412      -.028       .012
M5diff       -.005       .025      -.197       .845      -.056       .046
M6diff        .000       .005       .081       .936      -.010       .010
M1avg         .000       .002       .182       .857      -.004       .004
M2avg         .002       .002       .877       .390      -.003       .007
M3avg         .000       .001       .149       .883      -.003       .003
M4avg         .011       .006      1.953       .064      -.001       .023
M5avg        -.020       .029      -.666       .513      -.081       .042
M6avg         .009       .007      1.175       .253      -.007       .024
```

Degrees of freedom for all regression coefficient estimates:
  21

********** TOTAL, DIRECT, AND INDIRECT EFFECTS **********

Total effect of X on Y
     Effect   SE   t   df   p   LLCI   ULCI

```
      -.030       .028     -1.074     33.000       .291      -.086       .026

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      -.008       .037      -.218     21.000       .829      -.084       .068

Indirect Effect of X on Y through M
          Effect     BootSE   BootLLCI   BootULCI
Ind1        .000       .030      -.050       .068
Ind2       -.028       .034      -.098       .037
Ind3        .000       .009      -.015       .023
Ind4        .007       .018      -.016       .058
Ind5       -.001       .010      -.020       .020
Ind6        .000       .010      -.027       .017
Total      -.022       .039      -.099       .057

Indirect Key
Columns   1 -  14
Ind1  'X'      ->       M1diff   ->       Ydiff
Ind2  'X'      ->       M2diff   ->       Ydiff
Ind3  'X'      ->       M3diff   ->       Ydiff
Ind4  'X'      ->       M4diff   ->       Ydiff
Ind5  'X'      ->       M5diff   ->       Ydiff
Ind6  'X'      ->       M6diff   ->       Ydiff
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6

***************************** ANALYSIS NOTES AND WARNINGS *****************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  6

Bootstrap confidence interval method used: Percentile bootstrap.

Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l       )        /2
 (        t_b       +       m_b       )        /2
 (        t_sc      +       m_sc      )        /2
 (        t_mp      +       m_mp      )        /2
```

```
(         t_mn       +       m_mn      )         /2
(         t_sa       +       m_sa      )         /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

acquisition eda discrimination

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 **********************

                          Written by Amanda Montoya

                    Documentation available at akmontoya.com

***************************************************************************************

Model:
  1

Variables:
Y =   tae_d    mae_d
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           tae_d     -       mae_d
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l      )        /2       Centered
M2avg  = (        t_b       +       m_b      )        /2       Centered
M3avg  = (        t_sc      +       m_sc     )        /2       Centered
M4avg  = (        t_mp      +       m_mp     )        /2       Centered
M5avg  = (        t_mn      +       m_mn     )        /2       Centered
M6avg  = (        t_sa      +       m_sa     )        /2       Centered

Sample Size:
  34

***************************************************************************************
Outcome: Ydiff =  tae_d     -       mae_d

Model
```

```
------
        Effect         SE          t          p       LLCI       ULCI
'X'       .013       .039       .321       .750      -.067       .092

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************
Outcome: M1diff = t_l       -       m_l
```

```
Model
        Effect         SE          t          p       LLCI       ULCI
'X'     11.029      3.587      3.075       .004      3.732     18.327

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     15.676      4.723      3.319       .002      6.067     25.286

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .206      3.753       .055       .957     -7.429      7.841

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
        Effect         SE          t          p       LLCI       ULCI
'X'      -.882       .847     -1.041       .305     -2.606       .842

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************
Outcome: M5diff = t_mn      -       m_mn

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .118       .226       .520       .607      -.343       .578

Degrees of freedom for all regression coefficient estimates:
  33
```

```
**************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .559      1.407       .397       .694     -2.305      3.422

Degrees of freedom for all regression coefficient estimates:
```

33

```
*************************************************************************
Outcome: Ydiff =  tae_d     -       mae_d

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .451       .203       .066       .446     12.000     21.000       .924

Model
            coeff         SE          t          p       LLCI       ULCI
'X'          -.015       .057       -.265       .794       -.135       .104
M1diff        .000       .003       -.139       .891       -.006       .006
M2diff        .001       .002        .569       .575       -.003       .006
M3diff        .001       .003        .486       .632       -.005       .008
M4diff       -.017       .015      -1.125       .273       -.049       .015
M5diff        .008       .039        .207       .838       -.072       .088
M6diff       -.008       .008      -1.081       .292       -.024       .008
M1avg         .000       .003       -.132       .897       -.007       .006
M2avg        -.001       .004       -.348       .731       -.009       .006
M3avg        -.002       .002      -1.104       .282       -.007       .002
M4avg        -.006       .009       -.692       .497       -.025       .013
M5avg         .052       .046       1.125       .273       -.044       .148
M6avg         .000       .012        .010       .992       -.024       .024

Degrees of freedom for all regression coefficient estimates:
  21

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
       .013       .039       .321     33.000       .750       -.067       .092

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
       -.015       .057       -.265     21.000       .794       -.135       .104

Indirect Effect of X on Y through M
          Effect     BootSE   BootLLCI   BootULCI
Ind1         -.004       .056       -.135       .090
Ind2          .020       .054       -.100       .116
Ind3          .000       .015       -.036       .029
Ind4          .015       .029       -.044       .080
Ind5          .001       .016       -.031       .036
Ind6         -.005       .018       -.046       .030
Total         .028       .067       -.116       .149
```

```
Indirect Key
Columns   1 -  14
Ind1   'X'      ->       M1diff   ->       Ydiff
Ind2   'X'      ->       M2diff   ->       Ydiff
Ind3   'X'      ->       M3diff   ->       Ydiff
Ind4   'X'      ->       M4diff   ->       Ydiff
Ind5   'X'      ->       M5diff   ->       Ydiff
Ind6   'X'      ->       M6diff   ->       Ydiff
```

```
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6

***************************** ANALYSIS NOTES AND WARNINGS ******************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  6

Bootstrap confidence interval method used: Percentile bootstrap.

Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

extinction arousal threat

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 **********************

                          Written by Amanda Montoya

                   Documentation available at akmontoya.com

***************************************************************************************

Model:
  1
```

```
Variables:
Y =   tea_t    mea_t
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
```

```
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           tea_t     -       mea_t
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l      )        /2       Centered
M2avg  = (        t_b       +       m_b      )        /2       Centered
M3avg  = (        t_sc      +       m_sc     )        /2       Centered
M4avg  = (        t_mp      +       m_mp     )        /2       Centered
M5avg  = (        t_mn      +       m_mn     )        /2       Centered
M6avg  = (        t_sa      +       m_sa     )        /2       Centered

Sample Size:
  35

*************************************************************************************
Outcome: Ydiff =  tea_t     -       mea_t

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .057       .357       .160       .874      -.669       .783

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************************
Outcome: M1diff = t_l       -       m_l

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     11.543      3.520      3.279       .002      4.389     18.697

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     16.371      4.638      3.530       .001      6.945     25.798

Degrees of freedom for all regression coefficient estimates:
```

34

```
*************************************************************************
Outcome: M3diff = t_sc       -       m_sc

Model
        Effect          SE           t           p        LLCI        ULCI
'X'        .171       3.644        .047        .963      -7.234       7.577
```

```
Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -1.000       .831     -1.203       .237     -2.689       .689

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M5diff = t_mn      -       m_mn

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .143       .221       .645       .523      -.307       .593

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .571      1.367       .418       .678     -2.206      3.349

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: Ydiff =  tea_t     -       mea_t

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .499       .249      5.185       .608     12.000     22.000       .813

Model
            coeff         SE          t          p       LLCI       ULCI
'X'         -.329       .504      -.653       .521     -1.375       .717
M1diff       .048       .025      1.880       .073      -.005       .100
M2diff      -.004       .020      -.183       .857      -.045       .038
M3diff      -.016       .025      -.615       .545      -.068       .037
M4diff       .129       .132       .979       .338      -.144       .402
```

M5diff	.306	.337	.907	.374	-.393	1.004
M6diff	-.029	.063	-.453	.655	-.160	.102
M1avg	.015	.027	.570	.575	-.040	.070
M2avg	-.002	.032	-.076	.940	-.068	.063
M3avg	.017	.019	.933	.361	-.021	.056
M4avg	-.028	.080	-.356	.725	-.194	.137
M5avg	.039	.402	.097	.924	-.795	.873
M6avg	-.031	.096	-.325	.748	-.229	.167

```
Degrees of freedom for all regression coefficient estimates:
  22

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
       .057       .357       .160     34.000       .874      -.669       .783

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      -.329       .504      -.653     22.000       .521     -1.375       .717

Indirect Effect of X on Y through M
          Effect     BootSE   BootLLCI   BootULCI
Ind1        .551       .571      -.415      1.885
Ind2       -.060       .418      -.949       .738
Ind3       -.003       .127      -.255       .260
Ind4       -.129       .223      -.571       .350
Ind5        .044       .153      -.182       .452
Ind6       -.016       .117      -.266       .225
Total       .386       .565      -.576      1.665

Indirect Key
Columns   1 -  14
Ind1  'X'       ->       M1diff   ->       Ydiff
Ind2  'X'       ->       M2diff   ->       Ydiff
Ind3  'X'       ->       M3diff   ->       Ydiff
Ind4  'X'       ->       M4diff   ->       Ydiff
Ind5  'X'       ->       M5diff   ->       Ydiff
Ind6  'X'       ->       M6diff   ->       Ydiff
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6

***************************** ANALYSIS NOTES AND WARNINGS *****************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  5

Bootstrap confidence interval method used: Percentile bootstrap.
```

```
Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
```

```
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

extinction arousal safety

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 **********************

                         Written by Amanda Montoya

                    Documentation available at akmontoya.com

***************************************************************************************

Model:
  1

Variables:
Y =   tea_s    mea_s
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           tea_s     -       mea_s
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l      )        /2       Centered
M2avg  = (        t_b       +       m_b      )        /2       Centered
M3avg  = (        t_sc      +       m_sc     )        /2       Centered
M4avg  = (        t_mp      +       m_mp     )        /2       Centered
M5avg  = (        t_mn      +       m_mn     )        /2       Centered
M6avg  = (        t_sa      +       m_sa     )        /2       Centered
```

```
Sample Size:
  35

********************************************************************************
Outcome: Ydiff =  tea_s     -       mea_s

Model
```

```
        Effect         SE          t          p       LLCI       ULCI
'X'       .657       .284      2.315       .027       .080      1.234

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************************
Outcome: M1diff = t_l       -       m_l

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     11.543      3.520      3.279       .002      4.389     18.697

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     16.371      4.638      3.530       .001      6.945     25.798

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .171      3.644       .047       .963     -7.234      7.577

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -1.000       .831     -1.203       .237     -2.689       .689

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************************
Outcome: M5diff = t mn      -       m mn
```

```
Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .143       .221       .645       .523      -.307       .593

Degrees of freedom for all regression coefficient estimates:
  34
```

```
*************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .571      1.367       .418       .678     -2.206      3.349

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: Ydiff =  tea_s     -       mea_s

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .606       .368      2.756      1.066     12.000     22.000       .431

Model
            coeff         SE          t          p       LLCI       ULCI
'X'           .376       .368      1.022       .318      -.387      1.139
M1diff       -.002       .019      -.082       .935      -.040       .037
M2diff        .020       .015      1.339       .194      -.011       .050
M3diff       -.010       .019      -.551       .587      -.049       .028
M4diff       -.022       .096      -.230       .820      -.221       .177
M5diff        .059       .246       .238       .814      -.451       .568
M6diff       -.089       .046     -1.933       .066      -.185       .007
M1avg         .016       .019       .812       .425      -.024       .056
M2avg        -.020       .023      -.891       .382      -.068       .027
M3avg         .000       .014      -.012       .990      -.028       .028
M4avg         .079       .058      1.350       .191      -.042       .199
M5avg         .132       .293       .451       .656      -.476       .741
M6avg        -.009       .070      -.130       .898      -.154       .136

Degrees of freedom for all regression coefficient estimates:
  22

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
       .657       .284      2.315     34.000       .027       .080      1.234

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
       .376       .368      1.022     22.000       .318      -.387      1.139

Indirect Effect of X on Y through M
          Effect     BootSE   BootLLCI   BootULCI
```

Ind1	-.018	.265	-.634	.444
Ind2	.321	.306	-.212	1.002
Ind3	-.002	.087	-.132	.222
Ind4	.022	.137	-.216	.369
Ind5	.008	.098	-.233	.173
Ind6	-.051	.149	-.412	.201
Total	.281	.413	-.548	1.087

```
Indirect Key
Columns   1 -  14
Ind1   'X'      ->       M1diff   ->       Ydiff
Ind2   'X'      ->       M2diff   ->       Ydiff
Ind3   'X'      ->       M3diff   ->       Ydiff
Ind4   'X'      ->       M4diff   ->       Ydiff
Ind5   'X'      ->       M5diff   ->       Ydiff
Ind6   'X'      ->       M6diff   ->       Ydiff
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6

***************************** ANALYSIS NOTES AND WARNINGS *****************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  5

Bootstrap confidence interval method used: Percentile bootstrap.

Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

extinction arousal discrimination

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 **********************
```

```
********************************************************************************

Model:
  1
```

```
Variables:
Y =   tea_d    mea_d
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           tea_d     -       mea_d
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l      )        /2       Centered
M2avg  = (        t_b       +       m_b      )        /2       Centered
M3avg  = (        t_sc      +       m_sc     )        /2       Centered
M4avg  = (        t_mp      +       m_mp     )        /2       Centered
M5avg  = (        t_mn      +       m_mn     )        /2       Centered
M6avg  = (        t_sa      +       m_sa     )        /2       Centered

Sample Size:
  35

*************************************************************************************
Outcome: Ydiff =  tea_d     -       mea_d

Model
        Effect         SE          t          p       LLCI       ULCI
'X'      -.600       .442     -1.358       .183     -1.498       .298

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************************
Outcome: M1diff = t_l       -       m_l

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     11.543      3.520      3.279       .002      4.389     18.697

Degrees of freedom for all regression coefficient estimates:
  34
```

```
**************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     16.371      4.638      3.530       .001      6.945     25.798

Degrees of freedom for all regression coefficient estimates:
```

```
  34

*************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .171      3.644       .047       .963     -7.234      7.577

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -1.000       .831     -1.203       .237     -2.689       .689

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M5diff = t_mn      -       m_mn

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .143       .221       .645       .523      -.307       .593

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .571      1.367       .418       .678     -2.206      3.349

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: Ydiff =  tea_d     -       mea_d

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .534       .285      7.552       .731     12.000     22.000       .708
```

Model

	coeff	SE	t	p	LLCI	ULCI
'X'	-.705	.609	-1.159	.259	-1.968	.557
M1diff	.049	.031	1.607	.122	-.014	.113
M2diff	-.023	.024	-.960	.348	-.074	.027
M3diff	-.005	.031	-.177	.861	-.069	.058
M4diff	.151	.159	.950	.352	-.179	.481

```
M5diff       .247       .407       .608       .550      -.596      1.090
M6diff       .060       .076       .792       .437      -.098       .219
M1avg       -.001       .032      -.019       .985      -.067       .066
M2avg        .018       .038       .475       .639      -.061       .097
M3avg        .017       .022       .780       .443      -.029       .064
M4avg       -.107       .096     -1.111       .279      -.307       .093
M5avg       -.093       .485      -.192       .849     -1.100       .913
M6avg       -.022       .115      -.191       .850      -.261       .217

Degrees of freedom for all regression coefficient estimates:
  22

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      -.600       .442     -1.358     34.000       .183     -1.498       .298

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      -.705       .609     -1.159     22.000       .259     -1.968       .557

Indirect Effect of X on Y through M
         Effect     BootSE   BootLLCI   BootULCI
Ind1        .568       .572      -.284      1.998
Ind2       -.381       .534     -1.588       .531
Ind3       -.001       .130      -.303       .234
Ind4       -.151       .245      -.685       .316
Ind5        .035       .202      -.242       .578
Ind6        .035       .150      -.202       .410
Total       .105       .629      -.970      1.526

Indirect Key
Columns   1 -  14
Ind1   'X'      ->       M1diff   ->       Ydiff
Ind2   'X'      ->       M2diff   ->       Ydiff
Ind3   'X'      ->       M3diff   ->       Ydiff
Ind4   'X'      ->       M4diff   ->       Ydiff
Ind5   'X'      ->       M5diff   ->       Ydiff
Ind6   'X'      ->       M6diff   ->       Ydiff
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6
```

```
***************************** ANALYSIS NOTES AND WARNINGS ******************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  5

Bootstrap confidence interval method used: Percentile bootstrap.
```

```
Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

extinction valence threat

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 **********************

                           Written by Amanda Montoya

                     Documentation available at akmontoya.com

***************************************************************************************

Model:
  1

Variables:
Y =   tev_t    mev_t
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           tev_t     -       mev_t
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
```

```
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l       )       /2      Centered
M2avg  = (        t_b       +       m_b       )       /2      Centered
M3avg  = (        t_sc      +       m_sc      )       /2      Centered
M4avg  = (        t_mp      +       m_mp      )       /2      Centered
M5avg  = (        t_mn      +       m_mn      )       /2      Centered
M6avg  = (        t_sa      +       m_sa      )       /2      Centered
```

```
Sample Size:
  35

*************************************************************************
Outcome: Ydiff =  tev_t     -       mev_t

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .771       .333      2.315       .027       .094      1.449

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M1diff = t_l       -       m_l

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     11.543      3.520      3.279       .002      4.389     18.697

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     16.371      4.638      3.530       .001      6.945     25.798

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .171      3.644       .047       .963     -7.234      7.577

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
```

```
        Effect         SE          t          p       LLCI       ULCI
'X'     -1.000       .831     -1.203       .237     -2.689       .689

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M5diff = t_mn      -       m_mn
```

```
Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .143       .221       .645       .523      -.307       .593

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .571      1.367       .418       .678     -2.206      3.349

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************
Outcome: Ydiff =  tev_t     -       mev_t

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .496       .246      4.529       .599     12.000     22.000       .820

Model
            coeff         SE          t          p       LLCI       ULCI
'X'          .776       .471      1.646       .114       -.202      1.753
M1diff       .017       .024       .714       .483       -.032       .066
M2diff      -.004       .019      -.217       .830       -.043       .035
M3diff      -.027       .024     -1.158       .259       -.077       .022
M4diff       .133       .123      1.081       .292       -.122       .388
M5diff       .111       .315       .352       .728       -.542       .764
M6diff      -.019       .059      -.326       .747       -.142       .103
M1avg        .025       .025      1.017       .320       -.026       .077
M2avg       -.008       .029      -.257       .799       -.069       .054
M3avg       -.002       .017      -.142       .888       -.038       .034
M4avg        .031       .075       .422       .677       -.123       .186
M5avg       -.022       .376      -.057       .955       -.801       .758
M6avg       -.105       .089     -1.177       .252       -.291       .080

Degrees of freedom for all regression coefficient estimates:
  22

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
```

```
      .771       .333      2.315     34.000       .027       .094      1.449

Direct effect of X on Y
    Effect         SE          t         df          p       LLCI       ULCI
      .776       .471      1.646     22.000       .114      -.202      1.753

Indirect Effect of X on Y through M
         Effect     BootSE   BootLLCI   BootULCI
```

```
Ind1        .196       .437      -.511      1.268
Ind2       -.067       .454     -1.169       .685
Ind3       -.005       .150      -.348       .290
Ind4       -.133       .217      -.609       .247
Ind5        .016       .144      -.165       .434
Ind6       -.011       .111      -.216       .250
Total      -.004       .490     -1.004      1.027

Indirect Key
Columns   1 -  14
Ind1   'X'      ->       M1diff   ->       Ydiff
Ind2   'X'      ->       M2diff   ->       Ydiff
Ind3   'X'      ->       M3diff   ->       Ydiff
Ind4   'X'      ->       M4diff   ->       Ydiff
Ind5   'X'      ->       M5diff   ->       Ydiff
Ind6   'X'      ->       M6diff   ->       Ydiff
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6

***************************** ANALYSIS NOTES AND WARNINGS ******************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  5

Bootstrap confidence interval method used: Percentile bootstrap.

Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

extinction valence safety

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 **********************
```

Written by Amanda Montoya

Documentation available at akmontoya.com

```
**************************************************************************

Model:
  1

Variables:
Y =   tev_s    mev_s
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =          tev_s     -       mev_s
M1diff =         t_l       -       m_l
M2diff =         t_b       -       m_b
M3diff =         t_sc      -       m_sc
M4diff =         t_mp      -       m_mp
M5diff =         t_mn      -       m_mn
M6diff =         t_sa      -       m_sa
M1avg  = (       t_l       +       m_l      )        /2       Centered
M2avg  = (       t_b       +       m_b      )        /2       Centered
M3avg  = (       t_sc      +       m_sc     )        /2       Centered
M4avg  = (       t_mp      +       m_mp     )        /2       Centered
M5avg  = (       t_mn      +       m_mn     )        /2       Centered
M6avg  = (       t_sa      +       m_sa     )        /2       Centered

Sample Size:
  35

**************************************************************************
Outcome: Ydiff =  tev_s     -       mev_s

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .686       .317      2.163       .038       .042      1.330

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************
Outcome: M1diff = t_l       -       m_l
```

Model

	Effect	SE	t	p	LLCI	ULCI
'X'	11.543	3.520	3.279	.002	4.389	18.697

Degrees of freedom for all regression coefficient estimates:
34

```
**************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     16.371      4.638      3.530       .001      6.945     25.798

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .171      3.644       .047       .963     -7.234      7.577

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -1.000       .831     -1.203       .237     -2.689       .689

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************
Outcome: M5diff = t_mn      -       m_mn

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .143       .221       .645       .523      -.307       .593

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .571      1.367       .418       .678     -2.206      3.349

Degrees of freedom for all regression coefficient estimates:
```

34

```
************************************************************************************
Outcome: Ydiff =  tev_s     -       mev_s

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .472       .223      4.222       .526     12.000     22.000       .875
```

Model

	coeff	SE	t	p	LLCI	ULCI
'X'	.425	.455	.933	.361	-.519	1.368
M1diff	-.011	.023	-.479	.637	-.058	.037
M2diff	.023	.018	1.259	.221	-.015	.060
M3diff	-.025	.023	-1.091	.287	-.073	.023
M4diff	-.002	.119	-.017	.986	-.249	.244
M5diff	.094	.304	.309	.761	-.537	.724
M6diff	.005	.057	.089	.930	-.113	.123
M1avg	.035	.024	1.458	.159	-.015	.084
M2avg	-.031	.028	-1.103	.282	-.090	.028
M3avg	.002	.017	.129	.899	-.033	.037
M4avg	-.016	.072	-.224	.825	-.166	.133
M5avg	.028	.363	.078	.938	-.724	.781
M6avg	-.009	.086	-.101	.920	-.188	.170

Degrees of freedom for all regression coefficient estimates:
22

********** TOTAL, DIRECT, AND INDIRECT EFFECTS **********

Total effect of X on Y

Effect	SE	t	df	p	LLCI	ULCI
.686	.317	2.163	34.000	.038	.042	1.330

Direct effect of X on Y

Effect	SE	t	df	p	LLCI	ULCI
.425	.455	.933	22.000	.361	-.519	1.368

Indirect Effect of X on Y through M

	Effect	BootSE	BootLLCI	BootULCI
Ind1	-.127	.340	-.945	.433
Ind2	.374	.374	-.293	1.161
Ind3	-.004	.150	-.183	.437
Ind4	.002	.209	-.396	.465
Ind5	.013	.115	-.256	.217
Ind6	.003	.106	-.211	.224
Total	.261	.501	-.762	1.241

Indirect Key
Columns 1 - 14

Ind1	'X'	->	M1diff	->	Ydiff
Ind2	'X'	->	M2diff	->	Ydiff
Ind3	'X'	->	M3diff	->	Ydiff
Ind4	'X'	->	M4diff	->	Ydiff
Ind5	'X'	->	M5diff	->	Ydiff
Ind6	'X'	->	M6diff	->	Ydiff

```
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6
```

```
***************************** ANALYSIS NOTES AND WARNINGS *****************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  5

Bootstrap confidence interval method used: Percentile bootstrap.

Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

extinction valence discrimination

```
Run MATRIX procedure:

******************** MEMORE Procedure for SPSS Version 2.1 **********************

                          Written by Amanda Montoya

                    Documentation available at akmontoya.com

***************************************************************************************

Model:
  1

Variables:
Y =   tev_d    mev_d
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
```

```
                _          _
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           tev_d     -       mev_d
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
```

```
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l       )       /2       Centered
M2avg  = (        t_b       +       m_b       )       /2       Centered
M3avg  = (        t_sc      +       m_sc      )       /2       Centered
M4avg  = (        t_mp      +       m_mp      )       /2       Centered
M5avg  = (        t_mn      +       m_mn      )       /2       Centered
M6avg  = (        t_sa      +       m_sa      )       /2       Centered

Sample Size:
  35

**************************************************************************************
Outcome: Ydiff =  tev_d     -       mev_d

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .086       .452       .190       .851      -.832      1.004

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M1diff = t_l       -       m_l

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     11.543      3.520      3.279       .002      4.389     18.697

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     16.371      4.638      3.530       .001      6.945     25.798

Degrees of freedom for all regression coefficient estimates:
  34

**************************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .171      3.644       .047       .963     -7.234      7.577
```

```
Degrees of freedom for all regression coefficient estimates:
  34

************************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
```

```
        Effect         SE          t          p       LLCI       ULCI
'X'     -1.000       .831     -1.203       .237     -2.689       .689

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************************
Outcome: M5diff = t_mn      -       m_mn

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .143       .221       .645       .523      -.307       .593

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .571      1.367       .418       .678     -2.206      3.349

Degrees of freedom for all regression coefficient estimates:
  34

*************************************************************************************
Outcome: Ydiff =  tev_d     -       mev_d

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .486       .236      8.428       .567     12.000     22.000       .845

Model
            coeff         SE          t          p       LLCI       ULCI
'X'          .351       .643       .546       .591      -.983      1.685
M1diff       .028       .032       .862       .398      -.039       .095
M2diff      -.027       .026     -1.051       .305      -.080       .026
M3diff      -.002       .032      -.076       .940      -.070       .065
M4diff       .135       .168       .805       .430      -.213       .483
M5diff       .017       .429       .040       .969      -.874       .908
M6diff      -.024       .081      -.302       .765      -.191       .143
M1avg       -.010       .034      -.286       .777      -.080       .060
M2avg        .024       .040       .592       .560      -.060       .107
M3avg       -.005       .024      -.195       .847      -.054       .044
M4avg        .048       .102       .468       .645      -.164       .259
M5avg       -.050       .513      -.098       .923     -1.114      1.014
M6avg       -.096       .122      -.791       .437      -.349       .156
```

```
Degrees of freedom for all regression coefficient estimates:
  22

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
```

```
       .086       .452       .190     34.000       .851      -.832      1.004

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
       .351       .643       .546     22.000       .591      -.983      1.685

Indirect Effect of X on Y through M
          Effect     BootSE   BootLLCI   BootULCI
Ind1        .322       .519      -.470      1.622
Ind2       -.440       .586     -1.813       .573
Ind3        .000       .178      -.527       .194
Ind4       -.135       .255      -.740       .293
Ind5        .002       .198      -.246       .572
Ind6       -.014       .147      -.300       .324
Total      -.265       .649     -1.550      1.084

Indirect Key
Columns   1 -  14
Ind1  'X'      ->       M1diff   ->       Ydiff
Ind2  'X'      ->       M2diff   ->       Ydiff
Ind3  'X'      ->       M3diff   ->       Ydiff
Ind4  'X'      ->       M4diff   ->       Ydiff
Ind5  'X'      ->       M5diff   ->       Ydiff
Ind6  'X'      ->       M6diff   ->       Ydiff
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6

***************************** ANALYSIS NOTES AND WARNINGS *****************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  5

Bootstrap confidence interval method used: Percentile bootstrap.

Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l       )        /2
 (        t_b       +       m_b       )        /2
 (        t_sc      +       m_sc      )        /2
 (        t_mp      +       m_mp      )        /2
```

```
(         t_mn       +       m_mn      )         /2
(         t_sa       +       m_sa      )         /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

extinction eda threat

```
Run MATRIX procedure:

***************** MEMORE Procedure for SPSS Version 2.1 *********************

                        Written by Amanda Montoya

                  Documentation available at akmontoya.com

**************************************************************************************

Model:
  1

Variables:
Y =   tee_t    mee_t
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =          tee_t     -       mee_t
M1diff =         t_l       -       m_l
M2diff =         t_b       -       m_b
M3diff =         t_sc      -       m_sc
M4diff =         t_mp      -       m_mp
M5diff =         t_mn      -       m_mn
M6diff =         t_sa      -       m_sa
M1avg  = (       t_l       +       m_l      )       /2       Centered
M2avg  = (       t_b       +       m_b      )       /2       Centered
M3avg  = (       t_sc      +       m_sc     )       /2       Centered
M4avg  = (       t_mp      +       m_mp     )       /2       Centered
M5avg  = (       t_mn      +       m_mn     )       /2       Centered
M6avg  = (       t_sa      +       m_sa     )       /2       Centered

Sample Size:
  34

**************************************************************************************
Outcome: Ydiff =  tee_t     -       mee_t

Model
```

```
------
        Effect         SE          t          p       LLCI       ULCI
'X'      -.036       .033     -1.088       .285      -.104       .031

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************
Outcome: M1diff = t_l       -       m_l
```

```
Model
        Effect         SE          t          p       LLCI       ULCI
'X'     11.029      3.587      3.075       .004      3.732     18.327

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     15.676      4.723      3.319       .002      6.067     25.286

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .206      3.753       .055       .957     -7.429      7.841

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
        Effect         SE          t          p       LLCI       ULCI
'X'      -.882       .847     -1.041       .305     -2.606       .842

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************
Outcome: M5diff = t_mn      -       m_mn

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .118       .226       .520       .607      -.343       .578

Degrees of freedom for all regression coefficient estimates:
  33
```

```
**************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .559      1.407       .397       .694     -2.305      3.422

Degrees of freedom for all regression coefficient estimates:
```

33

```
**************************************************************************
Outcome: Ydiff =  tee_t     -       mee_t

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .705       .497       .030      1.731     12.000     21.000       .131

Model
            coeff         SE          t          p       LLCI       ULCI
'X'          -.009       .039      -.223       .826      -.089       .072
M1diff       -.002       .002      -.899       .379      -.006       .002
M2diff       -.002       .002     -1.039       .311      -.005       .002
M3diff        .003       .002      1.460       .159      -.001       .007
M4diff       -.019       .010     -1.834       .081      -.040       .003
M5diff        .023       .026       .887       .385      -.031       .077
M6diff       -.006       .005     -1.181       .251      -.016       .005
M1avg         .000       .002      -.182       .857      -.005       .004
M2avg         .005       .002      2.267       .034       .000       .010
M3avg        -.001       .001      -.574       .572      -.004       .002
M4avg         .018       .006      2.887       .009       .005       .030
M5avg        -.020       .031      -.657       .518      -.085       .044
M6avg         .008       .008       .990       .334      -.009       .024

Degrees of freedom for all regression coefficient estimates:
  21

*********************** TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      -.036       .033     -1.088     33.000       .285      -.104       .031

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      -.009       .039      -.223     21.000       .826      -.089       .072

Indirect Effect of X on Y through M
          Effect     BootSE   BootLLCI   BootULCI
Ind1       -.019       .031      -.085       .037
Ind2       -.025       .031      -.083       .042
Ind3        .001       .017      -.022       .048
Ind4        .017       .026      -.013       .085
Ind5        .003       .014      -.014       .044
Ind6       -.003       .015      -.047       .015
Total      -.028       .049      -.103       .096
```

```
Indirect Key
Columns   1 -  14
Ind1   'X'      ->       M1diff   ->       Ydiff
Ind2   'X'      ->       M2diff   ->       Ydiff
Ind3   'X'      ->       M3diff   ->       Ydiff
Ind4   'X'      ->       M4diff   ->       Ydiff
Ind5   'X'      ->       M5diff   ->       Ydiff
Ind6   'X'      ->       M6diff   ->       Ydiff
```

```
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6

***************************** ANALYSIS NOTES AND WARNINGS ******************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  6

Bootstrap confidence interval method used: Percentile bootstrap.

Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

extinction eda safety

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 **********************

                          Written by Amanda Montoya

                   Documentation available at akmontoya.com

***************************************************************************************

Model:
  1
```

```
Variables:
Y =   tee_s    mee_s
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
```

```
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           tee_s     -       mee_s
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l      )        /2       Centered
M2avg  = (        t_b       +       m_b      )        /2       Centered
M3avg  = (        t_sc      +       m_sc     )        /2       Centered
M4avg  = (        t_mp      +       m_mp     )        /2       Centered
M5avg  = (        t_mn      +       m_mn     )        /2       Centered
M6avg  = (        t_sa      +       m_sa     )        /2       Centered

Sample Size:
  34

**************************************************************************************
Outcome: Ydiff =  tee_s     -       mee_s

Model
        Effect         SE          t          p       LLCI       ULCI
'X'      -.026       .035      -.748       .460      -.096       .044

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************************
Outcome: M1diff = t_l       -       m_l

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     11.029      3.587      3.075       .004      3.732     18.327

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     15.676      4.723      3.319       .002      6.067     25.286

Degrees of freedom for all regression coefficient estimates:
```

33

```
*************************************************************************
Outcome: M3diff = t_sc       -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .206      3.753       .055       .957     -7.429      7.841
```

```
Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
        Effect         SE          t          p       LLCI       ULCI
'X'      -.882       .847     -1.041       .305     -2.606       .842

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************
Outcome: M5diff = t_mn      -       m_mn

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .118       .226       .520       .607      -.343       .578

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .559      1.407       .397       .694     -2.305      3.422

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************
Outcome: Ydiff =  tee_s     -       mee_s

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .638       .407       .038      1.200     12.000     21.000       .344

Model
            coeff         SE          t          p       LLCI       ULCI
'X'          .011       .044       .253       .802      -.080       .102
M1diff      -.002       .002      -.884       .387      -.006       .003
M2diff      -.002       .002     -1.004       .327      -.005       .002
M3diff       .004       .002      1.875       .075       .000       .009
M4diff      -.016       .012     -1.355       .190      -.040       .008
```

M5diff	-.004	.029	-.121	.905	-.064	.057
M6diff	-.005	.006	-.837	.412	-.017	.007
M1avg	-.001	.002	-.296	.770	-.005	.004
M2avg	.003	.003	1.217	.237	-.002	.009
M3avg	-.001	.002	-.866	.396	-.005	.002
M4avg	.015	.007	2.191	.040	.001	.029
M5avg	-.001	.035	-.034	.974	-.074	.072
M6avg	.016	.009	1.790	.088	-.003	.034

```
Degrees of freedom for all regression coefficient estimates:
  21

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      -.026       .035      -.748     33.000       .460      -.096       .044

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
       .011       .044       .253     21.000       .802      -.080       .102

Indirect Effect of X on Y through M
          Effect     BootSE   BootLLCI   BootULCI
Ind1       -.021       .035      -.107       .030
Ind2       -.027       .047      -.146       .035
Ind3        .001       .020      -.038       .044
Ind4        .014       .022      -.016       .069
Ind5        .000       .012      -.028       .021
Ind6       -.003       .014      -.043       .019
Total      -.037       .059      -.176       .056

Indirect Key
Columns   1 -  14
Ind1   'X'      ->       M1diff   ->       Ydiff
Ind2   'X'      ->       M2diff   ->       Ydiff
Ind3   'X'      ->       M3diff   ->       Ydiff
Ind4   'X'      ->       M4diff   ->       Ydiff
Ind5   'X'      ->       M5diff   ->       Ydiff
Ind6   'X'      ->       M6diff   ->       Ydiff
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6

***************************** ANALYSIS NOTES AND WARNINGS *****************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  6

Bootstrap confidence interval method used: Percentile bootstrap.
```

```
Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
```

```
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

extinction eda discrimination

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 **********************

                          Written by Amanda Montoya

                    Documentation available at akmontoya.com

***************************************************************************************

Model:
  1

Variables:
Y =   tee_d    mee_d
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           tee_d     -       mee_d
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l      )        /2       Centered
M2avg  = (        t_b       +       m_b      )        /2       Centered
M3avg  = (        t_sc      +       m_sc     )        /2       Centered
M4avg  = (        t_mp      +       m_mp     )        /2       Centered
M5avg  = (        t_mn      +       m_mn     )        /2       Centered
M6avg  = (        t_sa      +       m_sa     )        /2       Centered
```

```
Sample Size:
  34

********************************************************************************
Outcome: Ydiff =  tee_d     -       mee_d

Model
```

```
        Effect         SE          t          p       LLCI       ULCI
'X'      -.010       .033      -.316       .754      -.077       .056

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************************
Outcome: M1diff = t_l       -       m_l

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     11.029      3.587      3.075       .004      3.732     18.327

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     15.676      4.723      3.319       .002      6.067     25.286

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .206      3.753       .055       .957     -7.429      7.841

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
        Effect         SE          t          p       LLCI       ULCI
'X'      -.882       .847     -1.041       .305     -2.606       .842

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************************
Outcome: M5diff = t mn      -       m mn
```

```
Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .118       .226       .520       .607      -.343       .578

Degrees of freedom for all regression coefficient estimates:
  33
```

```
**************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .559      1.407       .397       .694     -2.305      3.422

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************
Outcome: Ydiff =  tee_d     -       mee_d

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .468       .219       .044       .491     12.000     21.000       .897

Model
            coeff         SE          t          p       LLCI       ULCI
'X'         -.020       .047      -.417       .681      -.118       .079
M1diff       .000       .002       .082       .935      -.005       .005
M2diff       .000       .002       .078       .938      -.004       .004
M3diff      -.001       .002      -.539       .596      -.006       .004
M4diff      -.003       .013      -.247       .807      -.029       .023
M5diff       .027       .032       .837       .412      -.039       .092
M6diff      -.001       .006      -.192       .849      -.014       .012
M1avg        .000       .002       .124       .902      -.005       .005
M2avg        .002       .003       .729       .474      -.004       .008
M3avg        .001       .002       .332       .743      -.003       .004
M4avg        .002       .007       .335       .741      -.013       .018
M5avg       -.019       .038      -.506       .618      -.098       .060
M6avg       -.008       .010      -.845       .408      -.028       .012

Degrees of freedom for all regression coefficient estimates:
  21

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      -.010       .033      -.316     33.000       .754      -.077       .056

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      -.020       .047      -.417     21.000       .681      -.118       .079

Indirect Effect of X on Y through M
          Effect     BootSE   BootLLCI   BootULCI
```

Ind1	.002	.040	-.068	.091
Ind2	.002	.041	-.052	.113
Ind3	.000	.013	-.017	.035
Ind4	.003	.019	-.025	.053
Ind5	.003	.019	-.020	.059
Ind6	-.001	.013	-.033	.021
Total	.009	.057	-.065	.166

```
Indirect Key
Columns   1 -  14
Ind1   'X'      ->       M1diff   ->       Ydiff
Ind2   'X'      ->       M2diff   ->       Ydiff
Ind3   'X'      ->       M3diff   ->       Ydiff
Ind4   'X'      ->       M4diff   ->       Ydiff
Ind5   'X'      ->       M5diff   ->       Ydiff
Ind6   'X'      ->       M6diff   ->       Ydiff
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6

***************************** ANALYSIS NOTES AND WARNINGS ******************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  6

Bootstrap confidence interval method used: Percentile bootstrap.

Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

retrieval arousal threat

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 **********************
```

Written by Amanda Montoya

Documentation available at akmontoya.com

```
*******************************************************************************

Model:
  1
```

```
Variables:
Y =   tra_t    mra_t
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           tra_t     -       mra_t
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l      )        /2       Centered
M2avg  = (        t_b       +       m_b      )        /2       Centered
M3avg  = (        t_sc      +       m_sc     )        /2       Centered
M4avg  = (        t_mp      +       m_mp     )        /2       Centered
M5avg  = (        t_mn      +       m_mn     )        /2       Centered
M6avg  = (        t_sa      +       m_sa     )        /2       Centered

Sample Size:
  34

*************************************************************************************
Outcome: Ydiff =  tra_t     -       mra_t

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .588       .427      1.379       .177      -.280      1.456

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************************
Outcome: M1diff = t_l       -       m_l

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     13.118      4.109      3.193       .003      4.759     21.477

Degrees of freedom for all regression coefficient estimates:
  33
```

```
**************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     19.118      5.286      3.617       .001      8.363     29.872

Degrees of freedom for all regression coefficient estimates:
```

```
  33

*************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -2.941      4.048      -.727       .473    -11.177      5.294

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -1.265       .892     -1.418       .166     -3.079       .550

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************
Outcome: M5diff = t_mn      -       m_mn

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .265       .281       .942       .353      -.307       .836

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .353      1.420       .249       .805     -2.536      3.242

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************
Outcome: Ydiff =  tra_t     -       mra_t

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .718       .516      4.705      1.867     12.000     21.000       .101
```

Model

	coeff	SE	t	p	LLCI	ULCI
'X'	-.081	.464	-.176	.862	-1.046	.883
M1diff	.038	.026	1.477	.155	-.015	.091
M2diff	.014	.021	.665	.514	-.030	.058
M3diff	-.045	.025	-1.818	.083	-.096	.006
M4diff	.266	.126	2.119	.046	.005	.528

```
M5diff       .340       .249      1.365       .187      -.178       .859
M6diff       .064       .058      1.110       .280      -.056       .185
M1avg        .057       .027      2.121       .046       .001       .112
M2avg       -.033       .032     -1.040       .310      -.099       .033
M3avg        .002       .019       .123       .903      -.037       .042
M4avg        .054       .089       .615       .545      -.130       .239
M5avg        .209       .342       .612       .547      -.503       .922
M6avg       -.164       .110     -1.486       .152      -.393       .065

Degrees of freedom for all regression coefficient estimates:
  21

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
       .588       .427      1.379     33.000       .177      -.280      1.456

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      -.081       .464      -.176     21.000       .862     -1.046       .883

Indirect Effect of X on Y through M
         Effect     BootSE   BootLLCI   BootULCI
Ind1        .496       .622      -.430      2.136
Ind2        .266       .629     -1.174      1.401
Ind3        .132       .251      -.340       .688
Ind4       -.337       .306      -.974       .218
Ind5        .090       .198      -.153       .621
Ind6        .023       .138      -.277       .306
Total       .670       .593      -.278      2.042

Indirect Key
Columns   1 -  14
Ind1   'X'      ->       M1diff   ->       Ydiff
Ind2   'X'      ->       M2diff   ->       Ydiff
Ind3   'X'      ->       M3diff   ->       Ydiff
Ind4   'X'      ->       M4diff   ->       Ydiff
Ind5   'X'      ->       M5diff   ->       Ydiff
Ind6   'X'      ->       M6diff   ->       Ydiff
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6
```

```
***************************** ANALYSIS NOTES AND WARNINGS ******************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  6

Bootstrap confidence interval method used: Percentile bootstrap.
```

```
Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

retrieval arousal safety

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 **********************

                           Written by Amanda Montoya

                     Documentation available at akmontoya.com

***************************************************************************************

Model:
  1

Variables:
Y =   tra_s    mra_s
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           tra_s     -       mra_s
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
```

```
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l       )       /2      Centered
M2avg  = (        t_b       +       m_b       )       /2      Centered
M3avg  = (        t_sc      +       m_sc      )       /2      Centered
M4avg  = (        t_mp      +       m_mp      )       /2      Centered
M5avg  = (        t_mn      +       m_mn      )       /2      Centered
M6avg  = (        t_sa      +       m_sa      )       /2      Centered
```

```
Sample Size:
  34

*************************************************************************
Outcome: Ydiff =  tra_s     -       mra_s

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .353       .235      1.504       .142      -.124       .830

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************
Outcome: M1diff = t_l       -       m_l

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     13.118      4.109      3.193       .003      4.759     21.477

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     19.118      5.286      3.617       .001      8.363     29.872

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -2.941      4.048      -.727       .473    -11.177      5.294

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
```

```
        Effect         SE          t          p       LLCI       ULCI
'X'     -1.265       .892     -1.418       .166     -3.079       .550

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************
Outcome: M5diff = t_mn      -       m_mn
```

```
Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .265       .281       .942       .353      -.307       .836

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .353      1.420       .249       .805     -2.536      3.242

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************************
Outcome: Ydiff =  tra_s     -       mra_s

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .593       .352      1.906       .950     12.000     21.000       .520

Model
            coeff         SE          t          p       LLCI       ULCI
'X'          .071       .295       .240       .813      -.543       .685
M1diff       .009       .016       .558       .583      -.025       .043
M2diff       .009       .013       .664       .514      -.019       .037
M3diff      -.022       .016     -1.400       .176      -.055       .011
M4diff       .072       .080       .904       .376      -.094       .239
M5diff       .058       .159       .365       .719      -.272       .388
M6diff       .014       .037       .385       .704      -.062       .091
M1avg        .034       .017      2.012       .057      -.001       .070
M2avg       -.018       .020      -.904       .376      -.061       .024
M3avg       -.012       .012      -.971       .342      -.037       .013
M4avg       -.041       .056      -.724       .477      -.158       .076
M5avg        .089       .218       .408       .688      -.364       .542
M6avg       -.169       .070     -2.406       .025      -.315      -.023

Degrees of freedom for all regression coefficient estimates:
  21

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
```

```
      .353       .235      1.504     33.000       .142      -.124       .830

Direct effect of X on Y
    Effect         SE          t         df          p       LLCI       ULCI
      .071       .295       .240     21.000       .813      -.543       .685

Indirect Effect of X on Y through M
         Effect     BootSE   BootLLCI   BootULCI
```

```
Ind1        .119       .333      -.671       .666
Ind2        .169       .370      -.382      1.114
Ind3        .065       .139      -.145       .411
Ind4       -.091       .147      -.436       .160
Ind5        .015       .110      -.193       .264
Ind6        .005       .075      -.165       .155
Total       .282       .342      -.345      1.010

Indirect Key
Columns   1 -  14
Ind1   'X'      ->       M1diff   ->       Ydiff
Ind2   'X'      ->       M2diff   ->       Ydiff
Ind3   'X'      ->       M3diff   ->       Ydiff
Ind4   'X'      ->       M4diff   ->       Ydiff
Ind5   'X'      ->       M5diff   ->       Ydiff
Ind6   'X'      ->       M6diff   ->       Ydiff
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6

***************************** ANALYSIS NOTES AND WARNINGS ******************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  6

Bootstrap confidence interval method used: Percentile bootstrap.

Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

retrieval arousal discrimination

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 ***********************
```

Written by Amanda Montoya

Documentation available at akmontoya.com

```
**************************************************************************************

Model:
  1

Variables:
Y =   tra_d    mra_d
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           tra_d     -       mra_d
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l      )        /2       Centered
M2avg  = (        t_b       +       m_b      )        /2       Centered
M3avg  = (        t_sc      +       m_sc     )        /2       Centered
M4avg  = (        t_mp      +       m_mp     )        /2       Centered
M5avg  = (        t_mn      +       m_mn     )        /2       Centered
M6avg  = (        t_sa      +       m_sa     )        /2       Centered

Sample Size:
  34

**************************************************************************************
Outcome: Ydiff =  tra_d     -       mra_d

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .235       .441       .534       .597      -.662      1.132

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************************
Outcome: M1diff = t_l       -       m_l
```

Model

	Effect	SE	t	p	LLCI	ULCI
'X'	13.118	4.109	3.193	.003	4.759	21.477

Degrees of freedom for all regression coefficient estimates:
33

```
**************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     19.118      5.286      3.617       .001      8.363     29.872

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -2.941      4.048      -.727       .473    -11.177      5.294

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -1.265       .892     -1.418       .166     -3.079       .550

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************
Outcome: M5diff = t_mn      -       m_mn

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .265       .281       .942       .353      -.307       .836

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .353      1.420       .249       .805     -2.536      3.242

Degrees of freedom for all regression coefficient estimates:
```

33

```
************************************************************************************
Outcome: Ydiff =  tra_d     -       mra_d

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .545       .297      7.302       .739     12.000     21.000       .700
```

Model

	coeff	SE	t	p	LLCI	ULCI
'X'	-.152	.578	-.263	.795	-1.354	1.050
M1diff	.029	.032	.900	.378	-.038	.095
M2diff	.005	.026	.194	.848	-.049	.059
M3diff	-.023	.031	-.744	.465	-.087	.041
M4diff	.194	.157	1.239	.229	-.132	.520
M5diff	.283	.311	.910	.373	-.364	.929
M6diff	.050	.072	.694	.495	-.100	.200
M1avg	.022	.033	.675	.507	-.047	.092
M2avg	-.015	.040	-.373	.713	-.097	.068
M3avg	.014	.024	.595	.558	-.035	.064
M4avg	.095	.110	.864	.398	-.134	.325
M5avg	.121	.427	.283	.780	-.767	1.008
M6avg	.005	.137	.037	.971	-.280	.290

Degrees of freedom for all regression coefficient estimates:
21

********** TOTAL, DIRECT, AND INDIRECT EFFECTS **********

Total effect of X on Y

Effect	SE	t	df	p	LLCI	ULCI
.235	.441	.534	33.000	.597	-.662	1.132

Direct effect of X on Y

Effect	SE	t	df	p	LLCI	ULCI
-.152	.578	-.263	21.000	.795	-1.354	1.050

Indirect Effect of X on Y through M

	Effect	BootSE	BootLLCI	BootULCI
Ind1	.376	.712	-.553	2.245
Ind2	.097	.836	-1.854	1.430
Ind3	.067	.209	-.406	.471
Ind4	-.245	.314	-.859	.394
Ind5	.075	.235	-.238	.718
Ind6	.018	.150	-.278	.331
Total	.388	.596	-.671	1.773

Indirect Key
Columns 1 - 14

Ind1	'X'	->	M1diff	->	Ydiff
Ind2	'X'	->	M2diff	->	Ydiff
Ind3	'X'	->	M3diff	->	Ydiff
Ind4	'X'	->	M4diff	->	Ydiff
Ind5	'X'	->	M5diff	->	Ydiff
Ind6	'X'	->	M6diff	->	Ydiff

```
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6
```

```
***************************** ANALYSIS NOTES AND WARNINGS *****************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  6

Bootstrap confidence interval method used: Percentile bootstrap.

Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

retrieval valence threat

```
Run MATRIX procedure:

******************** MEMORE Procedure for SPSS Version 2.1 **********************

                         Written by Amanda Montoya

                    Documentation available at akmontoya.com

***************************************************************************************

Model:
  1

Variables:
Y =   trv_t    mrv_t
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
```

```
                _          _
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           trv_t     -       mrv_t
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
```

```
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l       )       /2       Centered
M2avg  = (        t_b       +       m_b       )       /2       Centered
M3avg  = (        t_sc      +       m_sc      )       /2       Centered
M4avg  = (        t_mp      +       m_mp      )       /2       Centered
M5avg  = (        t_mn      +       m_mn      )       /2       Centered
M6avg  = (        t_sa      +       m_sa      )       /2       Centered

Sample Size:
  34

**************************************************************************************
Outcome: Ydiff =  trv_t     -       mrv_t

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .588       .387      1.519       .138      -.200      1.376

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************************
Outcome: M1diff = t_l       -       m_l

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     13.118      4.109      3.193       .003      4.759     21.477

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     19.118      5.286      3.617       .001      8.363     29.872

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -2.941      4.048      -.727       .473    -11.177      5.294
```

```
Degrees of freedom for all regression coefficient estimates:
  33

************************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
```

```
        Effect         SE          t          p       LLCI       ULCI
'X'     -1.265       .892     -1.418       .166     -3.079       .550

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************************
Outcome: M5diff = t_mn      -       m_mn

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .265       .281       .942       .353      -.307       .836

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .353      1.420       .249       .805     -2.536      3.242

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************************
Outcome: Ydiff =  trv_t     -       mrv_t

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .736       .541      3.676      2.064     12.000     21.000       .070

Model
            coeff         SE          t          p       LLCI       ULCI
'X'          .242       .410       .590       .561      -.611      1.095
M1diff       .026       .023      1.159       .259      -.021       .073
M2diff       .006       .019       .344       .734      -.032       .045
M3diff      -.029       .022     -1.352       .191      -.075       .016
M4diff       .192       .111      1.729       .098      -.039       .423
M5diff       .201       .220       .912       .372      -.257       .659
M6diff      -.046       .051      -.901       .378      -.152       .060
M1avg        .045       .024      1.891       .072      -.004       .094
M2avg       -.025       .028      -.886       .385      -.084       .034
M3avg        .009       .017       .539       .596      -.026       .044
M4avg        .112       .078      1.430       .167      -.051       .275
M5avg        .003       .303       .010       .992      -.626       .633
M6avg        .010       .097       .102       .920      -.193       .212
```

Degrees of freedom for all regression coefficient estimates:
  21

********** TOTAL, DIRECT, AND INDIRECT EFFECTS **********

Total effect of X on Y

Effect	SE	t	df	p	LLCI	ULCI

```
      .588       .387      1.519     33.000       .138      -.200      1.376

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
       .242       .410       .590     21.000       .561      -.611      1.095

Indirect Effect of X on Y through M
          Effect     BootSE   BootLLCI   BootULCI
Ind1        .344       .470      -.519      1.425
Ind2        .122       .522     -1.164      1.023
Ind3        .087       .191      -.282       .498
Ind4       -.243       .266      -.841       .208
Ind5        .053       .164      -.204       .471
Ind6       -.016       .113      -.271       .211
Total       .346       .532      -.800      1.250

Indirect Key
Columns   1 -  14
Ind1  'X'      ->       M1diff   ->       Ydiff
Ind2  'X'      ->       M2diff   ->       Ydiff
Ind3  'X'      ->       M3diff   ->       Ydiff
Ind4  'X'      ->       M4diff   ->       Ydiff
Ind5  'X'      ->       M5diff   ->       Ydiff
Ind6  'X'      ->       M6diff   ->       Ydiff
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6

***************************** ANALYSIS NOTES AND WARNINGS *****************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  6

Bootstrap confidence interval method used: Percentile bootstrap.

Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l       )        /2
 (        t_b       +       m_b       )        /2
 (        t_sc      +       m_sc      )        /2
 (        t_mp      +       m_mp      )        /2
```

```
(        t_mn      +       m_mn     )        /2
(        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

retrieval valence safety

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 **********************

                          Written by Amanda Montoya

                    Documentation available at akmontoya.com

***************************************************************************************

Model:
  1

Variables:
Y =   trv_s    mrv_s
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =          trv_s     -       mrv_s
M1diff =         t_l       -       m_l
M2diff =         t_b       -       m_b
M3diff =         t_sc      -       m_sc
M4diff =         t_mp      -       m_mp
M5diff =         t_mn      -       m_mn
M6diff =         t_sa      -       m_sa
M1avg  = (       t_l       +       m_l      )       /2       Centered
M2avg  = (       t_b       +       m_b      )       /2       Centered
M3avg  = (       t_sc      +       m_sc     )       /2       Centered
M4avg  = (       t_mp      +       m_mp     )       /2       Centered
M5avg  = (       t_mn      +       m_mn     )       /2       Centered
M6avg  = (       t_sa      +       m_sa     )       /2       Centered

Sample Size:
  34

***************************************************************************************
Outcome: Ydiff =  trv_s     -       mrv_s

Model
```

```
------
        Effect         SE          t          p       LLCI       ULCI
'X'       .382       .319      1.199       .239      -.266      1.031

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************
Outcome: M1diff = t_l       -       m_l
```

```
Model
        Effect         SE          t          p       LLCI       ULCI
'X'     13.118      4.109      3.193       .003      4.759     21.477

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     19.118      5.286      3.617       .001      8.363     29.872

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -2.941      4.048      -.727       .473    -11.177      5.294

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -1.265       .892     -1.418       .166     -3.079       .550

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************************
Outcome: M5diff = t_mn      -       m_mn

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .265       .281       .942       .353      -.307       .836

Degrees of freedom for all regression coefficient estimates:
  33
```

```
**************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .353      1.420       .249       .805     -2.536      3.242

Degrees of freedom for all regression coefficient estimates:
```

33

```
**************************************************************************
Outcome: Ydiff =  trv_s     -       mrv_s

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .653       .427      3.112      1.304     12.000     21.000       .287

Model
            coeff         SE          t          p       LLCI       ULCI
'X'          -.019       .377       -.051       .959       -.804       .765
M1diff        .000       .021        .015       .988       -.043       .044
M2diff        .019       .017       1.106       .281       -.017       .054
M3diff       -.029       .020      -1.435       .166       -.071       .013
M4diff        .000       .102        .003       .998       -.212       .213
M5diff       -.189       .203       -.931       .363       -.610       .233
M6diff        .008       .047        .167       .869       -.090       .106
M1avg         .046       .022       2.108       .047        .001       .091
M2avg        -.040       .026      -1.558       .134       -.094       .014
M3avg         .004       .016        .230       .820       -.029       .036
M4avg        -.050       .072       -.697       .494       -.200       .100
M5avg        -.156       .278       -.560       .582       -.735       .423
M6avg        -.115       .090      -1.280       .215       -.301       .072

Degrees of freedom for all regression coefficient estimates:
  21

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
       .382       .319      1.199     33.000       .239       -.266      1.031

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
       -.019       .377       -.051     21.000       .959       -.804       .765

Indirect Effect of X on Y through M
          Effect     BootSE   BootLLCI   BootULCI
Ind1         .004       .367       -.908        .590
Ind2         .361       .413       -.334       1.329
Ind3         .085       .194       -.145        .613
Ind4         .000       .199       -.388        .447
Ind5        -.050       .149       -.381        .226
Ind6         .003       .093       -.193        .197
Total        .402       .458       -.578       1.286
```

```
Indirect Key
Columns   1 -  14
Ind1   'X'      ->       M1diff   ->       Ydiff
Ind2   'X'      ->       M2diff   ->       Ydiff
Ind3   'X'      ->       M3diff   ->       Ydiff
Ind4   'X'      ->       M4diff   ->       Ydiff
Ind5   'X'      ->       M5diff   ->       Ydiff
Ind6   'X'      ->       M6diff   ->       Ydiff
```

```
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6

***************************** ANALYSIS NOTES AND WARNINGS ******************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  6

Bootstrap confidence interval method used: Percentile bootstrap.

Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

retrieval valence discrimination

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 **********************

                          Written by Amanda Montoya

                   Documentation available at akmontoya.com

***************************************************************************************

Model:
  1
```

```
Variables:
Y =   trv_d    mrv_d
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
```

```
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           trv_d     -       mrv_d
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l      )        /2       Centered
M2avg  = (        t_b       +       m_b      )        /2       Centered
M3avg  = (        t_sc      +       m_sc     )        /2       Centered
M4avg  = (        t_mp      +       m_mp     )        /2       Centered
M5avg  = (        t_mn      +       m_mn     )        /2       Centered
M6avg  = (        t_sa      +       m_sa     )        /2       Centered

Sample Size:
  34

*************************************************************************************
Outcome: Ydiff =  trv_d     -       mrv_d

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .206       .499       .412       .683      -.810      1.221

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************************
Outcome: M1diff = t_l       -       m_l

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     13.118      4.109      3.193       .003      4.759     21.477

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     19.118      5.286      3.617       .001      8.363     29.872

Degrees of freedom for all regression coefficient estimates:
```

33

```
*************************************************************************
Outcome: M3diff = t_sc       -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -2.941      4.048      -.727       .473    -11.177      5.294
```

```
Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     -1.265       .892     -1.418       .166     -3.079       .550

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************************
Outcome: M5diff = t_mn      -       m_mn

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .265       .281       .942       .353      -.307       .836

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .353      1.420       .249       .805     -2.536      3.242

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************************
Outcome: Ydiff =  trv_d     -       mrv_d

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .641       .411      7.840      1.221     12.000     21.000       .332

Model
            coeff         SE          t          p       LLCI       ULCI
'X'           .261       .599       .436       .667      -.984      1.507
M1diff        .026       .033       .784       .442      -.043       .095
M2diff       -.012       .027      -.462       .649      -.069       .044
M3diff       -.001       .032      -.022       .983      -.067       .066
M4diff        .192       .162      1.182       .250      -.146       .529
```

M5diff	.390	.322	1.211	.239	-.280	1.059
M6diff	-.054	.075	-.722	.478	-.209	.101
M1avg	-.001	.034	-.033	.974	-.073	.071
M2avg	.015	.041	.375	.712	-.070	.101
M3avg	.006	.025	.224	.825	-.046	.057
M4avg	.162	.114	1.418	.171	-.076	.400
M5avg	.159	.442	.359	.723	-.760	1.078
M6avg	.125	.142	.876	.391	-.171	.420

```
Degrees of freedom for all regression coefficient estimates:
  21

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
       .206       .499       .412     33.000       .683      -.810      1.221

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
       .261       .599       .436     21.000       .667      -.984      1.507

Indirect Effect of X on Y through M
          Effect     BootSE   BootLLCI   BootULCI
Ind1        .340       .626      -.646      1.828
Ind2       -.239       .721     -1.981       .919
Ind3        .002       .220      -.593       .299
Ind4       -.243       .314      -.980       .263
Ind5        .103       .258      -.258       .731
Ind6       -.019       .154      -.346       .300
Total      -.055       .652     -1.544      1.086

Indirect Key
Columns   1 -  14
Ind1  'X'      ->       M1diff   ->       Ydiff
Ind2  'X'      ->       M2diff   ->       Ydiff
Ind3  'X'      ->       M3diff   ->       Ydiff
Ind4  'X'      ->       M4diff   ->       Ydiff
Ind5  'X'      ->       M5diff   ->       Ydiff
Ind6  'X'      ->       M6diff   ->       Ydiff
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6

***************************** ANALYSIS NOTES AND WARNINGS *****************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  6

Bootstrap confidence interval method used: Percentile bootstrap.
```

```
Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
```

```
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

retrieval eda threat

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 **********************

                          Written by Amanda Montoya

                    Documentation available at akmontoya.com

***************************************************************************************

Model:
  1

Variables:
Y =   tre_t    mre_t
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           tre_t     -       mre_t
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l      )        /2       Centered
M2avg  = (        t_b       +       m_b      )        /2       Centered
M3avg  = (        t_sc      +       m_sc     )        /2       Centered
M4avg  = (        t_mp      +       m_mp     )        /2       Centered
M5avg  = (        t_mn      +       m_mn     )        /2       Centered
M6avg  = (        t_sa      +       m_sa     )        /2       Centered
```

```
Sample Size:
  34

********************************************************************************
Outcome: Ydiff =  tre_t     -       mre_t

Model
```

```
        Effect         SE          t          p       LLCI       ULCI
'X'       .010       .033       .314       .755      -.057       .078

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************************
Outcome: M1diff = t_l       -       m_l

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     11.029      3.587      3.075       .004      3.732     18.327

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     15.676      4.723      3.319       .002      6.067     25.286

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .206      3.753       .055       .957     -7.429      7.841

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
        Effect         SE          t          p       LLCI       ULCI
'X'      -.882       .847     -1.041       .305     -2.606       .842

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************************
Outcome: M5diff = t mn      -       m mn
```

```
Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .118       .226       .520       .607      -.343       .578

Degrees of freedom for all regression coefficient estimates:
  33
```

```
**************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .559      1.407       .397       .694     -2.305      3.422

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************
Outcome: Ydiff =  tre_t     -       mre_t

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .630       .397       .036      1.154     12.000     21.000       .373

Model
            coeff         SE          t          p       LLCI       ULCI
'X'          .000       .042       .003       .997      -.088       .088
M1diff      -.001       .002      -.284       .779      -.005       .004
M2diff       .000       .002      -.142       .889      -.004       .003
M3diff       .001       .002       .489       .630      -.003       .006
M4diff      -.028       .011     -2.523       .020      -.052      -.005
M5diff      -.022       .028      -.759       .456      -.081       .037
M6diff      -.004       .006      -.690       .498      -.015       .008
M1avg        .001       .002       .680       .504      -.003       .006
M2avg       -.001       .003      -.535       .598      -.007       .004
M3avg       -.002       .002     -1.527       .142      -.006       .001
M4avg        .002       .007       .291       .774      -.012       .016
M5avg        .034       .034       .984       .337      -.037       .104
M6avg        .008       .009       .931       .362      -.010       .026

Degrees of freedom for all regression coefficient estimates:
  21

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
       .010       .033       .314     33.000       .755      -.057       .078

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
       .000       .042       .003     21.000       .997      -.088       .088

Indirect Effect of X on Y through M
          Effect     BootSE   BootLLCI   BootULCI
```

Ind1	-.007	.030	-.078	.042
Ind2	-.004	.031	-.065	.057
Ind3	.000	.014	-.028	.031
Ind4	.025	.032	-.028	.099
Ind5	-.003	.015	-.037	.021
Ind6	-.002	.015	-.043	.015
Total	.010	.054	-.104	.115

```
Indirect Key
Columns   1 -  14
Ind1   'X'      ->       M1diff   ->       Ydiff
Ind2   'X'      ->       M2diff   ->       Ydiff
Ind3   'X'      ->       M3diff   ->       Ydiff
Ind4   'X'      ->       M4diff   ->       Ydiff
Ind5   'X'      ->       M5diff   ->       Ydiff
Ind6   'X'      ->       M6diff   ->       Ydiff
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6

***************************** ANALYSIS NOTES AND WARNINGS *****************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  6

Bootstrap confidence interval method used: Percentile bootstrap.

Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

retrieval eda safety

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 **********************
```

Written by Amanda Montoya

Documentation available at akmontoya.com

```
********************************************************************************

Model:
  1
```

```
Variables:
Y =   tre_s    mre_s
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           tre_s     -       mre_s
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l      )        /2       Centered
M2avg  = (        t_b       +       m_b      )        /2       Centered
M3avg  = (        t_sc      +       m_sc     )        /2       Centered
M4avg  = (        t_mp      +       m_mp     )        /2       Centered
M5avg  = (        t_mn      +       m_mn     )        /2       Centered
M6avg  = (        t_sa      +       m_sa     )        /2       Centered

Sample Size:
  34

*************************************************************************************
Outcome: Ydiff =  tre_s     -       mre_s

Model
        Effect         SE          t          p       LLCI       ULCI
'X'      -.008       .020      -.379       .707      -.049       .034

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************************
Outcome: M1diff = t_l       -       m_l

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     11.029      3.587      3.075       .004      3.732     18.327

Degrees of freedom for all regression coefficient estimates:
  33
```

```
**************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     15.676      4.723      3.319       .002      6.067     25.286

Degrees of freedom for all regression coefficient estimates:
```

```
  33

*************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .206      3.753       .055       .957     -7.429      7.841

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
        Effect         SE          t          p       LLCI       ULCI
'X'      -.882       .847     -1.041       .305     -2.606       .842

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************
Outcome: M5diff = t_mn      -       m_mn

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .118       .226       .520       .607      -.343       .578

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .559      1.407       .397       .694     -2.305      3.422

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************
Outcome: Ydiff =  tre_s     -       mre_s

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .621       .386       .014      1.098     12.000     21.000       .410
```

Model

	coeff	SE	t	p	LLCI	ULCI
'X'	-.018	.026	-.672	.509	-.072	.037
M1diff	.000	.001	-.225	.824	-.003	.002
M2diff	.000	.001	.430	.672	-.002	.003
M3diff	.003	.001	1.915	.069	.000	.005
M4diff	-.010	.007	-1.492	.151	-.025	.004

```
M5diff       .002       .018       .091       .928      -.035       .038
M6diff      -.007       .003     -1.975       .062      -.014       .000
M1avg        .000       .001       .165       .870      -.003       .003
M2avg        .003       .002      1.582       .129      -.001       .006
M3avg       -.001       .001      -.987       .335      -.003       .001
M4avg        .011       .004      2.679       .014       .002       .020
M5avg       -.008       .021      -.370       .715      -.052       .036
M6avg        .009       .005      1.767       .092      -.002       .020

Degrees of freedom for all regression coefficient estimates:
  21

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      -.008       .020      -.379     33.000       .707      -.049       .034

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
      -.018       .026      -.672     21.000       .509      -.072       .037

Indirect Effect of X on Y through M
         Effect     BootSE   BootLLCI   BootULCI
Ind1      -.003       .019      -.039       .041
Ind2       .007       .022      -.034       .055
Ind3       .001       .016      -.023       .042
Ind4       .009       .017      -.011       .054
Ind5       .000       .008      -.013       .020
Ind6      -.004       .015      -.043       .019
Total      .010       .040      -.041       .118

Indirect Key
Columns   1 -  14
Ind1   'X'      ->       M1diff   ->       Ydiff
Ind2   'X'      ->       M2diff   ->       Ydiff
Ind3   'X'      ->       M3diff   ->       Ydiff
Ind4   'X'      ->       M4diff   ->       Ydiff
Ind5   'X'      ->       M5diff   ->       Ydiff
Ind6   'X'      ->       M6diff   ->       Ydiff
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6
```

```
***************************** ANALYSIS NOTES AND WARNINGS ******************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  6

Bootstrap confidence interval method used: Percentile bootstrap.
```

```
Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

retrieval eda discrimination

```
Run MATRIX procedure:

********************* MEMORE Procedure for SPSS Version 2.1 **********************

                           Written by Amanda Montoya

                     Documentation available at akmontoya.com

***************************************************************************************

Model:
  1

Variables:
Y =   tre_d    mre_d
M1 =  t_l      m_l
M2 =  t_b      m_b
M3 =  t_sc     m_sc
M4 =  t_mp     m_mp
M5 =  t_mn     m_mn
M6 =  t_sa     m_sa

Computed Variables:
Ydiff =           tre_d     -       mre_d
M1diff =          t_l       -       m_l
M2diff =          t_b       -       m_b
M3diff =          t_sc      -       m_sc
M4diff =          t_mp      -       m_mp
```

```
M5diff =          t_mn      -       m_mn
M6diff =          t_sa      -       m_sa
M1avg  = (        t_l       +       m_l       )       /2      Centered
M2avg  = (        t_b       +       m_b       )       /2      Centered
M3avg  = (        t_sc      +       m_sc      )       /2      Centered
M4avg  = (        t_mp      +       m_mp      )       /2      Centered
M5avg  = (        t_mn      +       m_mn      )       /2      Centered
M6avg  = (        t_sa      +       m_sa      )       /2      Centered
```

```
Sample Size:
  34

*************************************************************************
Outcome: Ydiff =  tre_d     -       mre_d

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .018       .032       .568       .574      -.047       .083

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************
Outcome: M1diff = t_l       -       m_l

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     11.029      3.587      3.075       .004      3.732     18.327

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************
Outcome: M2diff = t_b       -       m_b

Model
        Effect         SE          t          p       LLCI       ULCI
'X'     15.676      4.723      3.319       .002      6.067     25.286

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************
Outcome: M3diff = t_sc      -       m_sc

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .206      3.753       .055       .957     -7.429      7.841

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************
Outcome: M4diff = t_mp      -       m_mp

Model
```

```
        Effect         SE          t          p       LLCI       ULCI
'X'      -.882       .847     -1.041       .305     -2.606       .842

Degrees of freedom for all regression coefficient estimates:
  33

**************************************************************************
Outcome: M5diff = t_mn      -       m_mn
```

```
Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .118       .226       .520       .607      -.343       .578

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************
Outcome: M6diff = t_sa      -       m_sa

Model
        Effect         SE          t          p       LLCI       ULCI
'X'       .559      1.407       .397       .694     -2.305      3.422

Degrees of freedom for all regression coefficient estimates:
  33

*************************************************************************
Outcome: Ydiff =  tre_d     -       mre_d

Model Summary
          R       R-sq        MSE          F        df1        df2          p
       .625       .391       .033      1.123     12.000     21.000       .393

Model
            coeff         SE          t          p       LLCI       ULCI
'X'          .018       .041       .433       .670      -.067       .103
M1diff       .000       .002      -.150       .882      -.005       .004
M2diff      -.001       .002      -.421       .678      -.004       .003
M3diff      -.002       .002      -.718       .481      -.006       .003
M4diff      -.018       .011     -1.657       .112      -.041       .005
M5diff      -.023       .027      -.844       .408      -.080       .034
M6diff       .003       .005       .547       .590      -.008       .014
M1avg        .001       .002       .598       .556      -.003       .006
M2avg       -.004       .003     -1.564       .133      -.009       .001
M3avg       -.001       .001      -.949       .353      -.005       .002
M4avg       -.009       .006     -1.411       .173      -.022       .004
M5avg        .041       .033      1.254       .224      -.027       .110
M6avg       -.001       .008      -.165       .870      -.019       .016

Degrees of freedom for all regression coefficient estimates:
  21

************************ TOTAL, DIRECT, AND INDIRECT EFFECTS ************************

Total effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
```

```
       .018       .032       .568     33.000       .574      -.047       .083

Direct effect of X on Y
     Effect         SE          t         df          p       LLCI       ULCI
       .018       .041       .433     21.000       .670      -.067       .103

Indirect Effect of X on Y through M
          Effect     BootSE   BootLLCI   BootULCI
```

```
Ind1       -.003       .029      -.078       .037
Ind2       -.011       .033      -.082       .048
Ind3        .000       .013      -.035       .021
Ind4        .016       .021      -.021       .063
Ind5       -.003       .014      -.041       .019
Ind6        .002       .011      -.023       .023
Total       .000       .052      -.138       .071

Indirect Key
Columns   1 -  14
Ind1   'X'      ->       M1diff   ->       Ydiff
Ind2   'X'      ->       M2diff   ->       Ydiff
Ind3   'X'      ->       M3diff   ->       Ydiff
Ind4   'X'      ->       M4diff   ->       Ydiff
Ind5   'X'      ->       M5diff   ->       Ydiff
Ind6   'X'      ->       M6diff   ->       Ydiff
Columns  15 -  15
Ind1
Ind2
Ind3
Ind4
Ind5
Ind6

***************************** ANALYSIS NOTES AND WARNINGS ******************************
*

NOTE: Some cases were deleted due to missing data. The number of cases was:
  6

Bootstrap confidence interval method used: Percentile bootstrap.

Number of bootstrap samples for bootstrap confidence intervals:
  10000

The following variables were mean centered prior to analysis:
 (        t_l       +       m_l      )        /2
 (        t_b       +       m_b      )        /2
 (        t_sc      +       m_sc     )        /2
 (        t_mp      +       m_mp     )        /2
 (        t_mn      +       m_mn     )        /2
 (        t_sa      +       m_sa     )        /2

Level of confidence for all confidence intervals in output:
      95.00

------ END MATRIX -----
```

Appendix I

References

Alexander, D. M., Trengove, C., Johnston, P., Cooper, T., August, J. P., & Gordon, E. (2005). Separating individual skin conductance responses in a short interstimulus-interval paradigm. *Journal of neuroscience methods*, *146*(1), 116–123. https://doi.org/10.1016/j.jneumeth.2005.02.001

Antov, M. I., Melicherová, U., & Stockhorst, U. (2015). Cold pressor test improves fear extinction in healthy men. *Psychoneuroendocrinology*, *54*, 54–59. https://doi.org/10.1016/j.psyneuen.2015.01.009

Aust, F., & Barth, M. (2023). Papaja: Prepare reproducible APA journal articles with R markdown.

Bach, D. R. (2014). A head-to-head comparison of SCRalyze and ledalab, two model-based methods for skin conductance analysis. *Biological psychology*, *103*, 63–68. https://doi.org/10.1016/j.biopsycho.2014.08.006

Bach, D. R., Castegnetti, G., Korn, C. W., Gerster, S., Melinscak, F., & Moser, T. (2018). Psychophysiological modeling: Current state and future directions. *Psychophysiology*, *55*(11), e13214. https://doi.org/10.1111/psyp.13209

Bach, D. R., Friston, K. J., & Dolan, R. J. (2013). An improved algorithm for model-based analysis of evoked skin conductance responses. *Biological psychology*, *94*(3), 490–497. https://doi.org/10.1016/j.biopsycho.2013.09.010

Bates, D., Mächler, M., Bolker, B., & Walker, S. (2015). Fitting linear mixed-effects models using lme4. *Journal of statistical software*, *67*, 1–48. https://doi.org/10.18637/jss.v067.i01

Bradley, M. M., & Lang, P. J. (1994). Measuring emotion: The self-assessment manikin and the semantic differential. *Journal of behavior therapy and experimental psychiatry*, *25*(1), 49–59. https://doi.org/10.1016/0005-7916(94)90063-9

Butler, T. R., Karkhanis, A. N., Jones, S. R., & Weiner, J. L. (2016). Adolescent social isolation as a model of heightened vulnerability to comorbid alcoholism and anxiety disorders. *Alcoholism, clinical and experimental research*, *40*(6), 1202–1214. https://doi.org/10.1111/acer.13075

Cooper, S. E., Dunsmoor, J. E., Koval, K. A., Pino, E. R., & Steinman, S. A. (2023). Test-retest reliability of human threat conditioning and generalization across a 1-to-2-week interval. *Psychophysiology*, *60*(6), e14242. https://doi.org/10.1111/psyp.14242

Craske, M. G., Waters, A. M., Lindsey Bergman, R., Naliboff, B., Lipp, O. V., Negoro, H., & Ornitz, E. M. (2008). Is aversive learning a marker of risk for anxiety disorders in children? *Behaviour research and therapy*, *46*(8), 954–967. https://doi.org/10.1016/j.brat.2008.04.011

Demin, G., Jeworutzki, S., Chaltiel, D., Williams, J., & Elliot, T. (2023). Expss: Tables, labels and some useful functions from spreadsheets and 'SPSS' statistics.

Deng, J.-H., Yan, W., Han, Y., Chen, C., Meng, S.-Q., Sun, C.-Y., Xu, L.-Z., Xue, Y.-X., Gao, X.-J., Chen, N., Zhang, F.-L., Wang, Y.-M., Shi, J., & Lu, L. (2017). Predictable chronic mild stress during adolescence promotes fear memory extinction in adulthood. *Scientific reports*, *7*(1), 7857. https://doi.org/10.1038/s41598-017-08017-7

Fareri, D. S., & Tottenham, N. (2016). Effects of early life stress on amygdala and striatal development. *Developmental cognitive neuroscience*, *19*, 233–247. https://doi.org/10.1016/j.dcn.2016.04.005

Ganella, D. E., Drummond, K. D., Ganella, E. P., Whittle, S., & Kim, J. H. (2017). Extinction of conditioned fear in adolescents and adults: A human fMRI study. *Frontiers in human neuroscience*, *11*, 647. https://doi.org/10.3389/fnhum.2017.00647

Greimel, E., Bakos, S., Landes, I., Töllner, T., Bartling, J., Kohls, G., & Schulte-Körne, G. (2018). Sex differences in the neural underpinnings of social and monetary incentive processing during adolescence. *Cognitive, affective & behavioral neuroscience*, *18*(2), 296–312. https://doi.org/10.3758/s13415-018-0570-z

Hall, F. S. (1998). Social deprivation of neonatal, adolescent, and adult rats has distinct neurochemical and behavioral consequences. *Critical reviews in neurobiology*, *12*(1-2), 129–162. https://doi.org/10.1615/critrevneurobiol.v12.i1-2.50

Han, X., Wang, W., Xue, X., Shao, F., & Li, N. (2011). Brief social isolation in early adolescence affects reversal learning and forebrain BDNF expression in adult rats. *Brain research bulletin*, *86*(3-4), 173–178. https://doi.org/10.1016/j.brainresbull.2011.07.008

Harris, P. A., Taylor, R., Minor, B. L., Elliott, V., Fernandez, M., O'Neal, L., McLeod, L., Delacqua, G., Delacqua, F., Kirby, J., Duda, S. N., & REDCap Consortium. (2019). The REDCap consortium: Building an international community of software platform partners. *Journal of biomedical informatics*, *95*, 103208. https://doi.org/10.1016/j.jbi.2019.103208

Harris, P. A., Taylor, R., Thielke, R., Payne, J., Gonzalez, N., & Conde, J. G. (2009). Research electronic data capture (REDCap)–a metadata-driven methodology and workflow process for providing translational research informatics support. *Journal of biomedical informatics*, *42*(2), 377–381. https://doi.org/10.1016/j.jbi.2008.08.010

IBM Corp. (2021). IBM SPSS statistics.

Jarcho, J. M., Romer, A. L., Shechner, T., Galvan, A., Guyer, A. E., Leibenluft, E., Pine, D. S., & Nelson, E. E. (2015). Forgetting the best when predicting the worst: Preliminary observations on neural circuit function in adolescent social anxiety. *Developmental cognitive neuroscience*, *13*, 21–31. https://doi.org/10.1016/j.dcn.2015.03.002

Jovanovic, T., Nylocks, K. M., Gamwell, K. L., Smith, A., Davis, T. A., Norrholm, S. D., & Bradley, B. (2014). Development of fear acquisition and extinction in children: Effects of age and anxiety. *Neurobiology of learning and memory*, *113*, 135–142. https://doi.org/10.1016/j.nlm.2013.10.016

Kuznetsova, A., Brockhoff, P. B., & Christensen, R. H. B. (2017). lmerTest package: Tests in linear mixed effects models. *Journal of statistical software*, *82*, 1–26. https://doi.org/10.18637/jss.v082.i13

LeDoux, J. E. (2014). Coming to terms with fear. *Proceedings of the National Academy of Sciences of the United States of America*, *111*(8), 2871–2878. https://doi.org/10.1073/pnas.1400335111

Lenth, R. V., Singmann, H., Love, J., Buerkner, P., & Herve, M. (2018). Package "emmeans".

Locci, A., & Pinna, G. (2019). Social isolation as a promising animal model of PTSD comorbid suicide: Neurosteroids and cannabinoids as possible treatment options. *Progress in neuro-psychopharmacology & biological psychiatry*, *92*, 243–259. https://doi.org/10.1016/j.pnpbp.2018.12.014

Lonsdorf, T. B., Menz, M. M., Andreatta, M., Fullana, M. A., Golkar, A., Haaker, J., Heitland, I., Hermann, A., Kuhn, M., Kruse, O., Meir Drexler, S., Meulders, A., Nees, F., Pittig, A., Richter, J., Römer, S., Shiban, Y., Schmitz, A., Straube, B., ... Merz, C. J. (2017). Do not fear 'fear conditioning': Methodological considerations for the design and analysis of studies on human fear acquisition, extinction, and return of fear. *Neuroscience and biobehavioral reviews*, *77*, 247–285. https://doi.org/10.1016/j.neubiorev.2017.02.026

Lukkes, J. L., Watt, M. J., Lowry, C. A., & Forster, G. L. (2009). Consequences of post-weaning social isolation on anxiety behavior and related neural circuits in rodents. *Frontiers in behavioral neuroscience*, *3*, 18. https://doi.org/10.3389/neuro.08.018.2009

Makowski, D., Pham, T., Lau, Z. J., Brammer, J. C., Lespinasse, F., Pham, H., Schölzel, C., & Chen, S. H. A. (2021). NeuroKit2: A python toolbox for neurophysiological signal processing. *Behavior research methods*, *53*(4), 1689–1696. https://doi.org/10.3758/s13428-020-01516-y

Maren, S., & Holmes, A. (2016). Stress and fear extinction. *Neuropsychopharmacology: official publication of the American College of Neuropsychopharmacology*, *41*(1), 58–79. https://doi.org/10.1038/npp.2015.180

Matsuda, S., Tohyama, S., & Mizutani, A. (2018). Sex differences in the effects of adult short-term isolation rearing on contextual fear memory and extinction. *Neuroscience letters*, *687*, 119–123. https://doi.org/10.1016/j.neulet.2018.09.030

McCallum, J., Kim, J. H., & Richardson, R. (2010). Impaired extinction retention in adolescent rats: Effects of D-cycloserine. *Neuropsychopharmacology: official publication of the American College of Neuropsychopharmacology*, *35*(10), 2134–2142. https://doi.org/10.1038/npp.2010.92

Meyer, H. C., Odriozola, P., Cohodes, E. M., Mandell, J. D., Li, A., Yang, R., Hall, B. S., Haberman, J. T., Zacharek, S. J., Liston, C., Lee, F. S., & Gee, D. G. (2019). Ventral hippocampus interacts with prelimbic cortex during inhibition of threat response via learned safety in both mice and humans. *Proceedings of the National Academy of Sciences of the United States of America*, *116*(52), 26970–26979. https://doi.org/10.1073/pnas.1910481116

Moin Afshar, N., Keip, A. J., Taylor, J. R., Lee, D., & Groman, S. M. (2020). Reinforcement learning during adolescence in rats. *The Journal of neuroscience: the official journal of the Society for Neuroscience*, *40*(30), 5857–5870. https://doi.org/10.1523/JNEUROSCI.0910-20.2020

Montoya, A. K., & Hayes, A. F. (2017). Two-condition within-participant statistical mediation analysis: A path-analytic framework. *Psychological methods*, *22*(1), 6–27. https://doi.org/10.1037/met0000086

Neumann, D. L., & Waters, A. M. (2006). The use of an unpleasant sound as an unconditional stimulus in a human aversive pavlovian conditioning procedure. *Biological psychology*, *73*(2), 175–185. https://doi.org/10.1016/j.biopsycho.2006.03.004

Neumann, D. L., Waters, A. M., & Westbury, H. R. (2008). The use of an unpleasant sound as the unconditional stimulus in aversive pavlovian conditioning experiments that involve children and adolescent participants. *Behavior research methods*, *40*(2), 622–625. https://doi.org/10.3758/brm.40.2.622

Nussenbaum, K., & Hartley, C. A. (2019). Reinforcement learning across development: What insights can we draw from a decade of research? *Developmental cognitive neuroscience*, *40*, 100733. https://doi.org/10.1016/j.dcn.2019.100733

Palminteri, S., Kilford, E. J., Coricelli, G., & Blakemore, S.-J. (2016). The computational development of reinforcement learning during adolescence. *PLoS computational biology*, *12*(6), e1004953. https://doi.org/10.1371/journal.pcbi.1004953

Panksepp, J. B., & Lahvis, G. P. (2016). Differential influence of social versus isolate housing on vicarious fear learning in adolescent mice. *Behavioral neuroscience*, *130*(2), 206–211. https://doi.org/10.1037/bne0000133

Pattwell, S. S., Duhoux, S., Hartley, C. A., Johnson, D. C., Jing, D., Elliott, M. D., Ruberry, E. J., Powers, A., Mehta, N., Yang, R. R., Soliman, F., Glatt, C. E., Casey, B. J., Ninan, I., & Lee, F. S. (2012). Altered fear learning across development in both mouse and human. *Proceedings of the National Academy of Sciences of the United States of America*, *109*(40), 16318–16323. https://doi.org/10.1073/pnas.1206834109

Peirce, J., Gray, J. R., Simpson, S., MacAskill, M., Höchenberger, R., Sogo, H., Kastman, E., & Lindeløv, J. K. (2019). PsychoPy2: Experiments in behavior made easy. *Behavior research methods*, *51*(1), 195–203. https://doi.org/10.3758/s13428-018-01193-y

Qualtrics. (2005). Qualtrics.

R Core Team. (2019). R: A language and environment for statistical computing.

Ryan, K. M., Zimmer-Gembeck, M. J., Neumann, D. L., & Waters, A. M. (2019). The need for standards in the design of differential fear conditioning and extinction experiments in youth: A systematic review and recommendations for research on anxiety. *Behaviour research and therapy*, *112*, 42–62. https://doi.org/10.1016/j.brat.2018.11.009

Sanders, M. J., Stevens, S., & Boeh, H. (2010). Stress enhancement of fear learning in mice is dependent upon stressor type: Effects of sex and ovarian hormones. *Neurobiology of learning and memory*, *94*(2), 254–262. https://doi.org/10.1016/j.nlm.2010.06.003

Schayek, R., & Maroun, M. (2015). Differences in stress-induced changes in extinction and prefrontal plasticity in postweanling and adult animals. *Biological psychiatry*, *78*(3), 159–166. https://doi.org/10.1016/j.biopsych.2014.10.004

Shechner, T., Britton, J. C., Ronkin, E. G., Jarcho, J. M., Mash, J. A., Michalska, K. J., Leibenluft, E., & Pine, D. S. (2015). Fear conditioning and extinction in anxious and nonanxious youth and adults: Examining a novel developmentally appropriate fear-conditioning task. *Depression and anxiety*, *32*(4), 277–288. https://doi.org/10.1002/da.22318

Silvers, J. A., Insel, C., Powers, A., Franz, P., Helion, C., Martin, R. E., Weber, J., Mischel, W., Casey, B. J., & Ochsner, K. N. (2017). vlPFC-vmPFC-amygdala interactions underlie age-related differences in cognitive regulation of emotion. *Cerebral cortex*, *27*(7), 3502–3514. https://doi.org/10.1093/cercor/bhw073

Silvers, J. A., Lumian, D. S., Gabard-Durnam, L., Gee, D. G., Goff, B., Fareri, D. S., Caldera, C., Flannery, J., Telzer, E. H., Humphreys, K. L., & Tottenham, N. (2016). Previous institutionalization is followed by broader amygdala-hippocampal-PFC network connectivity during aversive learning in human development. *The Journal*

of neuroscience: the official journal of the Society for Neuroscience, *36*(24), 6420–6430. https://doi.org/10.1523/JNEUROSCI.0038-16.2016

Skelly, M. J., Chappell, A. E., Carter, E., & Weiner, J. L. (2015). Adolescent social isolation increases anxiety-like behavior and ethanol intake and impairs fear extinction in adulthood: Possible role of disrupted noradrenergic signaling. *Neuropharmacology*, *97*, 149–159. https://doi.org/10.1016/j.neuropharm.2015.05.025

Staib, M., Castegnetti, G., & Bach, D. R. (2015). Optimising a model-based approach to inferring fear learning from skin conductance responses. *Journal of neuroscience methods*, *255*, 131–138. https://doi.org/10.1016/j.jneumeth.2015.08.009

Tomova, L., Wang, K. L., Thompson, T., Matthews, G. A., Takahashi, A., Tye, K. M., & Saxe, R. (2020). Acute social isolation evokes midbrain craving responses similar to hunger. *Nature neuroscience*, *23*(12), 1597–1605. https://doi.org/10.1038/s41593-020-00742-z

Tottenham, N., & Galván, A. (2016). Stress and the adolescent brain: Amygdala-prefrontal cortex circuitry and ventral striatum as developmental targets. *Neuroscience and biobehavioral reviews*, *70*, 217–227. https://doi.org/10.1016/j.neubiorev.2016.07.030

Tzschoppe, J., Nees, F., Banaschewski, T., Barker, G. J., Büchel, C., Conrod, P. J., Garavan, H., Heinz, A., Loth, E., Mann, K., Martinot, J.-L., Smolka, M. N., Gallinat, J., Ströhle, A., Struve, M., Rietschel, M., Schumann, G., Flor, H., & IMAGEN consortium. (2014). Aversive learning in adolescents: Modulation by amygdala-prefrontal and amygdala-hippocampal connectivity and neuroticism. *Neuropsychopharmacology: official publication of the American College of Neuropsychopharmacology*, *39*(4), 875–884. https://doi.org/10.1038/npp.2013.287

Walker, D. M., Cunningham, A. M., Gregory, J. K., & Nestler, E. J. (2019). Long-term behavioral effects of post-weaning social isolation in males and females. *Frontiers in behavioral neuroscience*, *13*, 66. https://doi.org/10.3389/fnbeh.2019.00066

Waters, A. M., & Pine, D. S. (2016). Evaluating differences in pavlovian fear acquisition and extinction as predictors of outcome from cognitive behavioural therapy for anxious children. *Journal of child psychology and psychiatry, and allied disciplines*, *57*(7), 869–876. https://doi.org/10.1111/jcpp.12522

Wickham, H. (2016). ggplot2: Elegant graphics for data analysis.

Wickham, H., Averick, M., Bryan, J., Chang, W., McGowan, L., François, R., Grolemund, G., Hayes, A., Henry, L., Hester, J., Kuhn, M., Pedersen, T., Miller, E., Bache, S., Müller, K., Ooms, J., Robinson, D., Seidel, D., Spinu, V., ... Yutani, H. (2019). Welcome to the tidyverse. *Journal of open source software*, *4*(43), 1686. https://doi.org/10.21105/joss.01686

Wickham, H., Miller, E., & Smith, D. (2023). Haven: Import and export 'SPSS', 'stata' and 'SAS' files.

Wilson, R. C., & Collins, A. G. (2019). Ten simple rules for the computational modeling of behavioral data. *eLife*, *8*. https://doi.org/10.7554/eLife.49547

Yusufishaq, S., & Rosenkranz, J. A. (2013). Post-weaning social isolation impairs observational fear conditioning. *Behavioural brain research*, *242*, 142–149. https://doi.org/10.1016/j.bbr.2012.12.050

Zhu, H., Travison, T., Tsai, T., Beasley, W., Xie, Y., Yu, G., Laurent, S., Shepherd, R., Sidi, Y., Salzer, B., Gui, G., Fan, Y., Murdoch, D., & Evans, B. (2021). kableExtra: Construct complex table with 'kable' and pipe syntax.