Refereebias ~

covid (a) -0.339 0.084 -4.046 0.000 -0.514 -0.188 -0.187 -0.090

OccpncyRt (a2) 0.084 0.040 2.092 0.036 0.012 0.170 0.046 0.046

OccpncyR: (a3) 0.021 0.057 0.370 0.711 -0.095 0.136 0.012 0.008

AvrgAttnd (a4) -0.086 0.037 -2.320 0.020 -0.160 -0.011 -0.047 -0.047

FrgnrsShD (a5) -0.018 0.030 -0.617 0.537 -0.075 0.043 -0.010 -0.010

AvrgAttn: (a6) -0.016 0.058 -0.268 0.789 -0.135 0.091 -0.009 -0.005

FrgnrsSD: (a7) -0.011 0.047 -0.238 0.812 -0.105 0.079 -0.006 -0.004

RtngDffrn (d1) 0.020 0.004 4.822 0.000 0.012 0.028 0.011 0.171

ImprtncDf (d2) -0.000 0.001 -0.548 0.584 -0.002 0.001 -0.000 -0.007

ShtsDffrn (d3) 0.018 0.005 3.886 0.000 0.009 0.027 0.010 0.063

VAR (d4) 0.085 0.089 0.962 0.336 -0.069 0.282 0.047 0.013

league (d5) -0.006 0.011 -0.547 0.585 -0.031 0.013 -0.003 -0.009

GoalDifference ~

covid (cp) -0.182 0.039 -4.690 0.000 -0.260 -0.107 -0.182 -0.048

Refereebs (b) 0.057 0.014 4.238 0.000 0.030 0.084 0.104 0.056

OccpncyRt (b2) 0.029 0.032 0.897 0.370 -0.034 0.092 0.029 0.016

OccpncyR: (b3) -0.157 0.048 -3.294 0.001 -0.251 -0.064 -0.157 -0.055

AvrgAttnd (b4) 0.046 0.031 1.486 0.137 -0.015 0.106 0.046 0.025

FrgnrsShD (b5) 0.027 0.024 1.109 0.267 -0.021 0.076 0.027 0.015

AvrgAttn: (b6) 0.055 0.051 1.075 0.282 -0.048 0.155 0.055 0.018

FrgnrsSD: (b7) 0.004 0.039 0.103 0.918 -0.071 0.081 0.004 0.001

AgeDffrnc (b8) 0.023 0.023 0.970 0.332 -0.023 0.068 0.023 0.012

AgDffrnc: (b9) -0.049 0.038 -1.293 0.196 -0.123 0.026 -0.049 -0.016

RtngDffrn (e1) 0.048 0.001 32.167 0.000 0.045 0.051 0.048 0.408

ImprtncDf (e2) 0.002 0.001 3.645 0.000 0.001 0.003 0.002 0.040

VAR (e4) 0.043 0.066 0.644 0.520 -0.087 0.172 0.043 0.006

league (e5) 0.002 0.008 0.278 0.781 -0.014 0.018 0.002 0.003

Variances:

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

.Refereebias 3.125 0.569 5.493 0.000 2.055 4.257 0.951 0.951

.FoulDifference 24.160 0.698 34.608 0.000 22.758 25.496 24.160 0.880

.YellwCrdDffrnc 0.509 0.523 0.974 0.330 -0.801 1.195 0.509 0.166

.GoalDifference 2.686 0.050 53.630 0.000 2.584 2.781 2.686 0.789

Defined Parameters:

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

Direct -0.182 0.039 -4.690 0.000 -0.260 -0.107 -0.182 -0.048

indirect -0.019 0.005 -4.139 0.000 -0.029 -0.011 -0.019 -0.005

mdrtdmdtnffctc 0.001 0.003 0.380 0.704 -0.005 0.008 0.001 0.000

mdrtdffctccpnc -0.157 0.048 -3.294 0.001 -0.251 -0.064 -0.157 -0.055

totlffctccpncy -0.156 0.048 -3.264 0.001 -0.248 -0.062 -0.156 -0.054

mdrtdmdtnffctt -0.001 0.003 -0.276 0.783 -0.008 0.005 -0.001 -0.000

mdrtdffctttndn 0.055 0.051 1.075 0.282 -0.048 0.155 0.055 0.018

totlffctttndnc 0.054 0.051 1.057 0.290 -0.048 0.155 0.054 0.018

mdrtdmdtnffctf -0.001 0.003 -0.246 0.806 -0.006 0.005 -0.001 -0.000

mdrtdffctfrgnr 0.004 0.039 0.103 0.918 -0.071 0.081 0.004 0.001

ttlffctfrgnrss 0.003 0.039 0.087 0.931 -0.072 0.081 0.003 0.001

moderatdffctAg -0.049 0.038 -1.293 0.196 -0.123 0.026 -0.049 -0.016

total -0.202 0.039 -5.207 0.000 -0.279 -0.126 -0.202 -0.053

confounderRtng 0.020 0.004 4.822 0.000 0.012 0.028 0.011 0.171

confndrImprtnc -0.000 0.001 -0.548 0.584 -0.002 0.001 -0.000 -0.007

confounderShts 0.018 0.005 3.886 0.000 0.009 0.027 0.010 0.063

counfounderVar 0.085 0.089 0.962 0.336 -0.069 0.282 0.047 0.013

Test statistic 114.823

Degrees of freedom 17

P-value (Chi-square) 0.000

Model Test Baseline Model:

Test statistic 2727.809

Degrees of freedom 45

P-value 0.000

User Model versus Baseline Model:

Comparative Fit Index (CFI) 0.964

Tucker-Lewis Index (TLI) 0.903

Loglikelihood and Information Criteria:

Loglikelihood user model (H0) -58421.583

Loglikelihood unrestricted model (H1) -58364.172

Akaike (AIC) 116905.167

Bayesian (BIC) 117121.979

Sample-size adjusted Bayesian (BIC) 117023.467

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 0.009

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 1.919 0.366

YellwCrdDffrnc 0.786 0.151 5.208 0.000 0.586 1.168 1.508 0.863

Regressions:

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

Refereebias ~

covid (a) -0.383 0.088 -4.360 0.000 -0.568 -0.217 -0.200 -0.096

OccpncyRt (a2) 0.092 0.044 2.099 0.036 0.005 0.182 0.048 0.048

OccpncyR: (a3) 0.023 0.063 0.367 0.714 -0.103 0.149 0.012 0.008

AvrgAttnd (a4) -0.090 0.041 -2.174 0.030 -0.168 -0.007 -0.047 -0.047

FrgnrsShD (a5) -0.019 0.032 -0.587 0.558 -0.080 0.046 -0.010 -0.010

AvrgAttn: (a6) -0.021 0.065 -0.314 0.753 -0.156 0.099 -0.011 -0.007

FrgnrsSD: (a7) -0.014 0.052 -0.263 0.792 -0.119 0.087 -0.007 -0.004

RtngDffrn (d1) 0.022 0.004 5.338 0.000 0.014 0.031 0.012 0.182

ImprtncDf (d2) -0.000 0.001 -0.543 0.587 -0.002 0.001 -0.000 -0.008

ShtsDffrn (d3) 0.019 0.005 4.032 0.000 0.010 0.029 0.010 0.065

VAR (d4) 0.107 0.100 1.072 0.284 -0.062 0.331 0.056 0.016

league (d6) -0.008 0.012 -0.691 0.489 -0.036 0.013 -0.004 -0.011

PointsDifference ~

covid (cp) -0.265 0.057 -4.676 0.000 -0.378 -0.153 -0.265 -0.050

Refereebs (b) 0.050 0.020 2.511 0.012 0.011 0.089 0.095 0.037

OccpncyRt (b2) 0.023 0.047 0.496 0.620 -0.069 0.112 0.023 0.009

OccpncyR: (b3) -0.197 0.068 -2.892 0.004 -0.331 -0.068 -0.197 -0.049

AvrgAttnd (b4) 0.069 0.041 1.672 0.094 -0.011 0.151 0.069 0.027

FrgnrsShD (b5) 0.036 0.034 1.058 0.290 -0.031 0.102 0.036 0.014

AvrgAttn: (b6) 0.042 0.067 0.635 0.526 -0.094 0.175 0.042 0.010

FrgnrsSD: (b7) -0.010 0.055 -0.181 0.857 -0.119 0.097 -0.010 -0.002

AgeDffrnc (b8) 0.071 0.033 2.170 0.030 0.007 0.133 0.071 0.028

AgDffrnc: (b9) -0.074 0.055 -1.348 0.178 -0.180 0.035 -0.074 -0.017

RtngDffrn (e1) 0.059 0.002 30.825 0.000 0.056 0.063 0.059 0.360

ImprtncDf (e2) 0.003 0.001 3.648 0.000 0.002 0.005 0.003 0.041

VAR (e4) 0.061 0.098 0.619 0.536 -0.138 0.255 0.061 0.007

league (e6) 0.006 0.012 0.481 0.630 -0.018 0.029 0.006 0.006

Variances:

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

.Refereebias 3.483 0.583 5.978 0.000 2.329 4.642 0.946 0.946

.FoulDifference 23.762 0.708 33.541 0.000 22.327 25.143 23.762 0.866

.YellwCrdDffrnc 0.783 0.429 1.823 0.068 -0.288 1.350 0.783 0.256

.PointsDiffernc 5.536 0.059 94.176 0.000 5.409 5.640 5.536 0.837

R-Square:

Estimate

Refereebias 0.054

FoulDifference 0.134

YellwCrdDffrnc 0.744

PointsDiffernc 0.163

Defined Parameters:

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

Direct -0.265 0.057 -4.676 0.000 -0.378 -0.153 -0.265 -0.050

indirect -0.019 0.007 -2.755 0.006 -0.033 -0.005 -0.019 -0.004

mdrtdmdtnffctc 0.001 0.003 0.359 0.720 -0.005 0.008 0.001 0.000

mdrtdffctccpnc -0.197 0.068 -2.891 0.004 -0.331 -0.068 -0.197 -0.049

totlffctccpncy -0.196 0.068 -2.869 0.004 -0.330 -0.065 -0.196 -0.049

mdrtdmdtnffctt -0.001 0.003 -0.310 0.756 -0.008 0.005 -0.001 -0.000

mdrtdffctttndn 0.042 0.067 0.635 0.526 -0.094 0.175 0.042 0.010

totlffctttndnc 0.041 0.067 0.619 0.536 -0.094 0.174 0.041 0.010

mdrtdmdtnffctf -0.001 0.003 -0.260 0.795 -0.006 0.005 -0.001 -0.000

mdrtdffctfrgnr -0.010 0.055 -0.181 0.857 -0.119 0.097 -0.010 -0.002

ttlffctfrgnrss -0.011 0.055 -0.193 0.847 -0.120 0.096 -0.011 -0.002

moderatdffctAg -0.074 0.055 -1.347 0.178 -0.180 0.035 -0.074 -0.017

total -0.284 0.056 -5.035 0.000 -0.396 -0.174 -0.284 -0.053

confounderRtng 0.022 0.004 5.337 0.000 0.014 0.031 0.012 0.182

confndrImprtnc -0.000 0.001 -0.543 0.587 -0.002 0.001 -0.000 -0.008

confounderShts 0.019 0.005 4.031 0.000 0.010 0.029 0.010 0.065

counfounderVar 0.107 0.100 1.072 0.284 -0.062 0.331 0.056 0.016

confounderleag -0.008 0.012 -0.691 0.490 -0.036 0.013 -0.004 -0.011

Model Test User Model:

Test statistic 26.394

Degrees of freedom 3

P-value (Chi-square) 0.000

Model Test Baseline Model:

Test statistic 1788.758

Degrees of freedom 29

P-value 0.000

User Model versus Baseline Model:

Comparative Fit Index (CFI) 0.987

Tucker-Lewis Index (TLI) 0.871

Loglikelihood and Information Criteria:

Loglikelihood user model (H0) -34080.501

Loglikelihood unrestricted model (H1) -34067.304

Akaike (AIC) 68217.002

Bayesian (BIC) 68412.831

Sample-size adjusted Bayesian (BIC) 68323.853

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 0.004

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) -0.293 0.041 -7.144 0.000 -0.374 -0.213 -0.293 -0.081

OccpncyRt (a2) 0.076 0.034 2.274 0.023 0.010 0.143 0.076 0.044

OccpncyR: (a3) 0.019 0.049 0.392 0.695 -0.078 0.117 0.019 0.007

AvrgAttnd (a4) -0.081 0.032 -2.560 0.010 -0.142 -0.018 -0.081 -0.047

FrgnrsShD (a5) -0.018 0.025 -0.700 0.484 -0.067 0.031 -0.018 -0.010

AvrgAttn: (a6) -0.010 0.050 -0.205 0.837 -0.107 0.087 -0.010 -0.004

FrgnrsSD: (a7) -0.008 0.040 -0.210 0.834 -0.088 0.070 -0.008 -0.003

RtngDffrn (d1) 0.017 0.002 11.232 0.000 0.014 0.021 0.017 0.156

ImprtncDf (d2) -0.000 0.001 -0.548 0.584 -0.002 0.001 -0.000 -0.007

ShtsDffrn (d3) 0.016 0.003 4.672 0.000 0.009 0.022 0.016 0.059

VAR (d4) 0.062 0.070 0.882 0.378 -0.074 0.202 0.062 0.010

league (d6) -0.004 0.009 -0.416 0.677 -0.021 0.014 -0.004 -0.006

PointsDifference ~

covid (cp) -0.268 0.056 -4.815 0.000 -0.377 -0.161 -0.268 -0.050

YllwCrdDf (b) 0.057 0.016 3.589 0.000 0.025 0.087 0.057 0.039

OccpncyRt (b2) 0.023 0.047 0.492 0.623 -0.072 0.115 0.023 0.009

OccpncyR: (b3) -0.197 0.068 -2.901 0.004 -0.330 -0.066 -0.197 -0.049

AvrgAttnd (b4) 0.069 0.041 1.672 0.095 -0.012 0.151 0.069 0.027

FrgnrsShD (b5) 0.036 0.034 1.044 0.297 -0.031 0.104 0.036 0.014

AvrgAttn: (b6) 0.042 0.067 0.627 0.530 -0.087 0.178 0.042 0.010

FrgnrsSD: (b7) -0.010 0.055 -0.185 0.853 -0.122 0.095 -0.010 -0.002

AgeDffrnc (b8) 0.071 0.033 2.135 0.033 0.005 0.137 0.071 0.028

AgDffrnc: (b9) -0.074 0.055 -1.345 0.178 -0.181 0.035 -0.074 -0.017

RtngDffrn (e1) 0.059 0.002 30.810 0.000 0.056 0.063 0.059 0.361

ImprtncDf (e2) 0.003 0.001 3.709 0.000 0.001 0.005 0.003 0.041

VAR (e4) 0.063 0.095 0.657 0.511 -0.122 0.255 0.063 0.007

league (e6) 0.006 0.012 0.458 0.647 -0.018 0.030 0.006 0.006

Variances:

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

.YellwCrdDffrnc 2.933 0.050 58.657 0.000 2.834 3.029 2.933 0.960

.PointsDiffernc 5.535 0.059 94.601 0.000 5.410 5.637 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 -4.814 0.000 -0.377 -0.161 -0.268 -0.050

indirect -0.017 0.005 -3.201 0.001 -0.028 -0.007 -0.017 -0.003

mdrtdmdtnffctc 0.001 0.003 0.379 0.705 -0.005 0.007 0.001 0.000

mdrtdffctccpnc -0.197 0.068 -2.901 0.004 -0.330 -0.066 -0.197 -0.049

totlffctccpncy -0.196 0.068 -2.881 0.004 -0.330 -0.064 -0.196 -0.049

mdrtdmdtnffctt -0.001 0.003 -0.197 0.844 -0.007 0.005 -0.001 -0.000

mdrtdffctttndn 0.042 0.067 0.627 0.531 -0.087 0.178 0.042 0.010

totlffctttndnc 0.041 0.067 0.618 0.537 -0.088 0.178 0.041 0.010

mdrtdmdtnffctf -0.000 0.002 -0.200 0.842 -0.005 0.004 -0.000 -0.000

mdrtdffctfrgnr -0.010 0.055 -0.185 0.853 -0.122 0.095 -0.010 -0.002

ttlffctfrgnrss -0.011 0.056 -0.194 0.846 -0.123 0.095 -0.011 -0.002

moderatdffctAg -0.074 0.055 -1.345 0.179 -0.181 0.035 -0.074 -0.017

total -0.284 0.056 -5.118 0.000 -0.395 -0.178 -0.284 -0.053

confounderRtng 0.017 0.002 11.231 0.000 0.014 0.021 0.017 0.156

confndrImprtnc -0.000 0.001 -0.548 0.584 -0.002 0.001 -0.000 -0.007

confounderShts 0.016 0.003 4.671 0.000 0.009 0.022 0.016 0.059

counfounderVar 0.062 0.070 0.882 0.378 -0.074 0.202 0.062 0.010

confounderleag -0.004 0.009 -0.416 0.677 -0.021 0.014 -0.004 -0.006

Model Test User Model:

Test statistic 36.566

Degrees of freedom 3

P-value (Chi-square) 0.000

Model Test Baseline Model:

Test statistic 2270.564

Degrees of freedom 29

P-value 0.000

User Model versus Baseline Model:

Comparative Fit Index (CFI) 0.985

Tucker-Lewis Index (TLI) 0.855

Loglikelihood and Information Criteria:

Loglikelihood user model (H0) -31169.447

Loglikelihood unrestricted model (H1) -31151.164

Akaike (AIC) 62394.894

Bayesian (BIC) 62590.724

Sample-size adjusted Bayesian (BIC) 62501.746

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) -0.293 0.041 -7.171 0.000 -0.373 -0.214 -0.293 -0.081

OccpncyRt (a2) 0.076 0.034 2.246 0.025 0.010 0.144 0.076 0.044

OccpncyR: (a3) 0.019 0.049 0.392 0.695 -0.076 0.117 0.019 0.007

AvrgAttnd (a4) -0.081 0.032 -2.569 0.010 -0.144 -0.017 -0.081 -0.047

FrgnrsShD (a5) -0.018 0.025 -0.695 0.487 -0.066 0.032 -0.018 -0.010

AvrgAttn: (a6) -0.010 0.049 -0.210 0.834 -0.106 0.084 -0.010 -0.004

FrgnrsSD: (a7) -0.008 0.040 -0.208 0.836 -0.087 0.072 -0.008 -0.003

RtngDffrn (d1) 0.017 0.002 11.011 0.000 0.014 0.021 0.017 0.156

ImprtncDf (d2) -0.000 0.001 -0.554 0.579 -0.002 0.001 -0.000 -0.007

ShtsDffrn (d3) 0.016 0.003 4.745 0.000 0.009 0.022 0.016 0.059

VAR (d4) 0.062 0.070 0.877 0.381 -0.078 0.198 0.062 0.010

league (d6) -0.004 0.009 -0.421 0.674 -0.021 0.014 -0.004 -0.006

GoalDifference ~

covid (cp) -0.185 0.039 -4.735 0.000 -0.262 -0.108 -0.185 -0.048

YllwCrdDf (b) 0.059 0.010 5.681 0.000 0.038 0.079 0.059 0.056

OccpncyRt (b2) 0.029 0.032 0.897 0.370 -0.036 0.093 0.029 0.016

OccpncyR: (b3) -0.157 0.047 -3.327 0.001 -0.248 -0.065 -0.157 -0.055

AvrgAttnd (b4) 0.046 0.031 1.459 0.145 -0.015 0.108 0.046 0.025

FrgnrsShD (b5) 0.027 0.024 1.122 0.262 -0.021 0.074 0.027 0.015

AvrgAttn: (b6) 0.055 0.052 1.059 0.289 -0.049 0.157 0.055 0.018

FrgnrsSD: (b7) 0.004 0.038 0.100 0.921 -0.071 0.082 0.004 0.001

AgeDffrnc (b8) 0.023 0.023 0.985 0.325 -0.023 0.068 0.023 0.012

AgDffrnc: (b9) -0.049 0.038 -1.300 0.194 -0.122 0.022 -0.049 -0.016

RtngDffrn (e1) 0.048 0.001 32.719 0.000 0.045 0.051 0.048 0.409

ImprtncDf (e2) 0.002 0.001 3.661 0.000 0.001 0.004 0.002 0.040

VAR (e4) 0.044 0.066 0.665 0.506 -0.086 0.171 0.044 0.007

league (e6) 0.002 0.008 0.258 0.797 -0.013 0.018 0.002 0.003

Variances:

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

.YellwCrdDffrnc 2.933 0.050 58.535 0.000 2.833 3.029 2.933 0.960

.GoalDifference 2.686 0.050 53.957 0.000 2.588 2.784 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 0.039 -4.735 0.000 -0.262 -0.108 -0.185 -0.048

indirect -0.017 0.004 -4.495 0.000 -0.025 -0.010 -0.017 -0.004

mdrtdmdtnffctc 0.001 0.003 0.386 0.699 -0.005 0.007 0.001 0.000

mdrtdffctccpnc -0.157 0.047 -3.327 0.001 -0.248 -0.065 -0.157 -0.055

totlffctccpncy -0.156 0.047 -3.293 0.001 -0.247 -0.064 -0.156 -0.054

mdrtdmdtnffctt -0.001 0.003 -0.206 0.837 -0.006 0.005 -0.001 -0.000

mdrtdffctttndn 0.055 0.052 1.059 0.289 -0.049 0.157 0.055 0.018

totlffctttndnc 0.054 0.052 1.047 0.295 -0.049 0.156 0.054 0.018

mdrtdmdtnffctf -0.000 0.002 -0.205 0.838 -0.005 0.004 -0.000 -0.000

mdrtdffctfrgnr 0.004 0.038 0.100 0.921 -0.071 0.082 0.004 0.001

ttlffctfrgnrss 0.003 0.038 0.087 0.931 -0.071 0.080 0.003 0.001

moderatdffctAg -0.049 0.038 -1.300 0.194 -0.122 0.022 -0.049 -0.016

total -0.202 0.039 -5.166 0.000 -0.280 -0.127 -0.202 -0.053

confounderRtng 0.017 0.002 11.010 0.000 0.014 0.021 0.017 0.156

confndrImprtnc -0.000 0.001 -0.554 0.579 -0.002 0.001 -0.000 -0.007

confounderShts 0.016 0.003 4.745 0.000 0.009 0.022 0.016 0.059

counfounderVar 0.062 0.070 0.877 0.381 -0.078 0.198 0.062 0.010

confounderleag -0.004 0.009 -0.421 0.674 -0.021 0.014 -0.004 -0.006

Test statistic 603.490

Degrees of freedom 33

P-value (Chi-square) 0.000

Model Test Baseline Model:

Test statistic 3464.918

Degrees of freedom 62

P-value 0.000

User Model versus Baseline Model:

Comparative Fit Index (CFI) 0.832

Tucker-Lewis Index (TLI) 0.685

Loglikelihood and Information Criteria:

Loglikelihood user model (H0) -63393.681

Loglikelihood unrestricted model (H1) -63091.936

Akaike (AIC) 126853.362

Bayesian (BIC) 127084.161

Sample-size adjusted Bayesian (BIC) 126979.294

Root Mean Square Error of Approximation:

RMSEA 0.046

90 Percent confidence interval - lower 0.043

90 Percent confidence interval - upper 0.050

P-value RMSEA <= 0.05 0.968

Standardized Root Mean Square Residual:

SRMR 0.019

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 1.667 0.318

YellwCrdDffrnc 1.041 0.153 6.806 0.000 0.834 1.439 1.735 0.993

RedCardDiffrnc 0.048 0.004 11.653 0.000 0.041 0.057 0.081 0.177

Regressions:

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

Refereebias ~

covid (a) -0.282 0.058 -4.828 0.000 -0.403 -0.170 -0.169 -0.081

OccpncyRt (a2) 0.073 0.034 2.173 0.030 0.011 0.144 0.044 0.044

OccpncyR: (a3) 0.018 0.048 0.387 0.699 -0.074 0.115 0.011 0.007

AvrgAttnd (a4) -0.078 0.031 -2.496 0.013 -0.140 -0.019 -0.047 -0.047

FrgnrsShD (a5) -0.017 0.025 -0.682 0.495 -0.067 0.032 -0.010 -0.010

AvrgAttn: (a6) -0.010 0.048 -0.206 0.836 -0.106 0.083 -0.006 -0.004

FrgnrsSD: (a7) -0.008 0.039 -0.211 0.833 -0.086 0.069 -0.005 -0.003

RtngDffrn (d1) 0.017 0.003 6.355 0.000 0.011 0.022 0.010 0.157

ImprtncDf (d2) -0.000 0.001 -0.541 0.589 -0.002 0.001 -0.000 -0.007

ShtsDffrn (d3) 0.015 0.004 3.401 0.001 0.007 0.025 0.009 0.059

VAR (d4) 0.060 0.072 0.838 0.402 -0.073 0.213 0.036 0.010

league (d5) -0.004 0.009 -0.417 0.677 -0.022 0.012 -0.002 -0.006

PointsDifference ~

covid (cp) -0.267 0.056 -4.729 0.000 -0.378 -0.157 -0.267 -0.050

Refereebs (b) 0.060 0.017 3.486 0.000 0.026 0.096 0.101 0.039

OccpncyRt (b2) 0.023 0.047 0.496 0.620 -0.072 0.111 0.023 0.009

OccpncyR: (b3) -0.197 0.068 -2.903 0.004 -0.328 -0.063 -0.197 -0.049

AvrgAttnd (b4) 0.069 0.042 1.647 0.100 -0.013 0.153 0.069 0.027

FrgnrsShD (b5) 0.036 0.034 1.047 0.295 -0.032 0.103 0.036 0.014

AvrgAttn: (b6) 0.042 0.066 0.631 0.528 -0.091 0.171 0.042 0.010

FrgnrsSD: (b7) -0.010 0.056 -0.182 0.855 -0.121 0.101 -0.010 -0.002

AgeDffrnc (b8) 0.071 0.032 2.198 0.028 0.009 0.137 0.071 0.028

AgDffrnc: (b9) -0.074 0.056 -1.330 0.184 -0.185 0.035 -0.074 -0.017

RtngDffrn (e1) 0.059 0.002 30.302 0.000 0.056 0.063 0.059 0.361

ImprtncDf (e2) 0.003 0.001 3.714 0.000 0.002 0.005 0.003 0.041

VAR (e4) 0.062 0.095 0.657 0.511 -0.120 0.250 0.062 0.007

league (e5) 0.006 0.012 0.467 0.640 -0.018 0.029 0.006 0.006

Variances:

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

.Refereebias 2.664 0.351 7.584 0.000 1.918 3.315 0.959 0.959

.FoulDifference 24.668 0.518 47.644 0.000 23.699 25.710 24.668 0.899

.YellwCrdDffrnc 0.044 0.449 0.099 0.922 -1.120 0.672 0.044 0.014

.RedCardDiffrnc 0.201 0.006 33.323 0.000 0.189 0.213 0.201 0.969

.PointsDiffernc 5.535 0.059 93.090 0.000 5.409 5.643 5.535 0.837

R-Square:

Estimate

Refereebias 0.041

FoulDifference 0.101

YellwCrdDffrnc 0.986

RedCardDiffrnc 0.031

PointsDiffernc 0.163

Defined Parameters:

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

Direct -0.267 0.056 -4.729 0.000 -0.378 -0.157 -0.267 -0.050

indirect -0.017 0.006 -2.655 0.008 -0.032 -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 -2.903 0.004 -0.328 -0.063 -0.197 -0.049

totlffctccpncy -0.196 0.068 -2.886 0.004 -0.328 -0.062 -0.196 -0.049

mdrtdmdtnffctt -0.001 0.003 -0.196 0.845 -0.007 0.006 -0.001 -0.000

mdrtdffctttndn 0.042 0.066 0.631 0.528 -0.091 0.171 0.042 0.010

totlffctttndnc 0.041 0.066 0.622 0.534 -0.091 0.170 0.041 0.010

mdrtdmdtnffctf -0.000 0.003 -0.197 0.844 -0.006 0.005 -0.000 -0.000

mdrtdffctfrgnr -0.010 0.056 -0.182 0.855 -0.121 0.101 -0.010 -0.002

ttlffctfrgnrss -0.011 0.056 -0.191 0.848 -0.121 0.101 -0.011 -0.002

moderatdffctAg -0.074 0.056 -1.329 0.184 -0.185 0.035 -0.074 -0.017

total -0.284 0.056 -5.057 0.000 -0.396 -0.175 -0.284 -0.053

confounderRtng 0.017 0.003 6.354 0.000 0.011 0.022 0.010 0.157

confndrImprtnc -0.000 0.001 -0.541 0.589 -0.002 0.001 -0.000 -0.007

confounderShts 0.015 0.004 3.400 0.001 0.007 0.025 0.009 0.059

counfounderVar 0.060 0.072 0.838 0.402 -0.073 0.213 0.036 0.010