

**Appendix -  
Increased Threat Learning After Social Isolation  
in Human Adolescents**

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**Appendix A**  
**Statistical Tables**

**Table A1***Threat Learning - ANOVA*

Arousal Rating	<i>df1</i>	<i>df2</i>	<i>F-ratio</i>	<i>eta-squared</i>	<i>p</i>
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. Eta-squared (partial) includes 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	2.83 ( 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, 0.30)	877.14	-0.21	.833
Cue (Threat)	-0.38 (-1.06, 0.31)	0.35	-0.18 (-0.51, 0.15)	877.01	-1.07	.286
Phase (Acquisition)	-0.22 (-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	-1.56	.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	-0.16	.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	-0.16 (-0.63, 0.30)	877.01	-0.70	.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 (-1.10, 0.84)	0.50	-0.06 (-0.53, 0.41)	877.09	-0.26	.796
Cue (Threat) * Phase (Acquisition)	1.02 ( 0.06, 1.99)	0.50	0.49 ( 0.02, 0.95)	877.01	2.06	.039
Cue (Threat) * Phase (Extinction)	1.23 ( 0.26, 2.19)	0.50	0.58 ( 0.12, 1.05)	877.01	2.46	.014
Cue (Threat) * Phase (Retention)	0.89 (-0.08, 1.86)	0.50	0.42 (-0.04, 0.89)	877.01	1.77	.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	.043
Session (ISO-with-media) * Cue (Threat) * Phase (Extinction)	0.78 (-0.60, 2.14)	0.71	0.37 (-0.29, 1.03)	877.01	1.10	.273
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, 1.06)	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*) 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*

<b>Valence Rating</b>	<i>df1</i>	<i>df2</i>	<i>F-ratio</i>	<i>eta-squared</i>	<i>p</i>
Session	2	819.87	6.51	0.02 (0.00, 1.00)	<b>.002</b>
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)	<b>.001</b>
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 of valence ratings. Eta-squared (partial) includes 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	4.26 ( 3.64, 4.86)	0.32	0.15 (-0.18, 0.47)	269.51	13.52	< .001
Session (ISO-with-media)	-0.01 (-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 (-1.29, 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 (-0.64, 1.26)	0.49	0.16 (-0.34, 0.67)	813.37	0.64	.524
Session (ISO-total) * Cue (Threat)	0.39 (-0.56, 1.33)	0.49	0.20 (-0.30, 0.71)	813.37	0.80	.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	.863
Session (ISO-with-media) * Phase (Retention)	-0.59 (-1.54, 0.36)	0.49	-0.31 (-0.81, 0.20)	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)	0.62 (-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 ( 0.09, 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)	0.70	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*) 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*

<b>Electrodermal Activity</b>	<i>df1</i>	<i>df2</i>	<i>F-ratio</i>	<i>eta-squared</i>	<i>p</i>
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)	<b>.002</b>
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. Eta-squared (partial) includes 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*

<b>Electrodermal Activity</b>	<i>Estimate</i>	<i>SE</i>	<i>Beta</i>	<i>df</i>	<i>t</i>	<i>p</i>
Intercept	0.12 ( 0.07, 0.16)	0.03	-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)	-0.04 (-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	0.70	.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	.347
Session (ISO-total) * Phase (Retention)	-0.01 (-0.09, 0.07)	0.04	-0.09 (-0.61, 0.43)	645.20	-0.34	.737
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, 0.10)	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 (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*) 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*

Response	Baseline						ISO-With-Media						ISO-Total					
	Threat			Safety			Threat			Safety			Threat			Safety		
	<i>Estimate</i>	<i>SE</i>	<i>df</i>															
<b>Pre-Acquisition</b>																		
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
<b>Acquisition</b>																		
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 (4.1, 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
<b>Extinction</b>																		
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
<b>Retention</b>																		
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, 3.8)	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 the means (with 95% confidence intervals in parentheses), standard errors, and degrees of freedom for threat responding separated by session (baseline, iso-with-media, iso-total), cue (threat, safety), phase (pre-acquisition, acquisition, extinction, retention) and measure (arousal, valence, electrodermal activity). Reported statistics are derived from estimated marginal means.

**Table A8***Threat Learning - Contrasts in Threat Responding*

Response	ISO-With-Media > Baseline											
	Threat						Safety					
	Estimate	SE	df	t	p	d	Estimate	SE	df	t	p	d
<b>Pre-Acquisition</b>												
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
<b>Acquisition</b>												
Arousal	1.25 (0.56, 1.95)	0.35	877.10	3.54	<b>&lt; .001</b>	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	<b>&lt; .001</b>	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
<b>Extinction</b>												
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	<b>.002</b>	0.71	0.09 (0.03, 0.15)	0.03	645.21	3.05	<b>.002</b>	0.69
<b>Retention</b>												
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 of the differences 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, degrees of freedom, t-values and p-values 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*

Response	ISO-Total > Baseline											
	Threat						Safety					
	Estimate	SE	df	t	p	d	Estimate	SE	df	t	p	d
<b>Pre-Acquisition</b>												
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	.833	-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
<b>Acquisition</b>												
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
<b>Extinction</b>												
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	.999	0.00
Electrodermal Activity	0.05 (-0.01, 0.11)	0.03	645.43	1.70	.089	0.39	0.09 (0.04, 0.15)	0.03	645.43	3.17	.002	0.72
<b>Retention</b>												
Arousal	0.73 (0.03, 1.43)	0.36	877.29	2.03	.042	0.46	-0.21 (-0.91, 0.5)	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, 0.4)	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 of the differences 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, degrees of freedom, t-values and p-values 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*

Response	ISO-Total > ISO-With-Media											
	Threat						Safety					
	Estimate	SE	df	t	p	d	Estimate	SE	df	t	p	d
<b>Pre-Acquisition</b>												
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
<b>Acquisition</b>												
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
<b>Extinction</b>												
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
<b>Retention</b>												
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 of the differences 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, degrees of freedom, t-values and p-values 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 precisely. These models allowed us to assess threat learning across phases of the task as well as to compare sessions (to determine whether social media use remediated the effects of isolation on threat learning).
- **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; Tzschooppe 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 using a Biopac. Data will be analyzed using PsPM (Bach et al., 2018) or NeuroKit2 (Makowski et al., 2021).

## 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

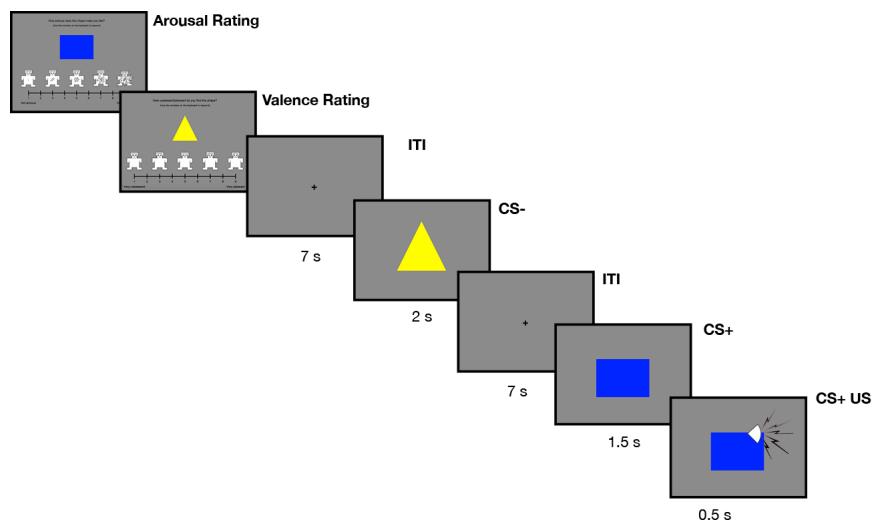
### *Physiology*

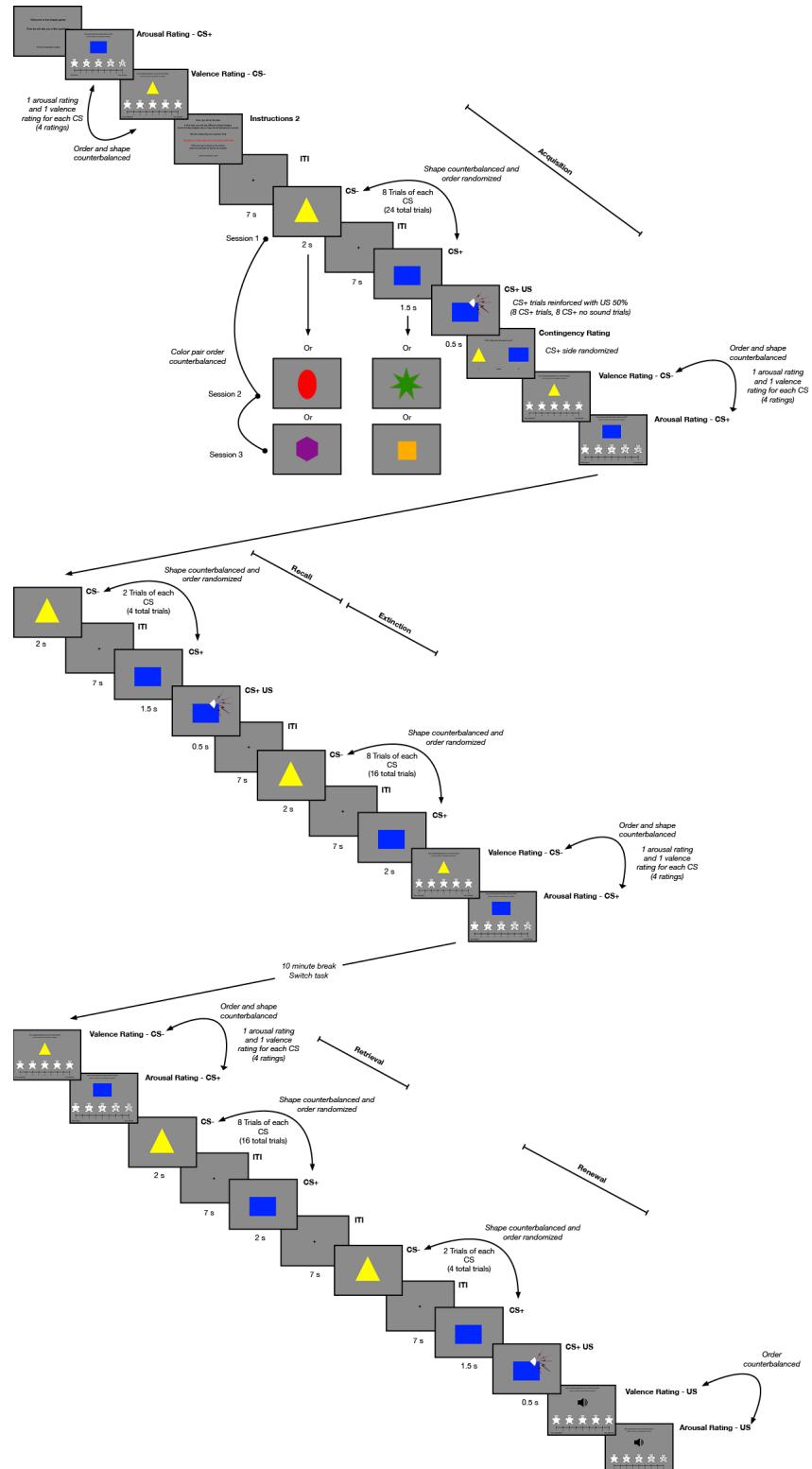
- Channel 1 - Other (start/stop, instructions, cs & us ratings, contingency)
- Channel 2 - CS+ (sound)
- Channel 3 - CS+ (no sound)
- Channel 4 - CS-
- Channel 5 - US
- Channel 6 - iti
- Channel 7 - break / fixation

### 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. However, in sensitivity analyses, 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 were excluded. 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**

## **preacquisition arousal threat**

Run MATRIX procedure:

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

Written by Amanda Montoya

Documentation available at [akmontoya.com](http://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:

\*\*\*\*\*
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

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```

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	-.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](http://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\_1 - m\_1

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](http://akmontoya.com)

\*\*\*\*\*

Model:

1

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```

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:

```
*****
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
```

<b>Model</b>	<b>coeff</b>	<b>SE</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
'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: Mldiff = 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](http://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:
```

```
*****  
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

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	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
--------	----	---	----	---	------	------

Page 24

-.029	.305	-.094	34.000	.926	-.649	.592
<b>Direct effect of X on Y</b>						
Effect	SE	t	df	p	LLCI	ULCI
-.188	.401	-.470	22.000	.643	-1.019	.643

<b>Indirect Effect of X on Y through M</b>						
	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		

<b>Indirect Key</b>						
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
```

(  $\hat{t}_{mn}$  +  $\hat{m}_{mn}$  ) /2  
(  $\hat{t}_{sa}$  +  $\hat{m}_{sa}$  ) /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](http://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:

\*\*\*\*\*
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:

```
*****
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](http://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\_1 - m\_1

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](http://akmontoya.com)

\*\*\*\*\*

Model:  
1

Page 36

```

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:

```
*****
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
```

<b>Model</b>	<b>coeff</b>	<b>SE</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
'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: Mldiff = 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](http://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

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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
--------	----	---	----	---	------	------

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-.030	.028	-1.074	33.000	.291	-.086	.026
<b>Direct effect of X on Y</b>						
Effect	SE	t	df	p	LLCI	ULCI
-.008	.037	-.218	21.000	.829	-.084	.068

<b>Indirect Effect of X on Y through M</b>						
	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		

<b>Indirect Key</b>						
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
```

(  $\hat{t}_{mn}$  +  $\hat{m}_{mn}$  ) /2  
(  $\hat{t}_{sa}$  +  $\hat{m}_{sa}$  ) /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](http://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:

\*\*\*\*\*  
**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
```

Page 55

```

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](http://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\_1 - m\_1

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 *****
```

Written by Amanda Montoya

Documentation available at [akmontoya.com](http://akmontoya.com)

\*\*\*\*\*

Model:

1

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```

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:

```
*****
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
```

<b>Model</b>	<b>coeff</b>	<b>SE</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
'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](http://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: Mldiff = 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	.019	-.217	.830	-.043	.035	
M3diff	.024	-1.158	.259	-.077	.022	
M4diff	.133	.123	1.081	.292	-.122	.388
M5diff	.111	.315	.352	.728	-.542	.764
M6diff	.059	-.326	.747	-.142	.103	
M1avg	.025	.025	1.017	.320	-.026	.077
M2avg	.029	-.257	.799	-.069	.054	
M3avg	.017	-.142	.888	-.038	.034	
M4avg	.031	.075	.422	.677	-.123	.186
M5avg	.376	-.057	.955	-.801	.758	
M6avg	.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](http://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

Page 70

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
--------	----	---	----	---	------	------

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.086	.452	.190	34.000	.851	-.832	1.004
<b>Direct effect of X on Y</b>						
Effect	SE	t	df	p	LLCI	ULCI
.351	.643	.546	22.000	.591	-.983	1.685

<b>Indirect Effect of X on Y through M</b>						
	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		

<b>Indirect Key</b>						
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
```

(  $\hat{t}_{mn}$  +  $\hat{m}_{mn}$  ) /2  
(  $\hat{t}_{sa}$  +  $\hat{m}_{sa}$  ) /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](http://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:

\*\*\*\*\*  
**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:

```
*****
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](http://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\_1 - m\_1

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](http://akmontoya.com)

\*\*\*\*\*

Model:

1

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```

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](http://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: Mldiff = 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](http://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

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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

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	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
--------	----	---	----	---	------	------

Page 99

.588	.387	1.519	33.000	.138	-.200	1.376
<b>Direct effect of X on Y</b>						
Effect	SE	t	df	p	LLCI	ULCI
.242	.410	.590	21.000	.561	-.611	1.095

<b>Indirect Effect of X on Y through M</b>						
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		

<b>Indirect Key</b>						
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
```

(  $\hat{t}_{mn}$  +  $\hat{m}_{mn}$  ) /2  
(  $\hat{t}_{sa}$  +  $\hat{m}_{sa}$  ) /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](http://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**

-----  
'x'      Effect      SE      t      p      LLCI      ULCI  
.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:

\*\*\*\*\*  
 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

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```

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](http://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

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	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\_1 - m\_1

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](http://akmontoya.com)

\*\*\*\*\*

Model:

1

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```

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

<b>Model</b>	<b>coeff</b>	<b>SE</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
'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: Mldiff = 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**

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