lavaan 0.6-8 ended normally after 119 iterations

Estimator ML

Optimization method NLMINB

Number of model parameters 29

Number of observations 8054

Model Test User Model:

Test statistic 107.041

Degrees of freedom 16

P-value (Chi-square) 0.000

Model Test Baseline Model:

Test statistic 2719.219

Degrees of freedom 42

P-value 0.000

User Model versus Baseline Model:

Comparative Fit Index (CFI) 0.966

Tucker-Lewis Index (TLI) 0.911

Loglikelihood and Information Criteria:

Loglikelihood user model (H0) -58421.988

Loglikelihood unrestricted model (H1) -58368.467

Akaike (AIC) 116901.975

Bayesian (BIC) 117104.799

Sample-size adjusted Bayesian (BIC) 117012.643

Root Mean Square Error of Approximation:

RMSEA 0.027

90 Percent confidence interval - lower 0.022

90 Percent confidence interval - upper 0.031

P-value RMSEA <= 0.05 1.000

Standardized Root Mean Square Residual:

SRMR 0.010

Parameter Estimates:

Standard errors Bootstrap

Number of requested bootstrap draws 5000

Number of successful bootstrap draws 5000

Latent Variables:

Estimate Std.Err z-value P(>|z|) ci.lower ci.upper Std.lv Std.all

Refereebias =~

FoulDifference 1.000 1.000 1.000 1.902 0.363

YellwCrdDffrnc 0.800 0.145 5.516 0.000 0.604 1.156 1.521 0.870

Regressions:

Estimate Std.Err z-value P(>|z|) ci.lower ci.upper Std.lv Std.all

Refereebias ~

covid (a) -0.375 0.085 -4.425 0.000 -0.552 -0.219 -0.197 -0.095

OccpncyRt (a2) 0.102 0.042 2.465 0.014 0.025 0.187 0.054 0.054

OccpncyR: (a3) 0.023 0.062 0.366 0.714 -0.098 0.148 0.012 0.008

AvrgAttnd (a4) -0.092 0.040 -2.327 0.020 -0.170 -0.013 -0.049 -0.049

FrgnrsShD (a5) -0.018 0.032 -0.569 0.569 -0.078 0.048 -0.009 -0.009

AvrgAttn: (a6) -0.020 0.064 -0.313 0.754 -0.156 0.101 -0.011 -0.006

FrgnrsSD: (a7) -0.014 0.051 -0.266 0.790 -0.114 0.083 -0.007 -0.004

RtngDffrn (d1) 0.022 0.004 5.415 0.000 0.014 0.030 0.012 0.180

ImprtncDf (d2) -0.000 0.001 -0.539 0.590 -0.002 0.001 -0.000 -0.008

ShtsDffrn (d3) 0.019 0.005 4.046 0.000 0.010 0.029 0.010 0.064

VAR (d4) 0.092 0.095 0.974 0.330 -0.077 0.299 0.049 0.014

PointsDifference ~

covid (cp) -0.266 0.056 -4.715 0.000 -0.374 -0.155 -0.266 -0.050

Refereebs (b) 0.050 0.020 2.557 0.011 0.012 0.089 0.096 0.037

OccpncyRt (b2) 0.015 0.042 0.344 0.731 -0.068 0.097 0.015 0.006

OccpncyR: (b3) -0.197 0.067 -2.948 0.003 -0.333 -0.068 -0.197 -0.049

AvrgAttnd (b4) 0.071 0.042 1.711 0.087 -0.011 0.152 0.071 0.028

FrgnrsShD (b5) 0.035 0.034 1.024 0.306 -0.033 0.102 0.035 0.014

AvrgAttn: (b6) 0.043 0.066 0.646 0.518 -0.084 0.171 0.043 0.010

FrgnrsSD: (b7) -0.010 0.057 -0.175 0.861 -0.120 0.099 -0.010 -0.002

AgeDffrnc (b8) 0.071 0.033 2.153 0.031 0.007 0.135 0.071 0.028

AgDffrnc: (b9) -0.074 0.055 -1.343 0.179 -0.181 0.037 -0.074 -0.017

RtngDffrn (e1) 0.059 0.002 30.425 0.000 0.056 0.063 0.059 0.360

ImprtncDf (e2) 0.003 0.001 3.685 0.000 0.001 0.005 0.003 0.041

VAR (e4) 0.069 0.096 0.717 0.473 -0.117 0.258 0.069 0.007

Variances:

Estimate Std.Err z-value P(>|z|) ci.lower ci.upper Std.lv Std.all

.Refereebias 3.425 0.564 6.068 0.000 2.350 4.573 0.947 0.947

.FoulDifference 23.828 0.696 34.240 0.000 22.411 25.164 23.828 0.868

.YellwCrdDffrnc 0.741 0.412 1.797 0.072 -0.268 1.301 0.741 0.243

.PointsDiffernc 5.536 0.060 92.593 0.000 5.409 5.647 5.536 0.837

R-Square:

Estimate

Refereebias 0.053

FoulDifference 0.132

YellwCrdDffrnc 0.757

PointsDiffernc 0.163

Defined Parameters:

Estimate Std.Err z-value P(>|z|) ci.lower ci.upper Std.lv Std.all

Direct -0.266 0.056 -4.714 0.000 -0.374 -0.155 -0.266 -0.050

indirect -0.019 0.007 -2.799 0.005 -0.031 -0.005 -0.019 -0.004

mdrtdmdtnffctc 0.001 0.003 0.366 0.714 -0.005 0.008 0.001 0.000

mdrtdffctccpnc -0.197 0.067 -2.948 0.003 -0.333 -0.068 -0.197 -0.049

totlffctccpncy -0.196 0.067 -2.927 0.003 -0.331 -0.066 -0.196 -0.049

mdrtdmdtnffctt -0.001 0.003 -0.315 0.752 -0.008 0.005 -0.001 -0.000

mdrtdffctttndn 0.043 0.066 0.646 0.518 -0.084 0.171 0.043 0.010

totlffctttndnc 0.042 0.066 0.630 0.528 -0.086 0.169 0.042 0.010

mdrtdmdtnffctf -0.001 0.003 -0.268 0.789 -0.006 0.004 -0.001 -0.000

mdrtdffctfrgnr -0.010 0.057 -0.175 0.861 -0.120 0.099 -0.010 -0.002

ttlffctfrgnrss -0.011 0.057 -0.187 0.852 -0.120 0.099 -0.011 -0.002

moderatdffctAg -0.074 0.055 -1.343 0.179 -0.181 0.037 -0.074 -0.017

total -0.285 0.056 -5.058 0.000 -0.393 -0.173 -0.285 -0.053

confounderRtng 0.022 0.004 5.415 0.000 0.014 0.030 0.012 0.180

confndrImprtnc -0.000 0.001 -0.539 0.590 -0.002 0.001 -0.000 -0.008

confounderShts 0.019 0.005 4.045 0.000 0.010 0.029 0.010 0.064

counfounderVar 0.092 0.095 0.974 0.330 -0.077 0.299 0.049 0.014

Estimator ML

Optimization method NLMINB

Number of model parameters 26

Number of observations 8054

Model Test User Model:

Test statistic 26.426

Degrees of freedom 3

P-value (Chi-square) 0.000

Model Test Baseline Model:

Test statistic 1788.381

Degrees of freedom 27

P-value 0.000

User Model versus Baseline Model:

Comparative Fit Index (CFI) 0.987

Tucker-Lewis Index (TLI) 0.880

Loglikelihood and Information Criteria:

Loglikelihood user model (H0) -34080.705

Loglikelihood unrestricted model (H1) -34067.492

Akaike (AIC) 68213.411

Bayesian (BIC) 68395.253

Sample-size adjusted Bayesian (BIC) 68312.630

Root Mean Square Error of Approximation:

RMSEA 0.031

90 Percent confidence interval - lower 0.021

90 Percent confidence interval - upper 0.043

P-value RMSEA <= 0.05 0.997

Standardized Root Mean Square Residual:

SRMR 0.005

Parameter Estimates:

Standard errors Bootstrap

Number of requested bootstrap draws 5000

Number of successful bootstrap draws 5000

Regressions:

Estimate Std.Err z-value P(>|z|) ci.lower ci.upper Std.lv Std.all

YellowCardDifference ~

covid (a) -0.292 0.041 -7.169 0.000 -0.372 -0.213 -0.292 -0.081

OccpncyRt (a2) 0.082 0.031 2.648 0.008 0.022 0.142 0.082 0.047

OccpncyR: (a3) 0.019 0.049 0.396 0.692 -0.078 0.113 0.019 0.007

AvrgAttnd (a4) -0.083 0.032 -2.604 0.009 -0.144 -0.021 -0.083 -0.047

FrgnrsShD (a5) -0.017 0.025 -0.681 0.496 -0.066 0.033 -0.017 -0.010

AvrgAttn: (a6) -0.010 0.049 -0.213 0.831 -0.107 0.086 -0.010 -0.004

FrgnrsSD: (a7) -0.009 0.040 -0.212 0.832 -0.088 0.069 -0.009 -0.003

RtngDffrn (d1) 0.017 0.002 11.185 0.000 0.014 0.020 0.017 0.155

ImprtncDf (d2) -0.000 0.001 -0.557 0.577 -0.002 0.001 -0.000 -0.007

ShtsDffrn (d3) 0.016 0.003 4.688 0.000 0.009 0.022 0.016 0.059

VAR (d4) 0.057 0.068 0.829 0.407 -0.076 0.195 0.057 0.009

PointsDifference ~

covid (cp) -0.268 0.056 -4.829 0.000 -0.378 -0.157 -0.268 -0.050

YllwCrdDf (b) 0.057 0.015 3.704 0.000 0.027 0.087 0.057 0.039

OccpncyRt (b2) 0.015 0.042 0.358 0.720 -0.065 0.099 0.015 0.006

OccpncyR: (b3) -0.197 0.067 -2.931 0.003 -0.329 -0.067 -0.197 -0.049

AvrgAttnd (b4) 0.071 0.041 1.731 0.083 -0.010 0.153 0.071 0.028

FrgnrsShD (b5) 0.035 0.034 1.052 0.293 -0.029 0.102 0.035 0.014

AvrgAttn: (b6) 0.042 0.066 0.636 0.525 -0.089 0.169 0.042 0.010

FrgnrsSD: (b7) -0.010 0.056 -0.183 0.855 -0.122 0.098 -0.010 -0.002

AgeDffrnc (b8) 0.072 0.032 2.211 0.027 0.009 0.135 0.072 0.028

AgDffrnc: (b9) -0.075 0.054 -1.371 0.170 -0.181 0.033 -0.075 -0.018

RtngDffrn (e1) 0.059 0.002 31.110 0.000 0.056 0.063 0.059 0.361

ImprtncDf (e2) 0.003 0.001 3.690 0.000 0.001 0.005 0.003 0.041

VAR (e4) 0.070 0.096 0.730 0.466 -0.118 0.258 0.070 0.008

Variances:

Estimate Std.Err z-value P(>|z|) ci.lower ci.upper Std.lv Std.all

.YellwCrdDffrnc 2.934 0.051 57.858 0.000 2.830 3.029 2.934 0.960

.PointsDiffernc 5.535 0.059 94.288 0.000 5.411 5.640 5.535 0.837

R-Square:

Estimate

YellwCrdDffrnc 0.040

PointsDiffernc 0.163

Defined Parameters:

Estimate Std.Err z-value P(>|z|) ci.lower ci.upper Std.lv Std.all

Direct -0.268 0.056 -4.829 0.000 -0.378 -0.157 -0.268 -0.050

indirect -0.017 0.005 -3.273 0.001 -0.027 -0.007 -0.017 -0.003

mdrtdmdtnffctc 0.001 0.003 0.380 0.704 -0.005 0.007 0.001 0.000

mdrtdffctccpnc -0.197 0.067 -2.931 0.003 -0.329 -0.067 -0.197 -0.049

totlffctccpncy -0.196 0.067 -2.910 0.004 -0.327 -0.065 -0.196 -0.049

mdrtdmdtnffctt -0.001 0.003 -0.204 0.838 -0.006 0.005 -0.001 -0.000

mdrtdffctttndn 0.042 0.066 0.636 0.525 -0.089 0.169 0.042 0.010

totlffctttndnc 0.042 0.066 0.627 0.531 -0.089 0.168 0.042 0.010

mdrtdmdtnffctf -0.000 0.002 -0.202 0.840 -0.005 0.004 -0.000 -0.000

mdrtdffctfrgnr -0.010 0.056 -0.183 0.855 -0.122 0.098 -0.010 -0.002

ttlffctfrgnrss -0.011 0.056 -0.191 0.849 -0.122 0.097 -0.011 -0.002

moderatdffctAg -0.075 0.054 -1.371 0.170 -0.181 0.033 -0.075 -0.018

total -0.285 0.056 -5.124 0.000 -0.393 -0.174 -0.285 -0.053

confounderRtng 0.017 0.002 11.184 0.000 0.014 0.020 0.017 0.155

confndrImprtnc -0.000 0.001 -0.557 0.577 -0.002 0.001 -0.000 -0.007

confounderShts 0.016 0.003 4.688 0.000 0.009 0.022 0.016 0.059

counfounderVar 0.057 0.068 0.829 0.407 -0.076 0.195 0.057 0.009

Model Test User Model:

Test statistic 134.156

Degrees of freedom 16

P-value (Chi-square) 0.000

Model Test Baseline Model:

Test statistic 3215.943

Degrees of freedom 42

P-value 0.000

User Model versus Baseline Model:

Comparative Fit Index (CFI) 0.963

Tucker-Lewis Index (TLI) 0.902

Loglikelihood and Information Criteria:

Loglikelihood user model (H0) -55511.946

Loglikelihood unrestricted model (H1) -55444.868

Akaike (AIC) 111081.892

Bayesian (BIC) 111284.715

Sample-size adjusted Bayesian (BIC) 111192.559

Root Mean Square Error of Approximation:

RMSEA 0.030

90 Percent confidence interval - lower 0.026

90 Percent confidence interval - upper 0.035

P-value RMSEA <= 0.05 1.000

Standardized Root Mean Square Residual:

SRMR 0.010

Parameter Estimates:

Standard errors Bootstrap

Number of requested bootstrap draws 5000

Number of successful bootstrap draws 5000

Latent Variables:

Estimate Std.Err z-value P(>|z|) ci.lower ci.upper Std.lv Std.all

Refereebias =~

FoulDifference 1.000 1.000 1.000 1.798 0.343

YellwCrdDffrnc 0.895 0.180 4.972 0.000 0.664 1.362 1.609 0.920

Regressions:

Estimate Std.Err z-value P(>|z|) ci.lower ci.upper Std.lv Std.all

Refereebias ~

covid (a) -0.332 0.081 -4.114 0.000 -0.504 -0.189 -0.185 -0.089

OccpncyRt (a2) 0.092 0.038 2.413 0.016 0.022 0.172 0.051 0.051

OccpncyR: (a3) 0.021 0.056 0.376 0.707 -0.090 0.133 0.012 0.008

AvrgAttnd (a4) -0.087 0.036 -2.437 0.015 -0.156 -0.015 -0.048 -0.048

FrgnrsShD (a5) -0.018 0.028 -0.618 0.537 -0.074 0.041 -0.010 -0.010

AvrgAttn: (a6) -0.015 0.057 -0.267 0.790 -0.133 0.093 -0.008 -0.005

FrgnrsSD: (a7) -0.011 0.046 -0.241 0.810 -0.105 0.078 -0.006 -0.004

RtngDffrn (d1) 0.020 0.004 5.006 0.000 0.012 0.027 0.011 0.170

ImprtncDf (d2) -0.000 0.001 -0.543 0.587 -0.002 0.001 -0.000 -0.007

ShtsDffrn (d3) 0.017 0.005 3.825 0.000 0.009 0.027 0.010 0.063

VAR (d4) 0.075 0.084 0.889 0.374 -0.077 0.257 0.041 0.012

GoalDifference ~

covid (cp) -0.183 0.039 -4.695 0.000 -0.258 -0.107 -0.183 -0.048

Refereebs (b) 0.058 0.014 4.284 0.000 0.031 0.085 0.104 0.056

OccpncyRt (b2) 0.025 0.030 0.839 0.401 -0.034 0.083 0.025 0.014

OccpncyR: (b3) -0.157 0.048 -3.274 0.001 -0.249 -0.062 -0.157 -0.055

AvrgAttnd (b4) 0.046 0.031 1.487 0.137 -0.013 0.110 0.046 0.025

FrgnrsShD (b5) 0.027 0.025 1.101 0.271 -0.022 0.074 0.027 0.015

AvrgAttn: (b6) 0.055 0.052 1.066 0.286 -0.046 0.157 0.055 0.018

FrgnrsSD: (b7) 0.004 0.039 0.105 0.917 -0.072 0.081 0.004 0.001

AgeDffrnc (b8) 0.023 0.023 0.974 0.330 -0.023 0.069 0.023 0.012

AgDffrnc: (b9) -0.049 0.038 -1.285 0.199 -0.123 0.027 -0.049 -0.016

RtngDffrn (e1) 0.048 0.002 31.909 0.000 0.045 0.051 0.048 0.409

ImprtncDf (e2) 0.002 0.001 3.612 0.000 0.001 0.004 0.002 0.040

VAR (e4) 0.046 0.064 0.713 0.476 -0.082 0.171 0.046 0.007

Variances:

Estimate Std.Err z-value P(>|z|) ci.lower ci.upper Std.lv Std.all

.Refereebias 3.078 0.540 5.701 0.000 2.032 4.191 0.952 0.952

.FoulDifference 24.213 0.676 35.808 0.000 22.905 25.547 24.213 0.882

.YellwCrdDffrnc 0.467 0.515 0.908 0.364 -0.868 1.124 0.467 0.153

.GoalDifference 2.686 0.051 53.118 0.000 2.585 2.782 2.686 0.789

R-Square:

Estimate

Refereebias 0.048

FoulDifference 0.118

YellwCrdDffrnc 0.847

GoalDifference 0.211

Defined Parameters:

Estimate Std.Err z-value P(>|z|) ci.lower ci.upper Std.lv Std.all

Direct -0.183 0.039 -4.694 0.000 -0.258 -0.107 -0.183 -0.048

indirect -0.019 0.005 -4.120 0.000 -0.029 -0.010 -0.019 -0.005

mdrtdmdtnffctc 0.001 0.003 0.384 0.701 -0.005 0.008 0.001 0.000

mdrtdffctccpnc -0.157 0.048 -3.274 0.001 -0.249 -0.062 -0.157 -0.055

totlffctccpncy -0.156 0.048 -3.239 0.001 -0.248 -0.061 -0.156 -0.054

mdrtdmdtnffctt -0.001 0.003 -0.275 0.783 -0.007 0.005 -0.001 -0.000

mdrtdffctttndn 0.055 0.052 1.066 0.286 -0.046 0.157 0.055 0.018

totlffctttndnc 0.054 0.052 1.048 0.295 -0.047 0.156 0.054 0.018

mdrtdmdtnffctf -0.001 0.003 -0.246 0.805 -0.006 0.004 -0.001 -0.000

mdrtdffctfrgnr 0.004 0.039 0.105 0.917 -0.072 0.081 0.004 0.001

ttlffctfrgnrss 0.003 0.039 0.088 0.930 -0.073 0.080 0.003 0.001

moderatdffctAg -0.049 0.038 -1.285 0.199 -0.123 0.027 -0.049 -0.016

total -0.202 0.039 -5.194 0.000 -0.277 -0.125 -0.202 -0.053

confounderRtng 0.020 0.004 5.006 0.000 0.012 0.027 0.011 0.170

confndrImprtnc -0.000 0.001 -0.543 0.587 -0.002 0.001 -0.000 -0.007

confounderShts 0.017 0.005 3.825 0.000 0.009 0.027 0.010 0.063

counfounderVar 0.075 0.084 0.889 0.374 -0.077 0.257 0.041 0.012

Test statistic 36.660

Degrees of freedom 3

P-value (Chi-square) 0.000

Model Test Baseline Model:

Test statistic 2270.407

Degrees of freedom 27

P-value 0.000

User Model versus Baseline Model:

Comparative Fit Index (CFI) 0.985

Tucker-Lewis Index (TLI) 0.865

Loglikelihood and Information Criteria:

Loglikelihood user model (H0) -31169.572

Loglikelihood unrestricted model (H1) -31151.243

Akaike (AIC) 62391.145

Bayesian (BIC) 62572.987

Sample-size adjusted Bayesian (BIC) 62490.364

Root Mean Square Error of Approximation:

RMSEA 0.037

90 Percent confidence interval - lower 0.027

90 Percent confidence interval - upper 0.049

P-value RMSEA <= 0.05 0.969

Standardized Root Mean Square Residual:

SRMR 0.005

Parameter Estimates:

Standard errors Bootstrap

Number of requested bootstrap draws 5000

Number of successful bootstrap draws 5000

Regressions:

Estimate Std.Err z-value P(>|z|) ci.lower ci.upper Std.lv Std.all

YellowCardDifference ~

covid (a) -0.292 0.041 -7.096 0.000 -0.373 -0.215 -0.292 -0.081

OccpncyRt (a2) 0.082 0.031 2.622 0.009 0.020 0.144 0.082 0.047

OccpncyR: (a3) 0.019 0.049 0.393 0.694 -0.078 0.115 0.019 0.007

AvrgAttnd (a4) -0.083 0.032 -2.615 0.009 -0.144 -0.019 -0.083 -0.047

FrgnrsShD (a5) -0.017 0.025 -0.681 0.496 -0.068 0.032 -0.017 -0.010

AvrgAttn: (a6) -0.010 0.049 -0.211 0.833 -0.107 0.087 -0.010 -0.004

FrgnrsSD: (a7) -0.009 0.040 -0.210 0.833 -0.088 0.071 -0.009 -0.003

RtngDffrn (d1) 0.017 0.002 11.305 0.000 0.014 0.020 0.017 0.155

ImprtncDf (d2) -0.000 0.001 -0.563 0.573 -0.002 0.001 -0.000 -0.007

ShtsDffrn (d3) 0.016 0.003 4.762 0.000 0.009 0.022 0.016 0.059

VAR (d4) 0.057 0.069 0.824 0.410 -0.081 0.191 0.057 0.009

GoalDifference ~

covid (cp) -0.185 0.040 -4.671 0.000 -0.263 -0.109 -0.185 -0.048

YllwCrdDf (b) 0.059 0.010 5.623 0.000 0.038 0.079 0.059 0.056

OccpncyRt (b2) 0.026 0.031 0.850 0.395 -0.034 0.087 0.026 0.014

OccpncyR: (b3) -0.157 0.048 -3.242 0.001 -0.252 -0.062 -0.157 -0.055

AvrgAttnd (b4) 0.046 0.031 1.490 0.136 -0.016 0.107 0.046 0.025

FrgnrsShD (b5) 0.027 0.025 1.086 0.278 -0.021 0.075 0.027 0.015

AvrgAttn: (b6) 0.055 0.052 1.051 0.293 -0.047 0.157 0.055 0.018

FrgnrsSD: (b7) 0.004 0.039 0.100 0.921 -0.071 0.083 0.004 0.001

AgeDffrnc (b8) 0.023 0.023 0.982 0.326 -0.022 0.069 0.023 0.012

AgDffrnc: (b9) -0.049 0.038 -1.282 0.200 -0.125 0.023 -0.049 -0.016

RtngDffrn (e1) 0.048 0.001 32.493 0.000 0.046 0.051 0.048 0.410

ImprtncDf (e2) 0.002 0.001 3.648 0.000 0.001 0.004 0.002 0.040

VAR (e4) 0.047 0.065 0.724 0.469 -0.079 0.174 0.047 0.007

Variances:

Estimate Std.Err z-value P(>|z|) ci.lower ci.upper Std.lv Std.all

.YellwCrdDffrnc 2.934 0.050 58.714 0.000 2.832 3.029 2.934 0.960

.GoalDifference 2.686 0.050 53.640 0.000 2.588 2.786 2.686 0.789

R-Square:

Estimate

YellwCrdDffrnc 0.040

GoalDifference 0.211

Defined Parameters:

Estimate Std.Err z-value P(>|z|) ci.lower ci.upper Std.lv Std.all

Direct -0.185 0.040 -4.670 0.000 -0.263 -0.109 -0.185 -0.048

indirect -0.017 0.004 -4.426 0.000 -0.025 -0.010 -0.017 -0.004

mdrtdmdtnffctc 0.001 0.003 0.389 0.697 -0.005 0.007 0.001 0.000

mdrtdffctccpnc -0.157 0.048 -3.242 0.001 -0.252 -0.062 -0.157 -0.055

totlffctccpncy -0.156 0.049 -3.212 0.001 -0.251 -0.061 -0.156 -0.054

mdrtdmdtnffctt -0.001 0.003 -0.208 0.835 -0.006 0.005 -0.001 -0.000

mdrtdffctttndn 0.055 0.052 1.051 0.293 -0.047 0.157 0.055 0.018

totlffctttndnc 0.054 0.052 1.039 0.299 -0.047 0.157 0.054 0.018

mdrtdmdtnffctf -0.000 0.002 -0.207 0.836 -0.005 0.004 -0.000 -0.000

mdrtdffctfrgnr 0.004 0.039 0.100 0.921 -0.071 0.083 0.004 0.001

ttlffctfrgnrss 0.003 0.039 0.087 0.931 -0.072 0.082 0.003 0.001

moderatdffctAg -0.049 0.038 -1.282 0.200 -0.125 0.023 -0.049 -0.016

total -0.202 0.040 -5.100 0.000 -0.281 -0.127 -0.202 -0.053

confounderRtng 0.017 0.002 11.304 0.000 0.014 0.020 0.017 0.155

confndrImprtnc -0.000 0.001 -0.563 0.573 -0.002 0.001 -0.000 -0.007

confounderShts 0.016 0.003 4.762 0.000 0.009 0.022 0.016 0.059

counfounderVar 0.057 0.069 0.824 0.410 -0.081 0.191 0.057 0.009

Test statistic 595.285

Degrees of freedom 31

P-value (Chi-square) 0.000

Model Test Baseline Model:

Test statistic 3456.293

Degrees of freedom 58

P-value 0.000

User Model versus Baseline Model:

Comparative Fit Index (CFI) 0.834

Tucker-Lewis Index (TLI) 0.689

Loglikelihood and Information Criteria:

Loglikelihood user model (H0) -63393.891

Loglikelihood unrestricted model (H1) -63096.248

Akaike (AIC) 126849.781

Bayesian (BIC) 127066.593

Sample-size adjusted Bayesian (BIC) 126968.081

Root Mean Square Error of Approximation:

RMSEA 0.048

90 Percent confidence interval - lower 0.044

90 Percent confidence interval - upper 0.051

P-value RMSEA <= 0.05 0.884

Standardized Root Mean Square Residual:

SRMR 0.020

Parameter Estimates:

Standard errors Bootstrap

Number of requested bootstrap draws 5000

Number of successful bootstrap draws 5000

Latent Variables:

Estimate Std.Err z-value P(>|z|) ci.lower ci.upper Std.lv Std.all

Refereebias =~

FoulDifference 1.000 1.000 1.000 1.662 0.317

YellwCrdDffrnc 1.048 0.154 6.786 0.000 0.841 1.424 1.741 0.996

RedCardDiffrnc 0.048 0.004 11.603 0.000 0.041 0.057 0.080 0.176

Regressions:

Estimate Std.Err z-value P(>|z|) ci.lower ci.upper Std.lv Std.all

Refereebias ~

covid (a) -0.279 0.059 -4.744 0.000 -0.405 -0.171 -0.168 -0.081

OccpncyRt (a2) 0.078 0.032 2.466 0.014 0.020 0.143 0.047 0.047

OccpncyR: (a3) 0.018 0.048 0.384 0.701 -0.076 0.114 0.011 0.007

AvrgAttnd (a4) -0.079 0.031 -2.556 0.011 -0.139 -0.019 -0.047 -0.047

FrgnrsShD (a5) -0.016 0.025 -0.670 0.503 -0.066 0.033 -0.010 -0.010

AvrgAttn: (a6) -0.010 0.047 -0.210 0.833 -0.105 0.082 -0.006 -0.004

FrgnrsSD: (a7) -0.008 0.039 -0.213 0.831 -0.085 0.066 -0.005 -0.003

RtngDffrn (d1) 0.017 0.003 6.380 0.000 0.011 0.022 0.010 0.156

ImprtncDf (d2) -0.000 0.001 -0.549 0.583 -0.002 0.001 -0.000 -0.007

ShtsDffrn (d3) 0.015 0.004 3.369 0.001 0.007 0.025 0.009 0.059

VAR (d4) 0.055 0.070 0.783 0.434 -0.071 0.199 0.033 0.009

PointsDifference ~

covid (cp) -0.268 0.056 -4.779 0.000 -0.379 -0.157 -0.268 -0.050

Refereebs (b) 0.060 0.017 3.472 0.001 0.026 0.095 0.100 0.039

OccpncyRt (b2) 0.015 0.043 0.350 0.727 -0.070 0.097 0.015 0.006

OccpncyR: (b3) -0.197 0.068 -2.883 0.004 -0.334 -0.061 -0.197 -0.049

AvrgAttnd (b4) 0.071 0.042 1.701 0.089 -0.010 0.154 0.071 0.028

FrgnrsShD (b5) 0.035 0.034 1.038 0.299 -0.030 0.105 0.035 0.014

AvrgAttn: (b6) 0.042 0.068 0.622 0.534 -0.092 0.176 0.042 0.010

FrgnrsSD: (b7) -0.010 0.056 -0.182 0.856 -0.119 0.101 -0.010 -0.002

AgeDffrnc (b8) 0.072 0.033 2.188 0.029 0.009 0.136 0.072 0.028

AgDffrnc: (b9) -0.075 0.056 -1.340 0.180 -0.186 0.032 -0.075 -0.018

RtngDffrn (e1) 0.059 0.002 30.539 0.000 0.055 0.063 0.059 0.361

ImprtncDf (e2) 0.003 0.001 3.696 0.000 0.001 0.005 0.003 0.041

VAR (e4) 0.070 0.095 0.736 0.462 -0.113 0.263 0.070 0.008

Variances:

Estimate Std.Err z-value P(>|z|) ci.lower ci.upper Std.lv Std.all

.Refereebias 2.650 0.352 7.532 0.000 1.933 3.298 0.960 0.960

.FoulDifference 24.684 0.517 47.743 0.000 23.703 25.722 24.684 0.899

.YellwCrdDffrnc 0.025 0.451 0.056 0.955 -1.071 0.658 0.025 0.008

.RedCardDiffrnc 0.201 0.006 32.910 0.000 0.189 0.213 0.201 0.969

.PointsDiffernc 5.535 0.059 94.302 0.000 5.414 5.644 5.535 0.837

R-Square:

Estimate

Refereebias 0.040

FoulDifference 0.101

YellwCrdDffrnc 0.992

RedCardDiffrnc 0.031

PointsDiffernc 0.163

Defined Parameters:

Estimate Std.Err z-value P(>|z|) ci.lower ci.upper Std.lv Std.all

Direct -0.268 0.056 -4.779 0.000 -0.379 -0.157 -0.268 -0.050

indirect -0.017 0.006 -2.616 0.009 -0.031 -0.006 -0.017 -0.003

mdrtdmdtnffctc 0.001 0.003 0.361 0.718 -0.005 0.008 0.001 0.000

mdrtdffctccpnc -0.197 0.068 -2.882 0.004 -0.334 -0.061 -0.197 -0.049

totlffctccpncy -0.196 0.069 -2.861 0.004 -0.334 -0.060 -0.196 -0.049

mdrtdmdtnffctt -0.001 0.003 -0.199 0.842 -0.007 0.005 -0.001 -0.000

mdrtdffctttndn 0.042 0.068 0.622 0.534 -0.092 0.176 0.042 0.010

totlffctttndnc 0.042 0.068 0.613 0.540 -0.094 0.178 0.042 0.010

mdrtdmdtnffctf -0.000 0.002 -0.202 0.840 -0.006 0.004 -0.000 -0.000

mdrtdffctfrgnr -0.010 0.056 -0.182 0.856 -0.119 0.101 -0.010 -0.002

ttlffctfrgnrss -0.011 0.056 -0.190 0.849 -0.120 0.101 -0.011 -0.002

moderatdffctAg -0.075 0.056 -1.339 0.180 -0.186 0.032 -0.075 -0.018

total -0.285 0.056 -5.097 0.000 -0.395 -0.175 -0.285 -0.053

confounderRtng 0.017 0.003 6.380 0.000 0.011 0.022 0.010 0.156

confndrImprtnc -0.000 0.001 -0.549 0.583 -0.002 0.001 -0.000 -0.007

confounderShts 0.015 0.004 3.369 0.001 0.007 0.025 0.009 0.059

counfounderVar 0.055 0.070 0.783 0.434 -0.071 0.199 0.033 0.009