

# **APPENDICES**

For Online Publication

Sobriety, Social Capital, and Village Network Structures

November 22, 2022

# Appendix Figures

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## Akibui Village Network: Receive\_Ag\_Advice

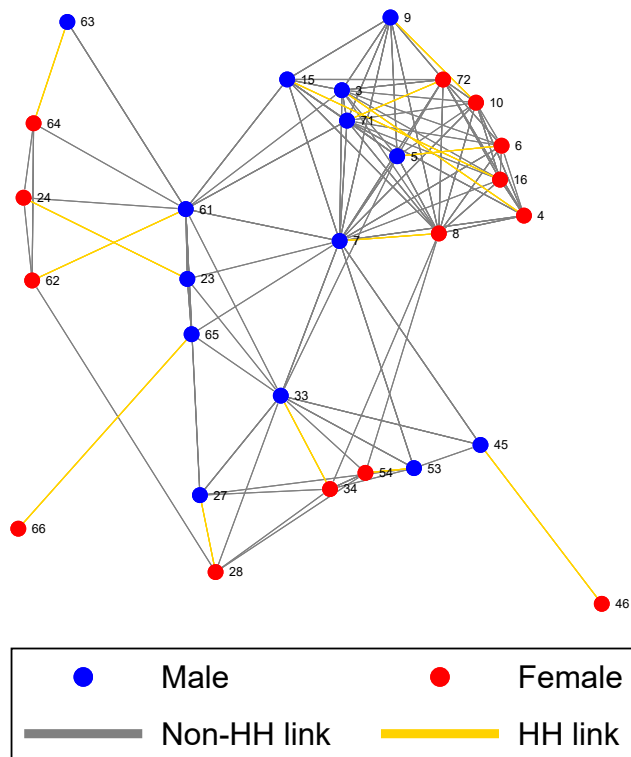


FIGURE A1: Akibui Village Network: Agricultural Information Links

*Notes:* Predicted links. A yellow line illustrates a same household link (i.e.  $i$  and  $j$  are spouses). Blue and red dots illustrate male and female individuals, respectively. Graph generated using Stata commands developed by Grund & Hedström (2022).

## Akibui Village Network: Trust

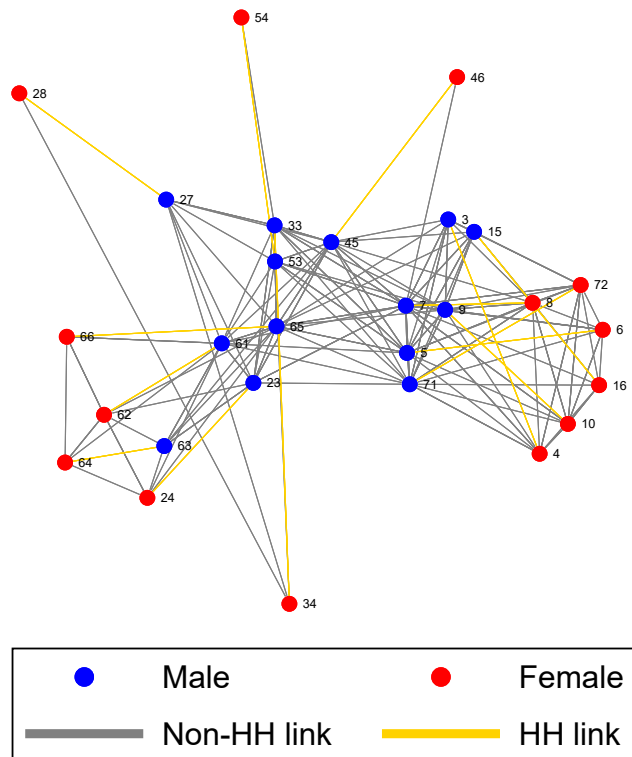


FIGURE A2: Akibui Village Network: Trust Links

*Notes:* Predicted links. A yellow line illustrates a same household link (i.e.  $i$  and  $j$  are spouses). Blue and red dots illustrate male and female individuals, respectively. Graph generated using Stata commands developed by Grund & Hedström (2022).

## Akibui Village Network: Speak\_Daily

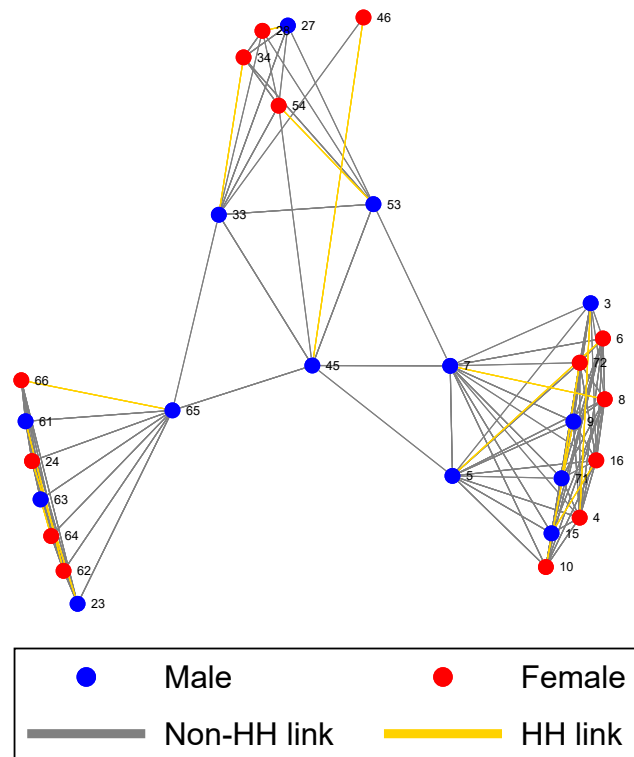


FIGURE A3: Akibui Village Network: Daily Communication Links

*Notes:* Predicted links. A yellow line illustrates a same household link (i.e.  $i$  and  $j$  are spouses). Blue and red dots illustrate male and female individuals, respectively. Graph generated using Stata commands developed by Grund & Hedström (2022).

## Akibui Village Network: Worked\_with

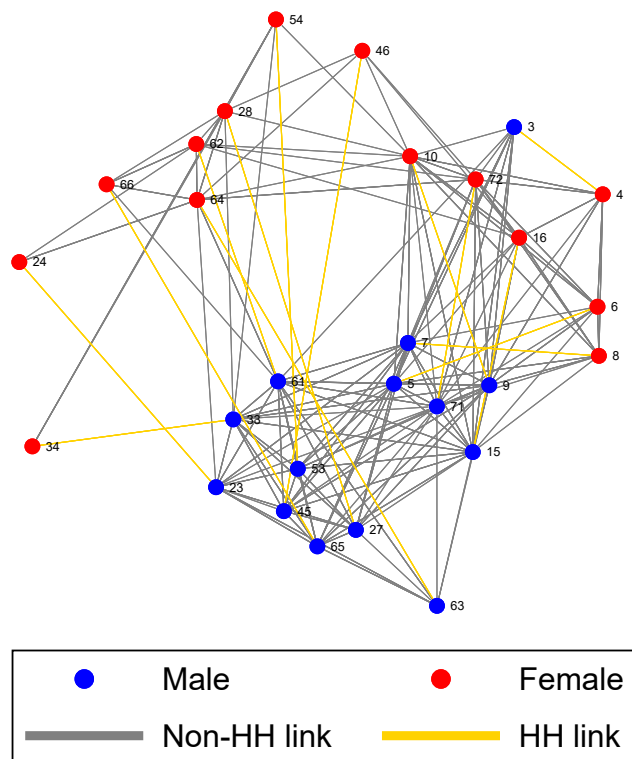


FIGURE A4: Akibui Village Network: Work Links

*Notes:* Predicted links. A yellow line illustrates a same household link (i.e.  $i$  and  $j$  are spouses). Blue and red dots illustrate male and female individuals, respectively. Graph generated using Stata commands developed by Grund & Hedström (2022).



## Akibui Village Network: Receive\_Health\_Info

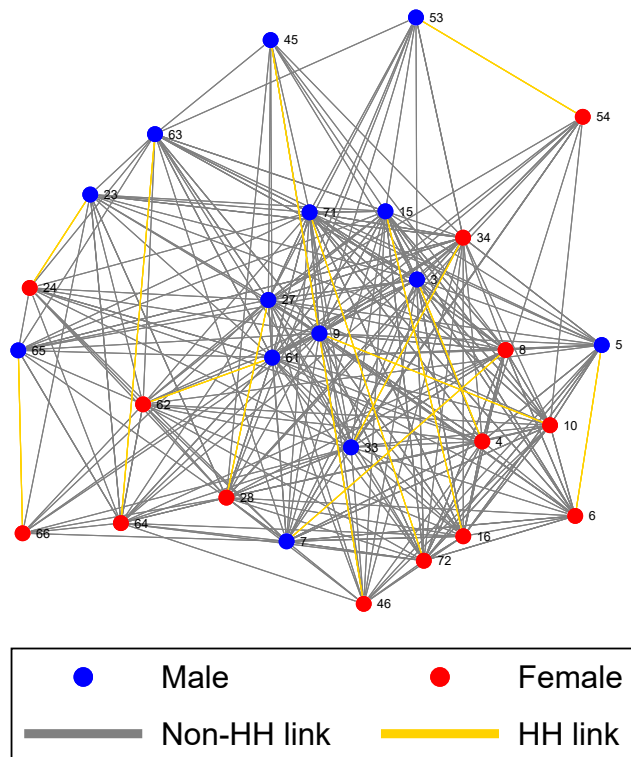


FIGURE A5: Akibui Village Network: Health Information Links

*Notes:* Predicted links. A yellow line illustrates a same household link (i.e.  $i$  and  $j$  are spouses). Blue and red dots illustrate male and female individuals, respectively. Graph generated using Stata commands developed by Grund & Hedström (2022).

## Akibui Village Network: Close\_Friend

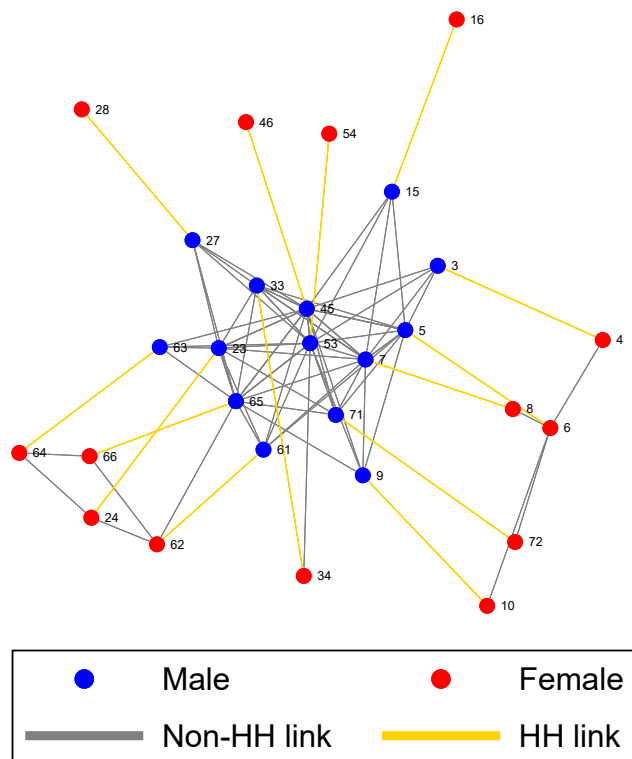


FIGURE A6: Akibui Village Network: Friendship Links

*Notes:* Predicted links. A yellow line illustrates a same household link (i.e.  $i$  and  $j$  are spouses). Blue and red dots illustrate male and female individuals, respectively. Graph generated using Stata commands developed by Grund & Hedström (2022).

## Sango Village Network: Receive\_Ag\_Advice

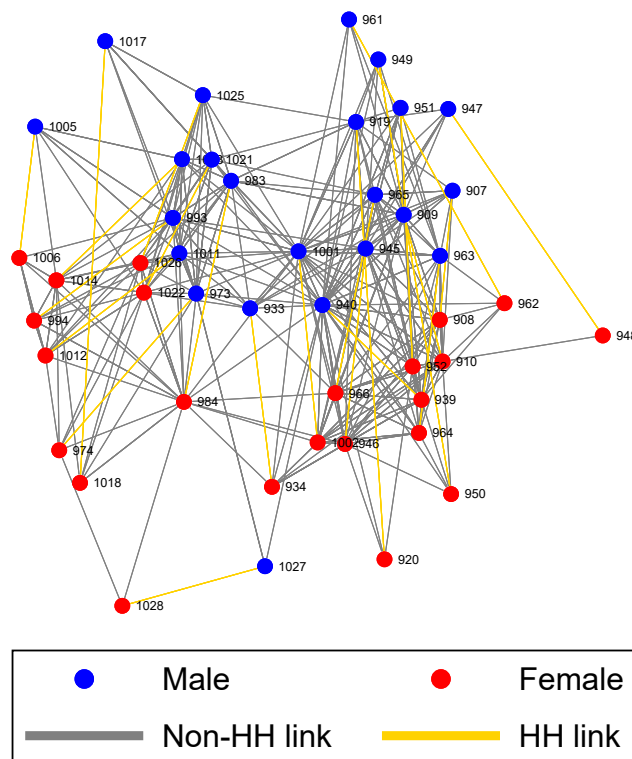


FIGURE A7: Sango Village Network: Agricultural Information Links

*Notes:* Predicted links. A yellow line illustrates a same household link (i.e.  $i$  and  $j$  are spouses). Blue and red dots illustrate male and female individuals, respectively. Graph generated using Stata commands developed by Grund & Hedström (2022).

## Sango Village Network: Trust

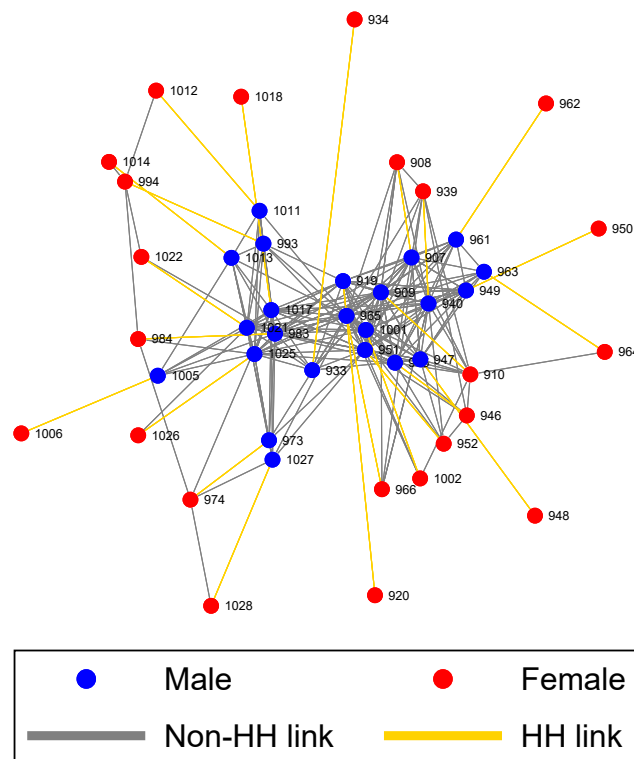


FIGURE A8: Sango Village Network: Trust Links

*Notes:* Predicted links. A yellow line illustrates a same household link (i.e.  $i$  and  $j$  are spouses). Blue and red dots illustrate male and female individuals, respectively. Graph generated using Stata commands developed by Grund & Hedström (2022).

## Sango Village Network: Speak\_Daily

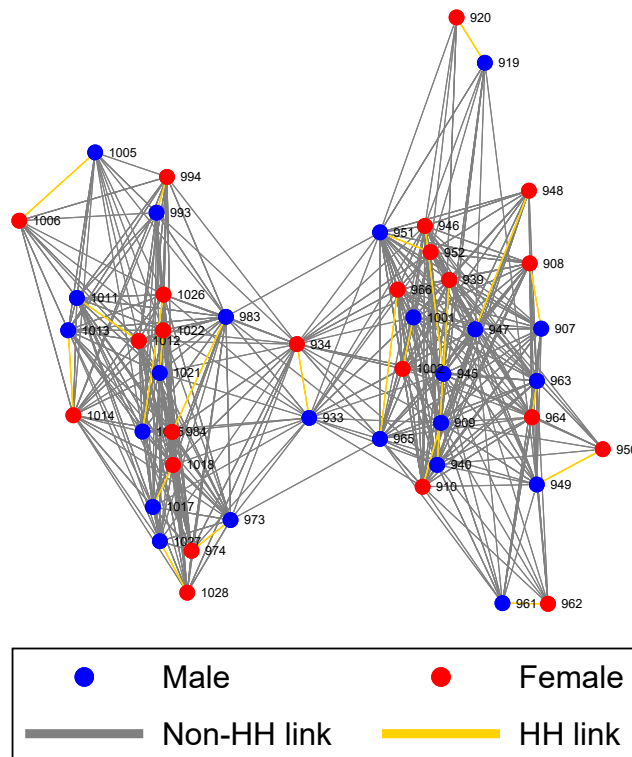


FIGURE A9: Sango Village Network: Daily Communication Links

*Notes:* Predicted links. A yellow line illustrates a same household link (i.e.  $i$  and  $j$  are spouses). Blue and red dots illustrate male and female individuals, respectively. Graph generated using Stata commands developed by Grund & Hedström (2022).

## Sango Village Network: Worked\_with

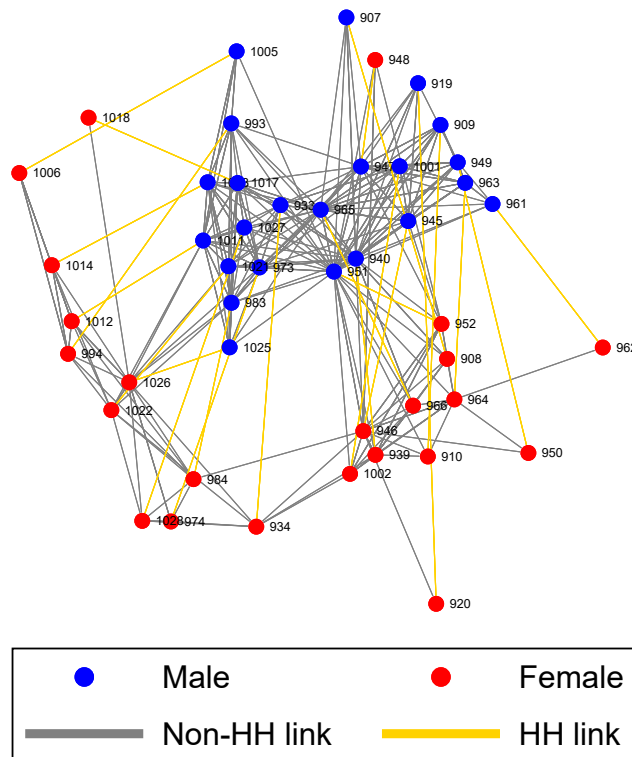


FIGURE A10: Sango Village Network: Work Links

*Notes:* Predicted links. A yellow line illustrates a same household link (i.e.  $i$  and  $j$  are spouses). Blue and red dots illustrate male and female individuals, respectively. Graph generated using Stata commands developed by Grund & Hedström (2022).

## Sango Village Network: Receive\_Health\_Info

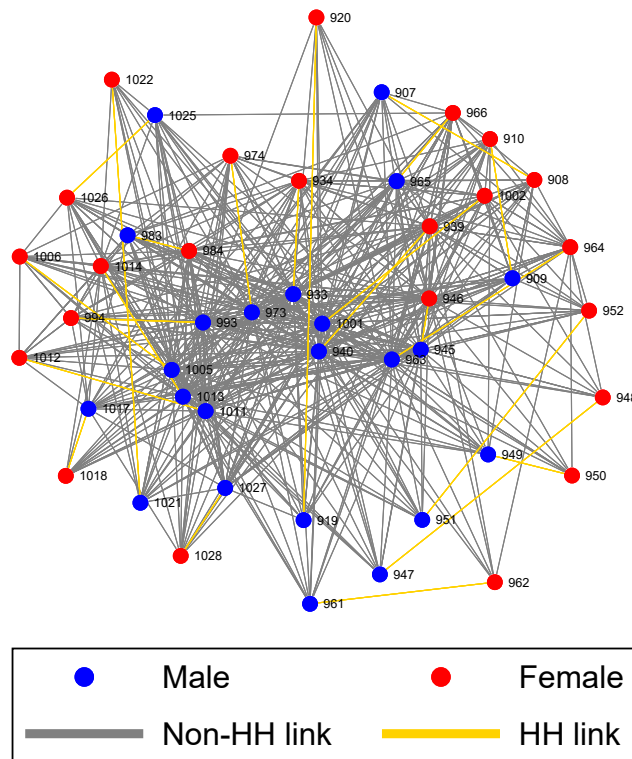


FIGURE A11: Sango Village Network: Health Information Links

*Notes:* Predicted links. A yellow line illustrates a same household link (i.e.  $i$  and  $j$  are spouses). Blue and red dots illustrate male and female individuals, respectively. Graph generated using Stata commands developed by Grund & Hedström (2022).

## Sango Village Network: Close\_Friend

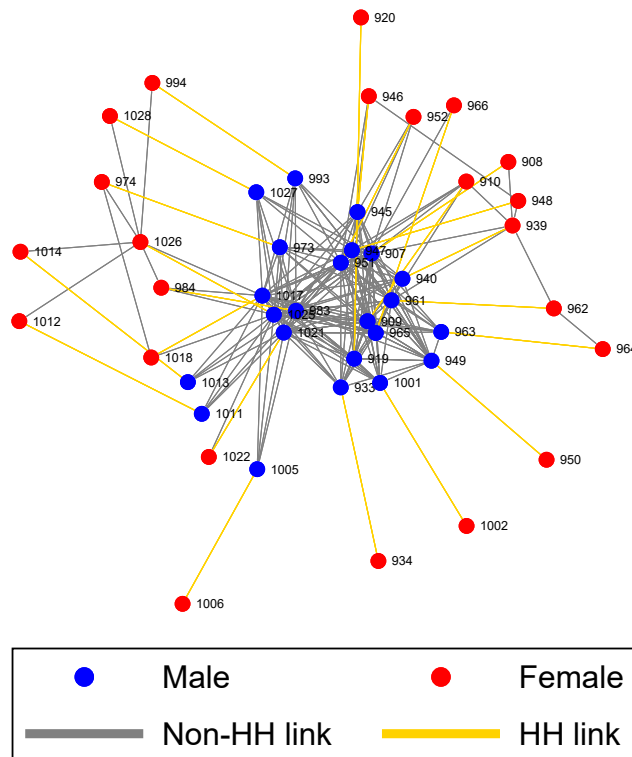


FIGURE A12: Sango Village Network: Friendship Links

*Notes:* Predicted links. A yellow line illustrates a same household link (i.e.  $i$  and  $j$  are spouses). Blue and red dots illustrate male and female individuals, respectively. Graph generated using Stata commands developed by Grund & Hedström (2022).



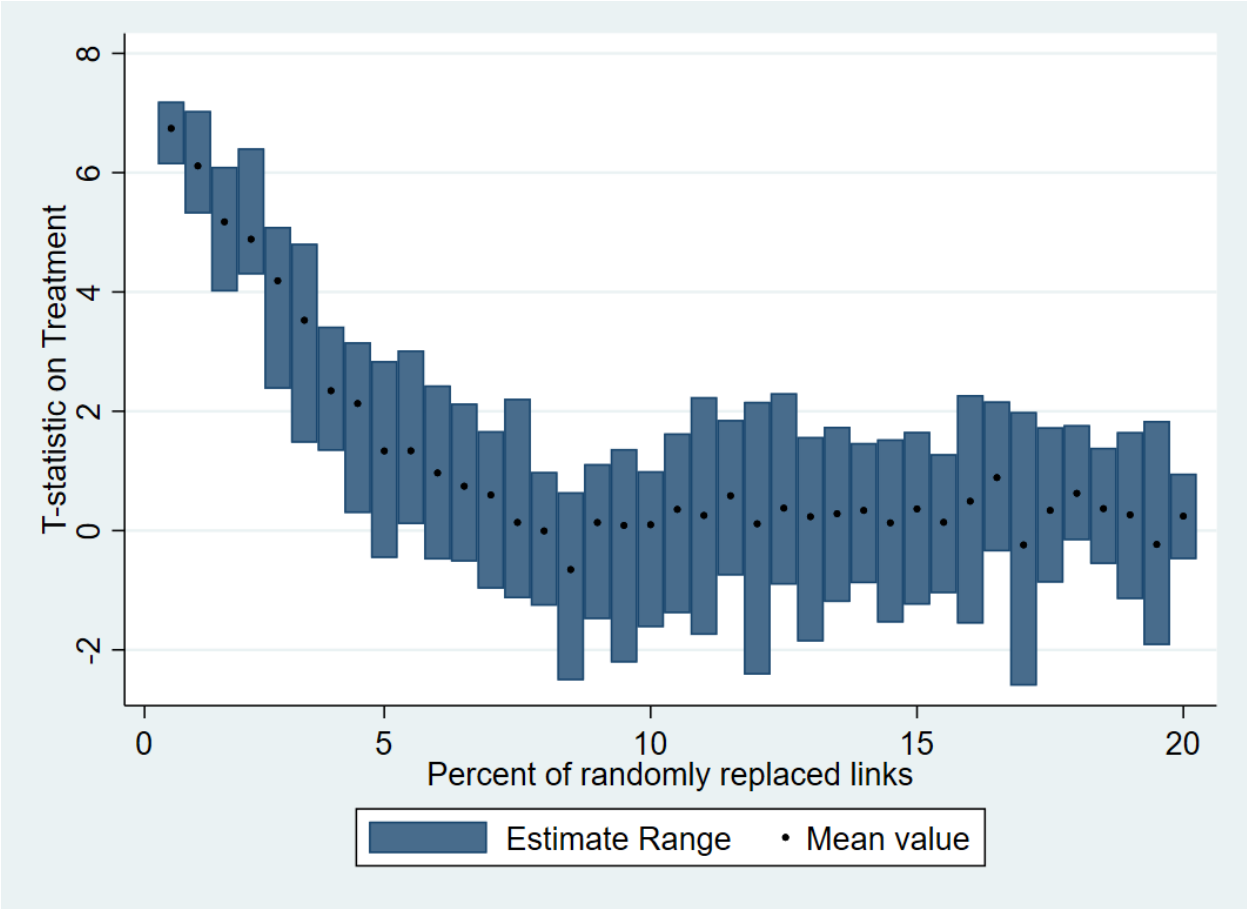


FIGURE A13: Agricultural Information Networks: In-degree Centrality – Robustness with Misspecified links

Notes: Figure shows the effect of the t-statistic on the ITT effect (assignment to treatment) with increasing numbers of randomly replaced links to model robustness of results to misspecified links in the data. Blue bars represent range of estimates and black dots are the mean value.

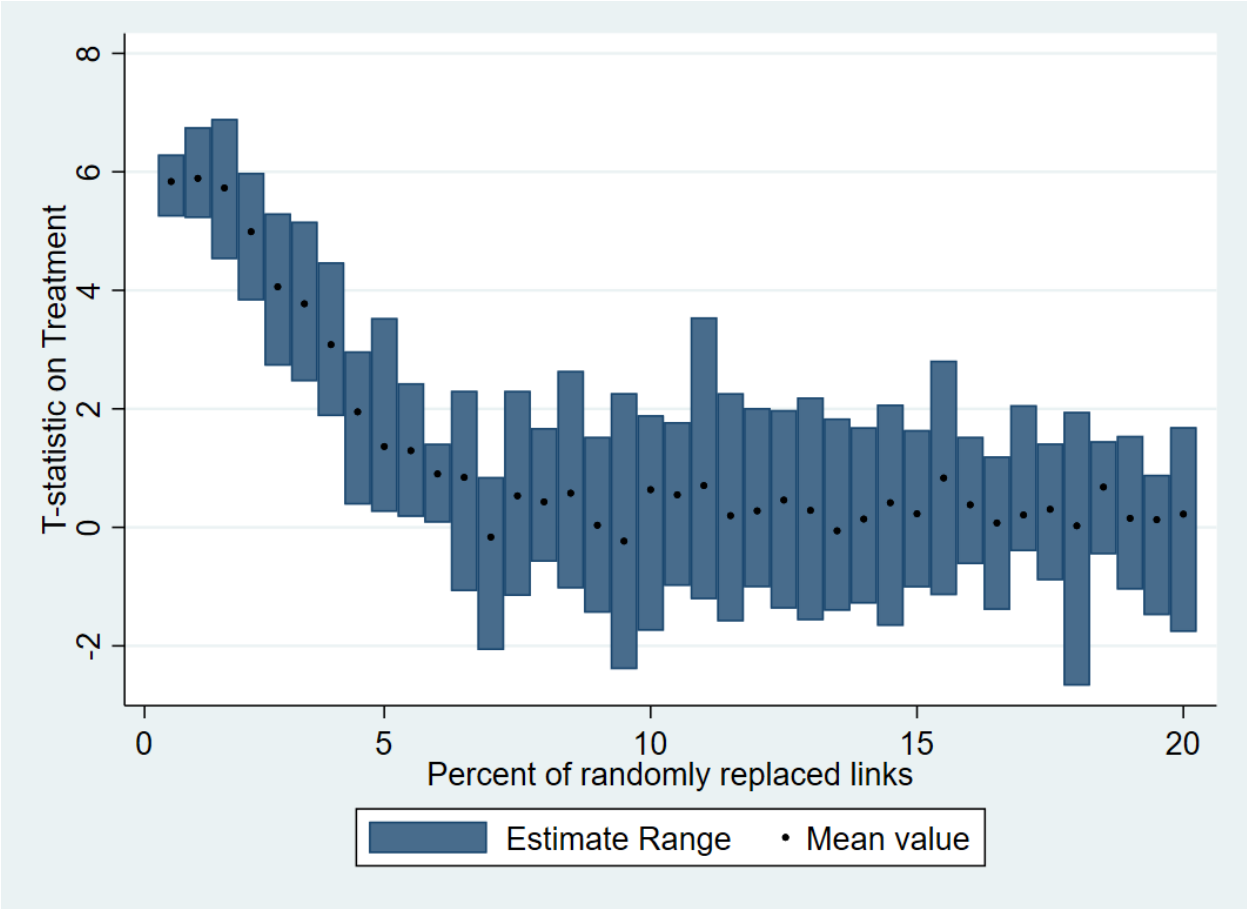


FIGURE A14: Agricultural Information Networks: Out-degree Centrality – Robustness with Misspecified links

Notes: Figure shows the effect of the t-statistic on the ITT effect (assignment to treatment) with increasing numbers of randomly replaced links to model robustness of results to misspecified links in the data. Blue bars represent range of estimates and black dots are the mean value.

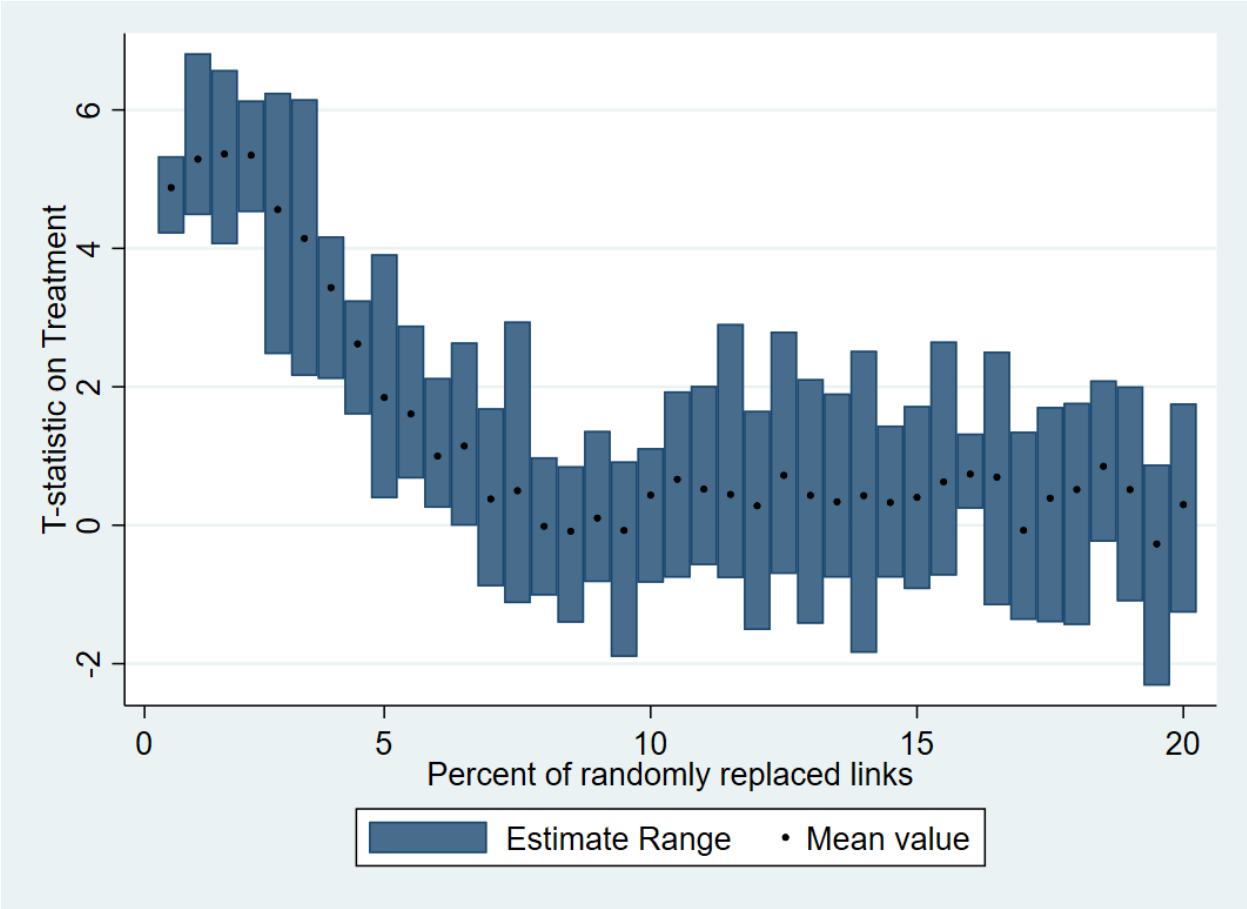


FIGURE A15: Agricultural Information Networks: Closeness Centrality – Robustness with Misspecified links

Notes: Figure shows the effect of the t-statistic on the ITT effect (assignment to treatment) with increasing numbers of randomly replaced links to model robustness of results to misspecified links in the data. Blue bars represent range of estimates and black dots are the mean value.

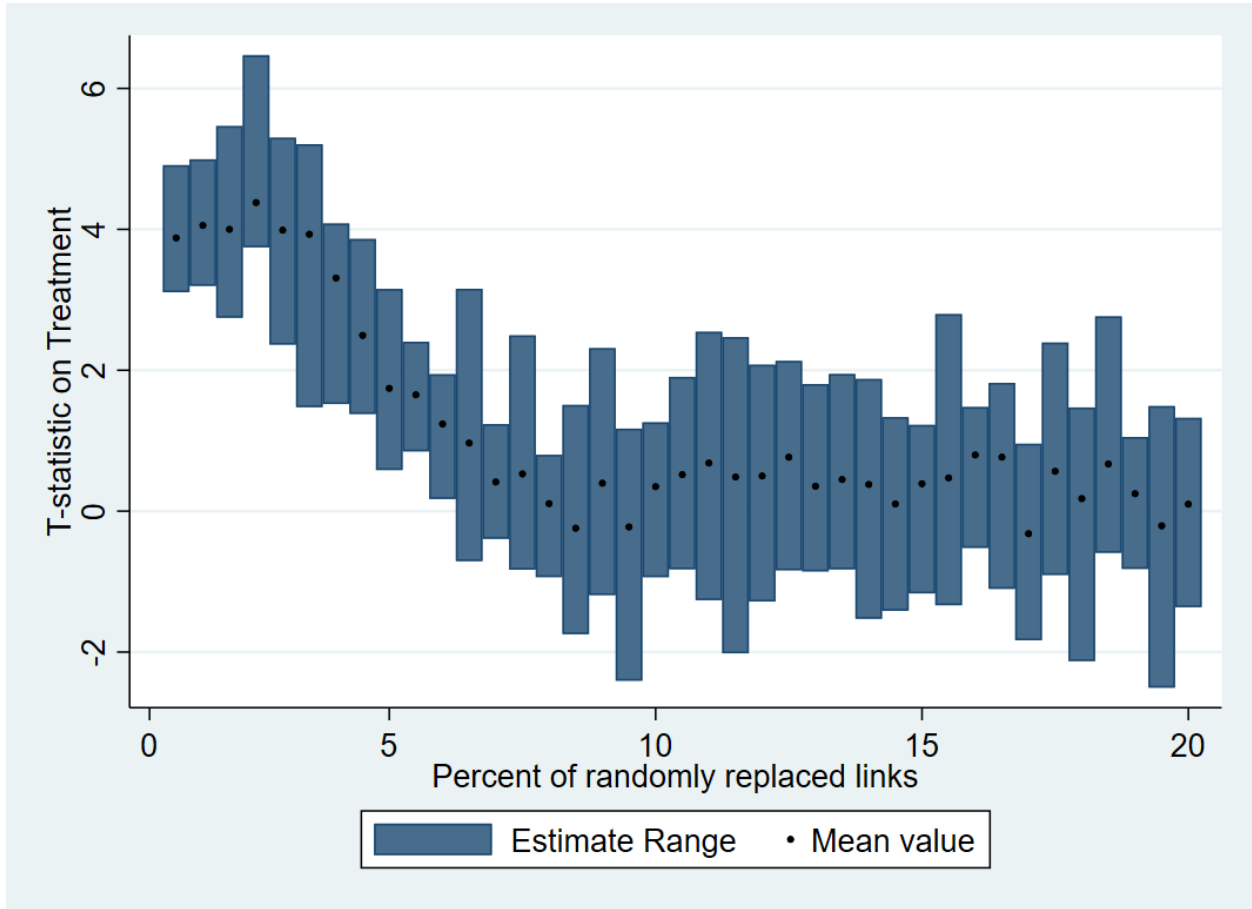


FIGURE A16: Agricultural Information Networks: Betweenness Centrality – Robustness with Misspecified links

*Notes:* Figure shows the effect of the t-statistic on the ITT effect (assignment to treatment) with increasing numbers of randomly replaced links to model robustness of results to misspecified links in the data. Blue bars represent range of estimates and black dots are the mean value.

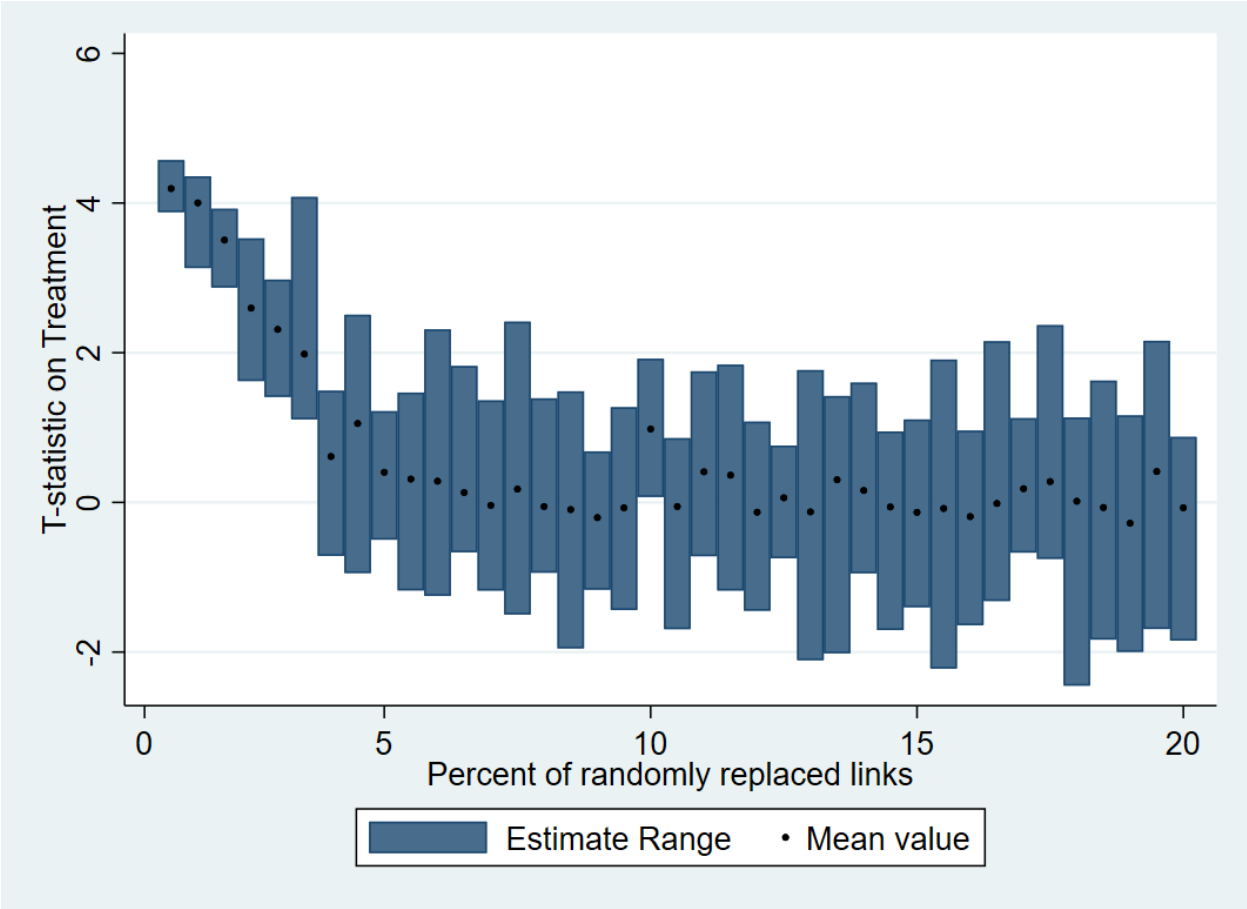


FIGURE A17: Trust Networks: In-degree Centrality – Robustness with Misspecified links

Notes: Figure shows the effect of the t-statistic on the ITT effect (assignment to treatment) with increasing numbers of randomly replaced links to model robustness of results to misspecified links in the data. Blue bars represent range of estimates and black dots are the mean value.

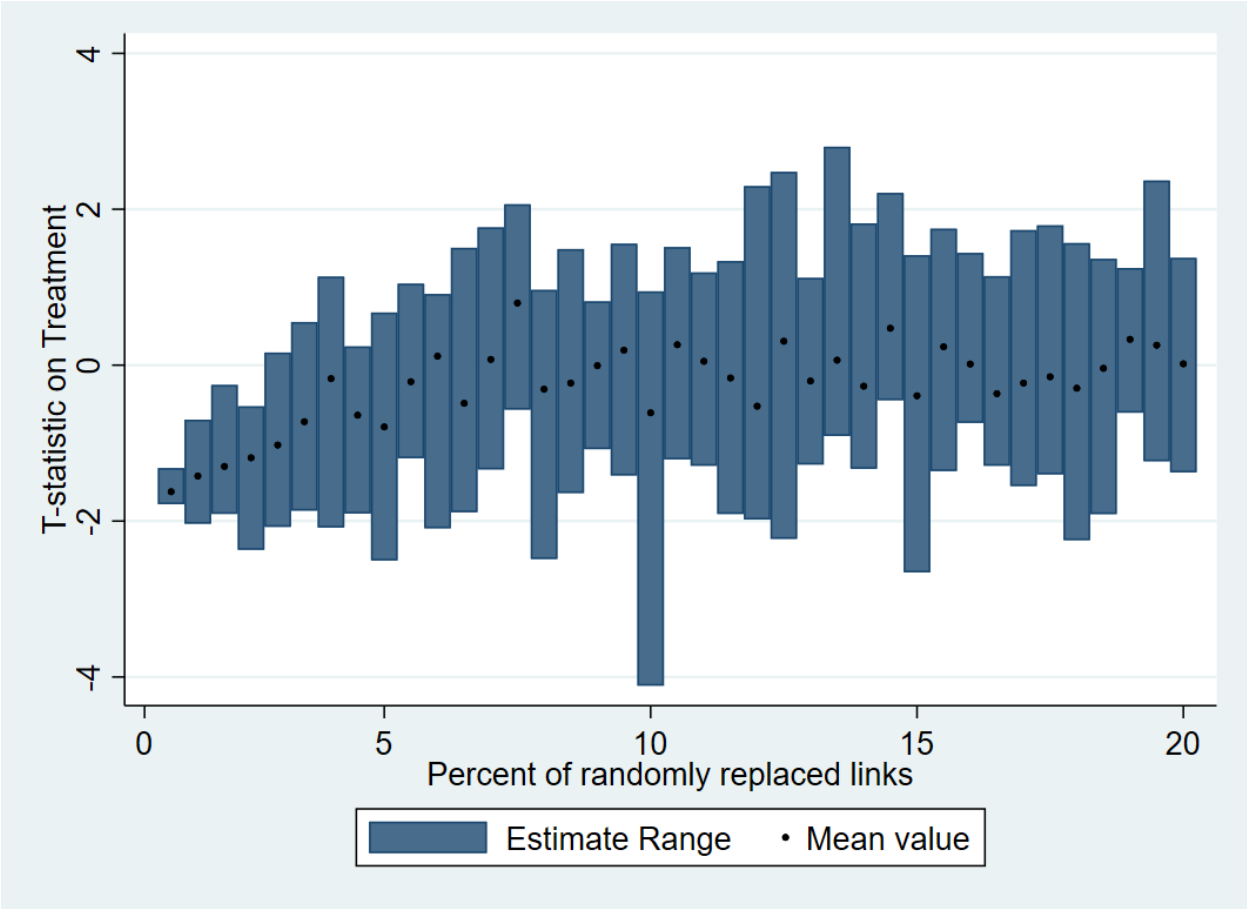


FIGURE A18: Trust Networks: Out-degree Centrality – Robustness with Misspecified links

Notes: Figure shows the effect of the t-statistic on the ITT effect (assignment to treatment) with increasing numbers of randomly replaced links to model robustness of results to misspecified links in the data. Blue bars represent range of estimates and black dots are the mean value.

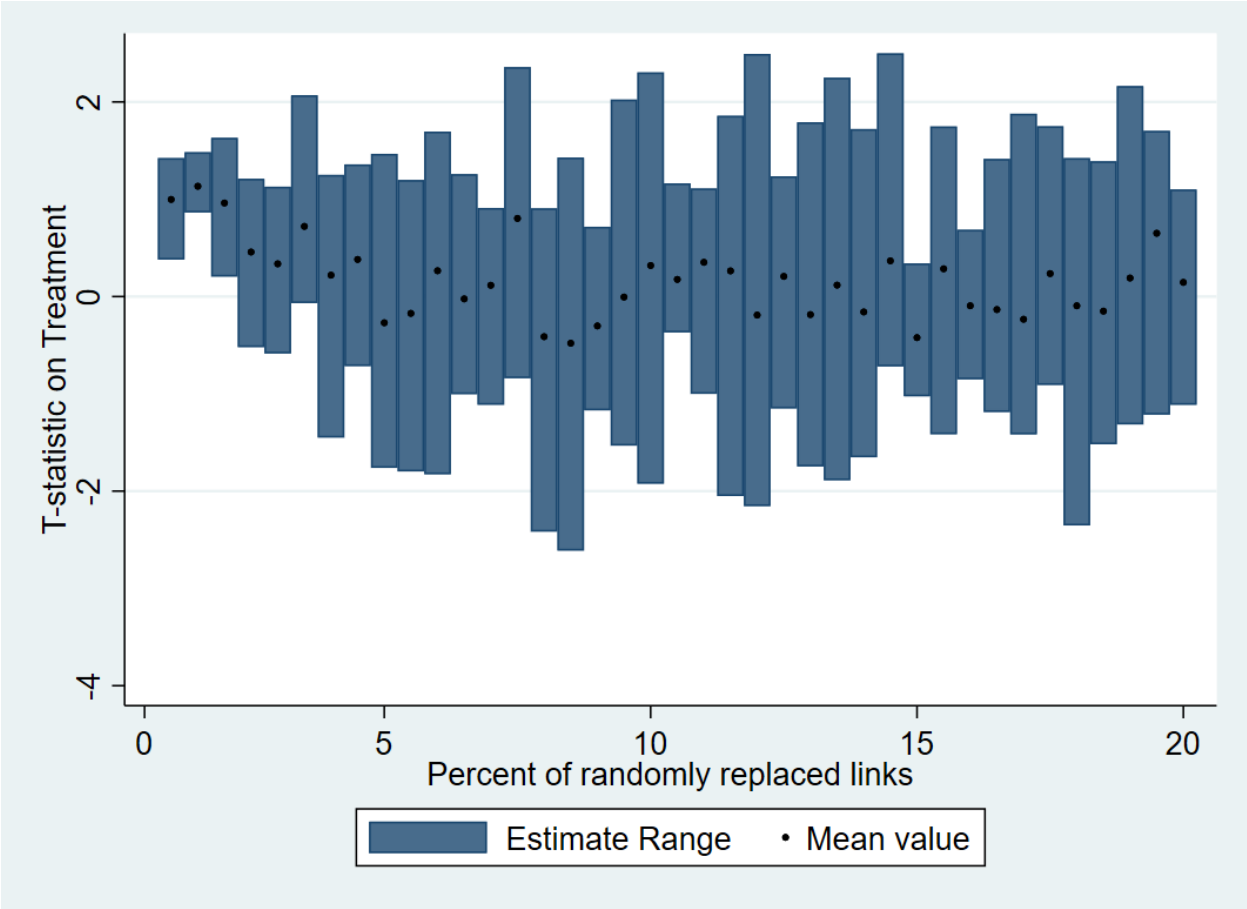


FIGURE A19: Trust Networks: Closeness Centrality – Robustness with Misspecified links

Notes: Figure shows the effect of the t-statistic on the ITT effect (assignment to treatment) with increasing numbers of randomly replaced links to model robustness of results to misspecified links in the data. Blue bars represent range of estimates and black dots are the mean value.

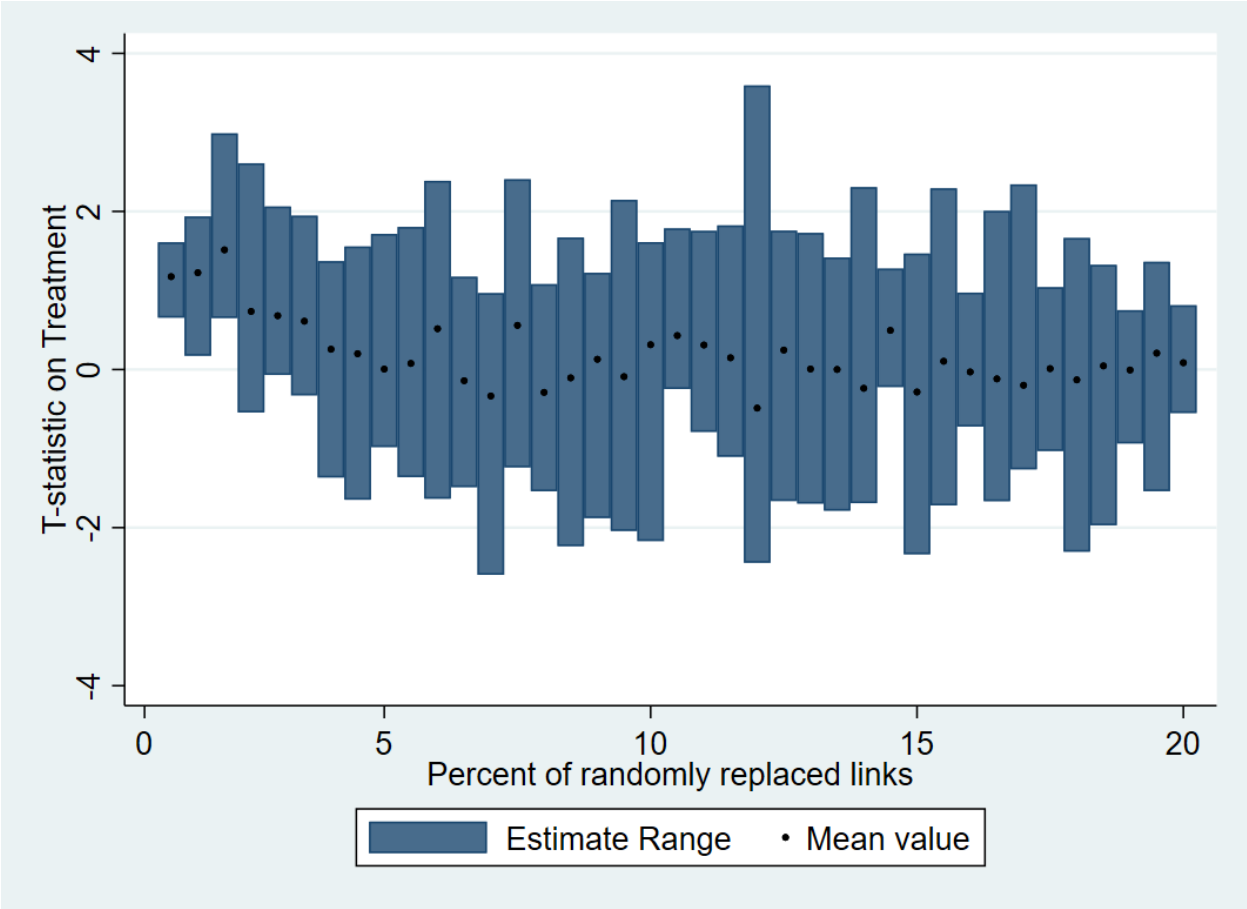


FIGURE A20: Trust Networks: Betweenness Centrality – Robustness with Misspecified links

*Notes:* Figure shows the effect of the t-statistic on the ITT effect (assignment to treatment) with increasing numbers of randomly replaced links to model robustness of results to misspecified links in the data. Blue bars represent range of estimates and black dots are the mean value.



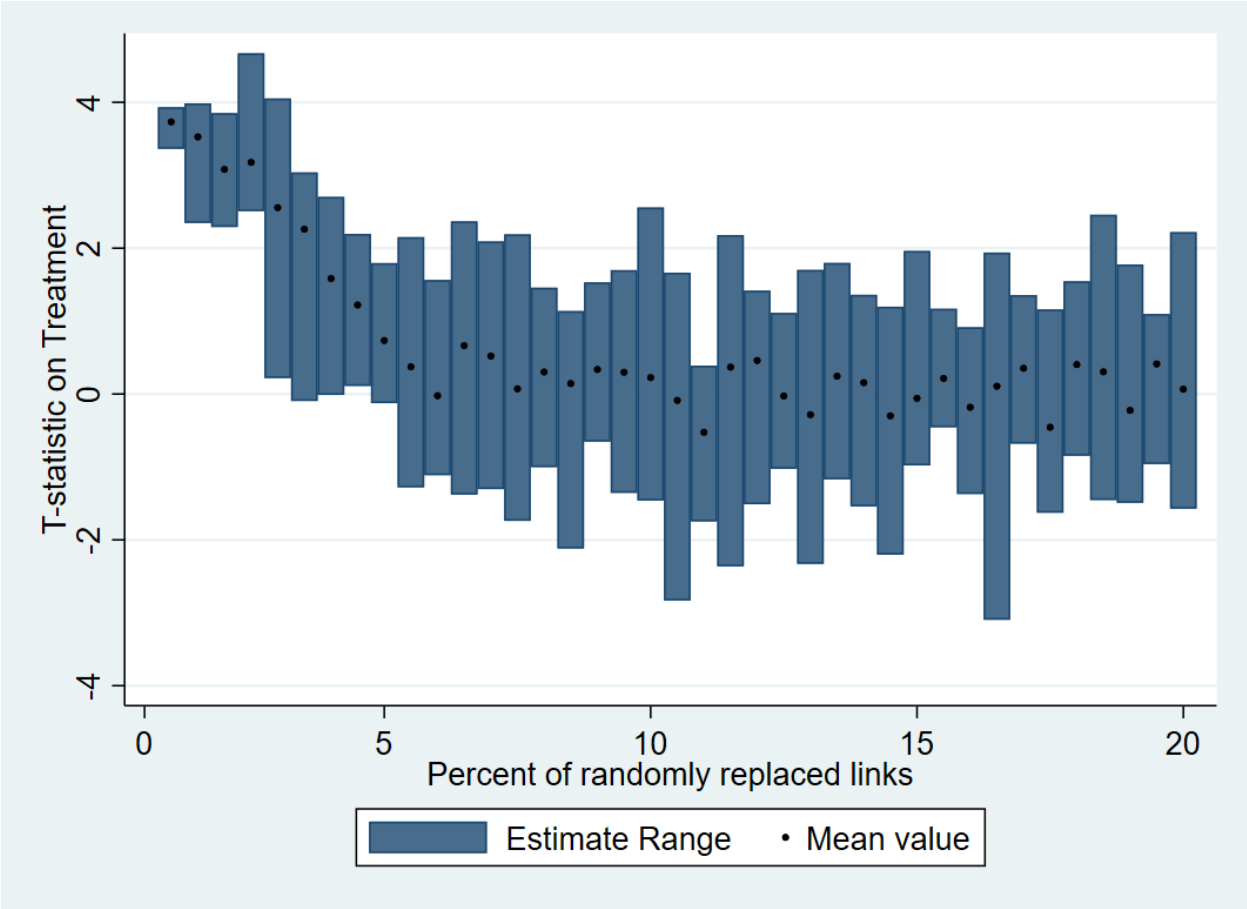


FIGURE A21: Daily Communication Networks: In-degree Centrality – Robustness with Misspecified links

Notes: Figure shows the effect of the t-statistic on the ITT effect (assignment to treatment) with increasing numbers of randomly replaced links to model robustness of results to misspecified links in the data. Blue bars represent range of estimates and black dots are the mean value.

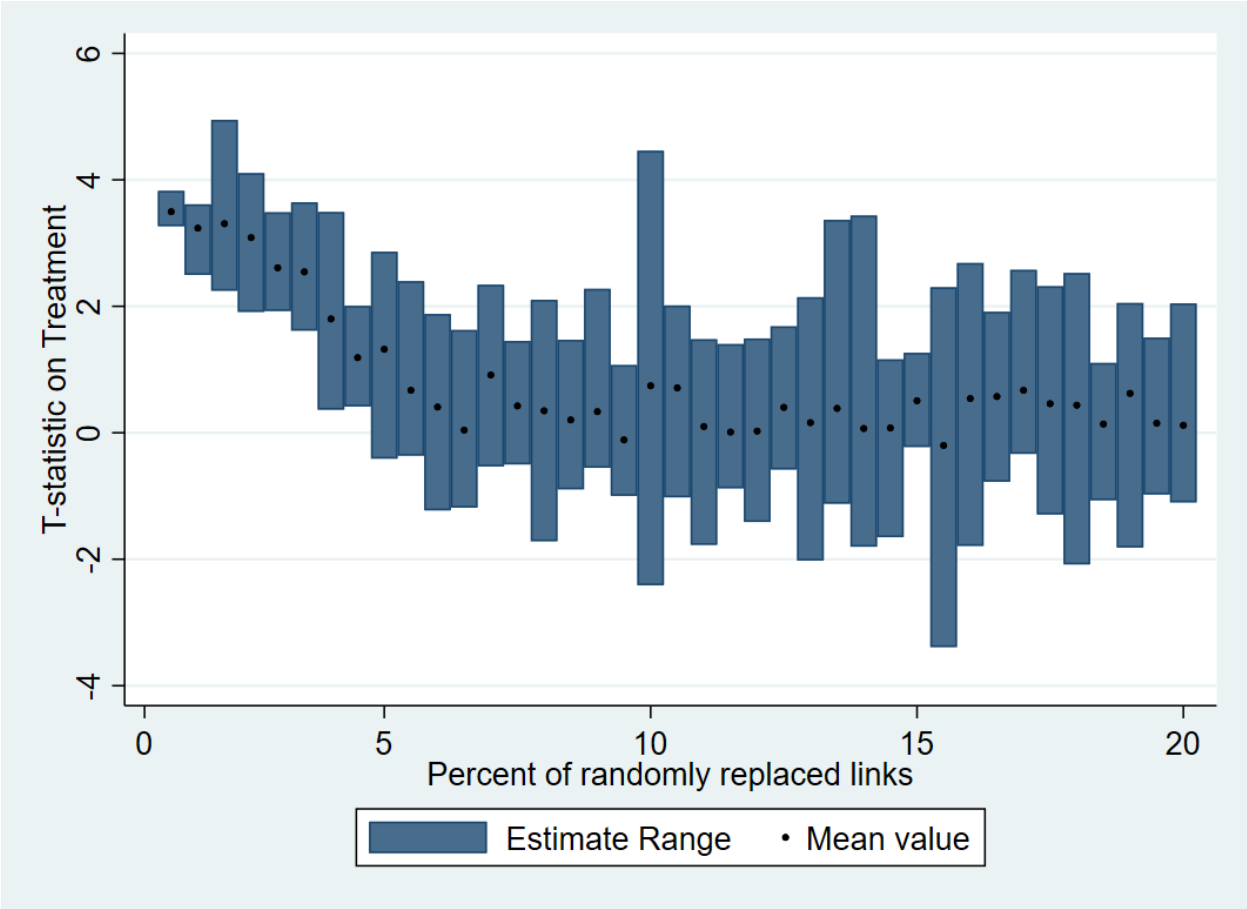


FIGURE A22: Daily Communication Networks: Out-degree Centrality – Robustness with Misspecified links

Notes: Figure shows the effect of the t-statistic on the ITT effect (assignment to treatment) with increasing numbers of randomly replaced links to model robustness of results to misspecified links in the data. Blue bars represent range of estimates and black dots are the mean value.

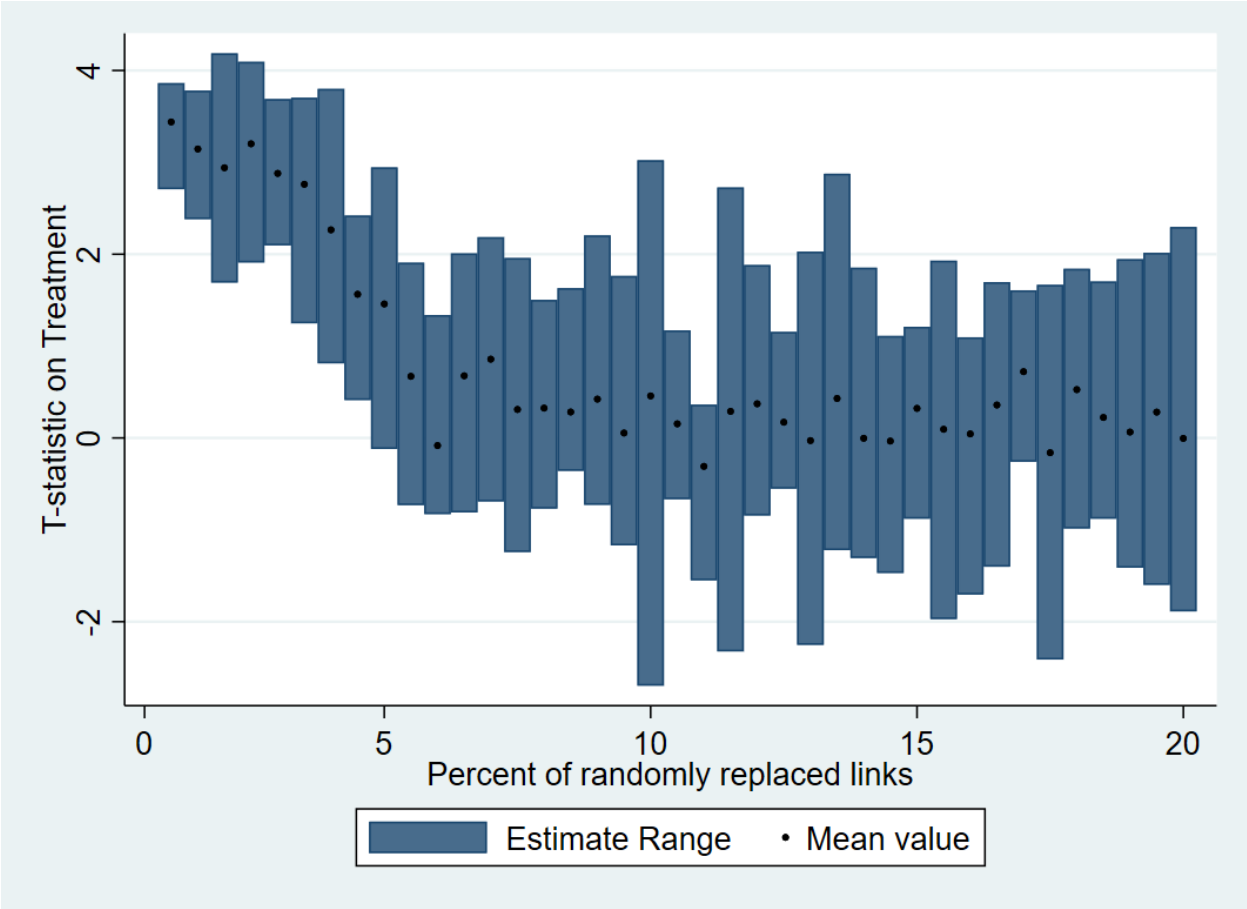
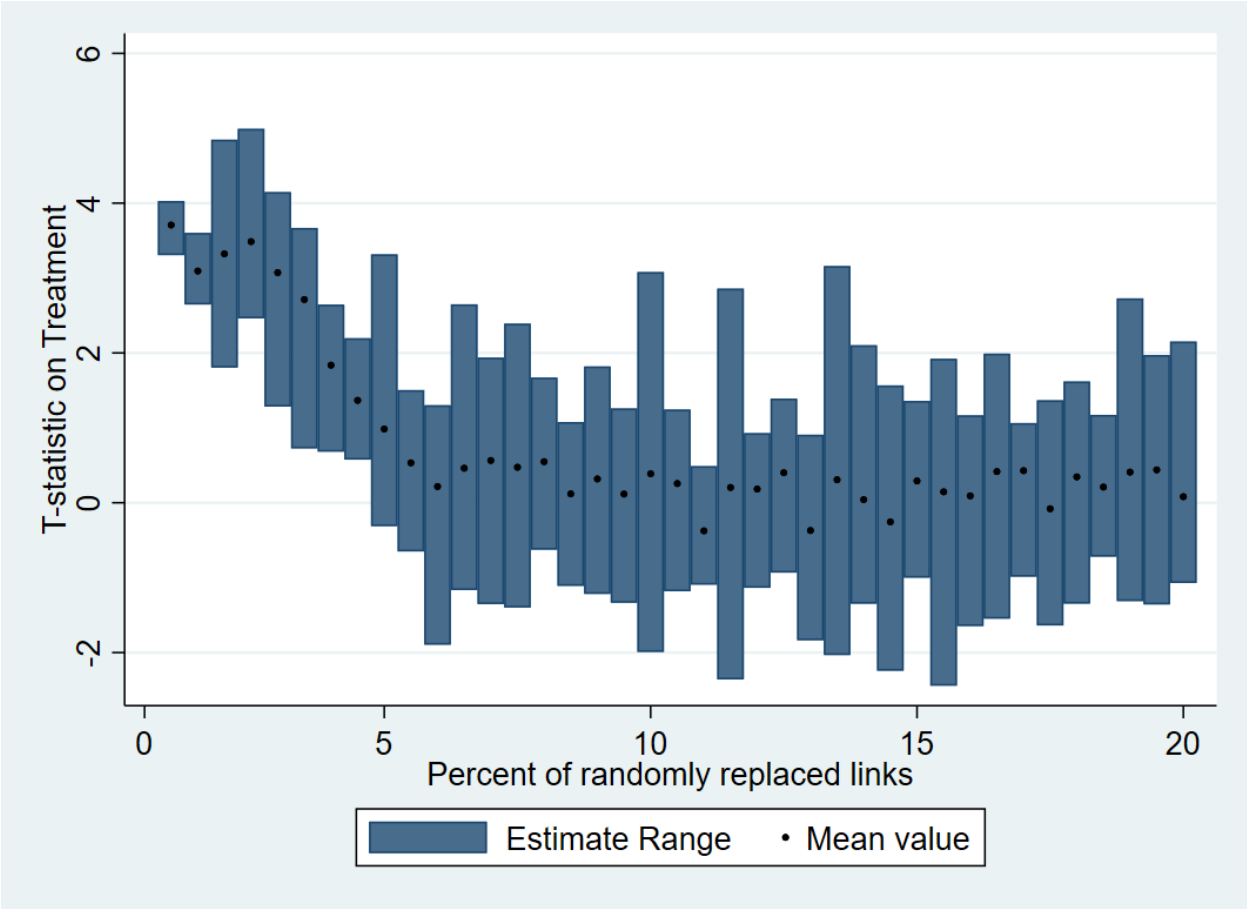


FIGURE A23: Daily Communication Networks: Closeness Centrality – Robustness with Misspecified links

Notes: Figure shows the effect of the t-statistic on the ITT effect (assignment to treatment) with increasing numbers of randomly replaced links to model robustness of results to misspecified links in the data. Blue bars represent range of estimates and black dots are the mean value.



**FIGURE A24: Daily Communication Networks: Betweenness Centrality – Robustness with Misspecified links**

*Notes:* Figure shows the effect of the t-statistic on the ITT effect (assignment to treatment) with increasing numbers of randomly replaced links to model robustness of results to misspecified links in the data. Blue bars represent range of estimates and black dots are the mean value.

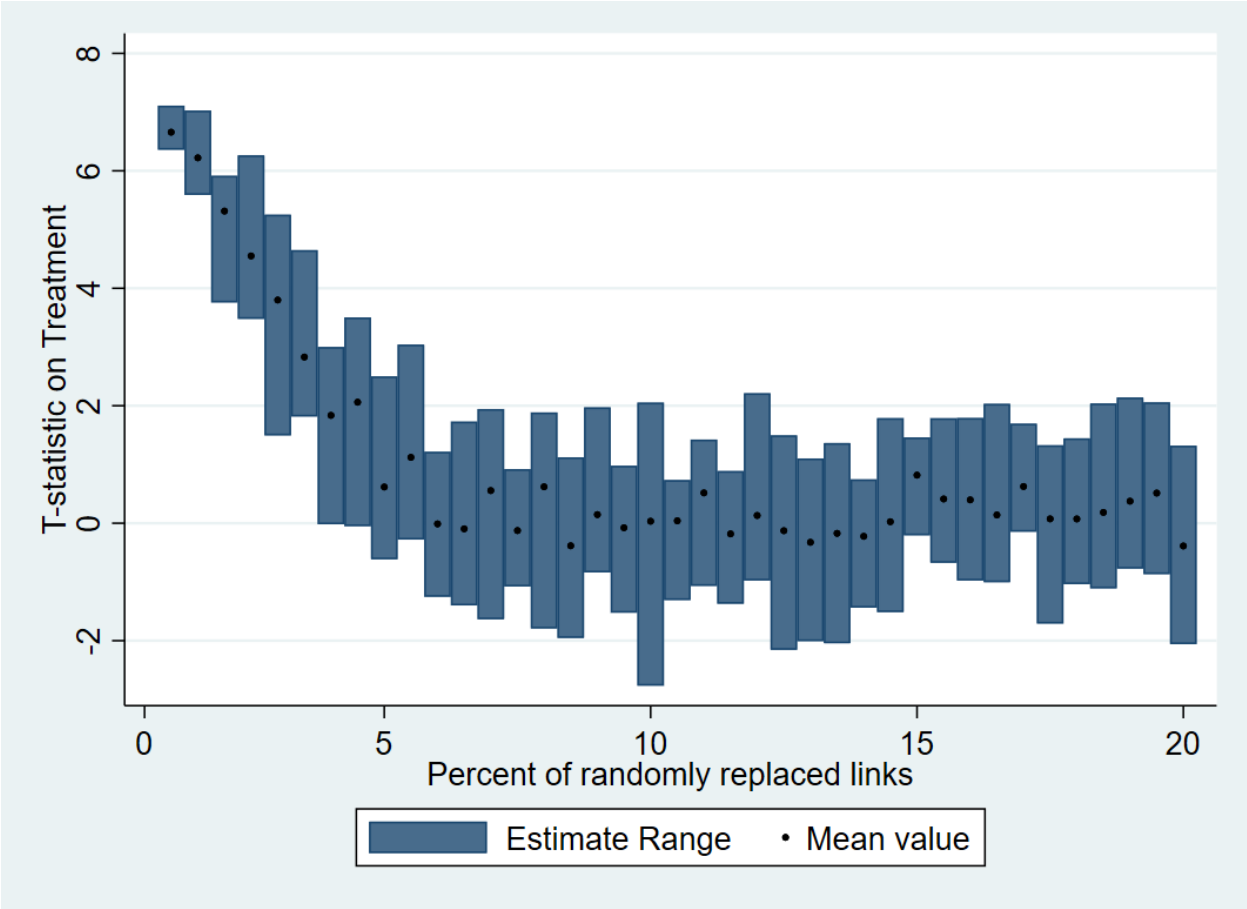
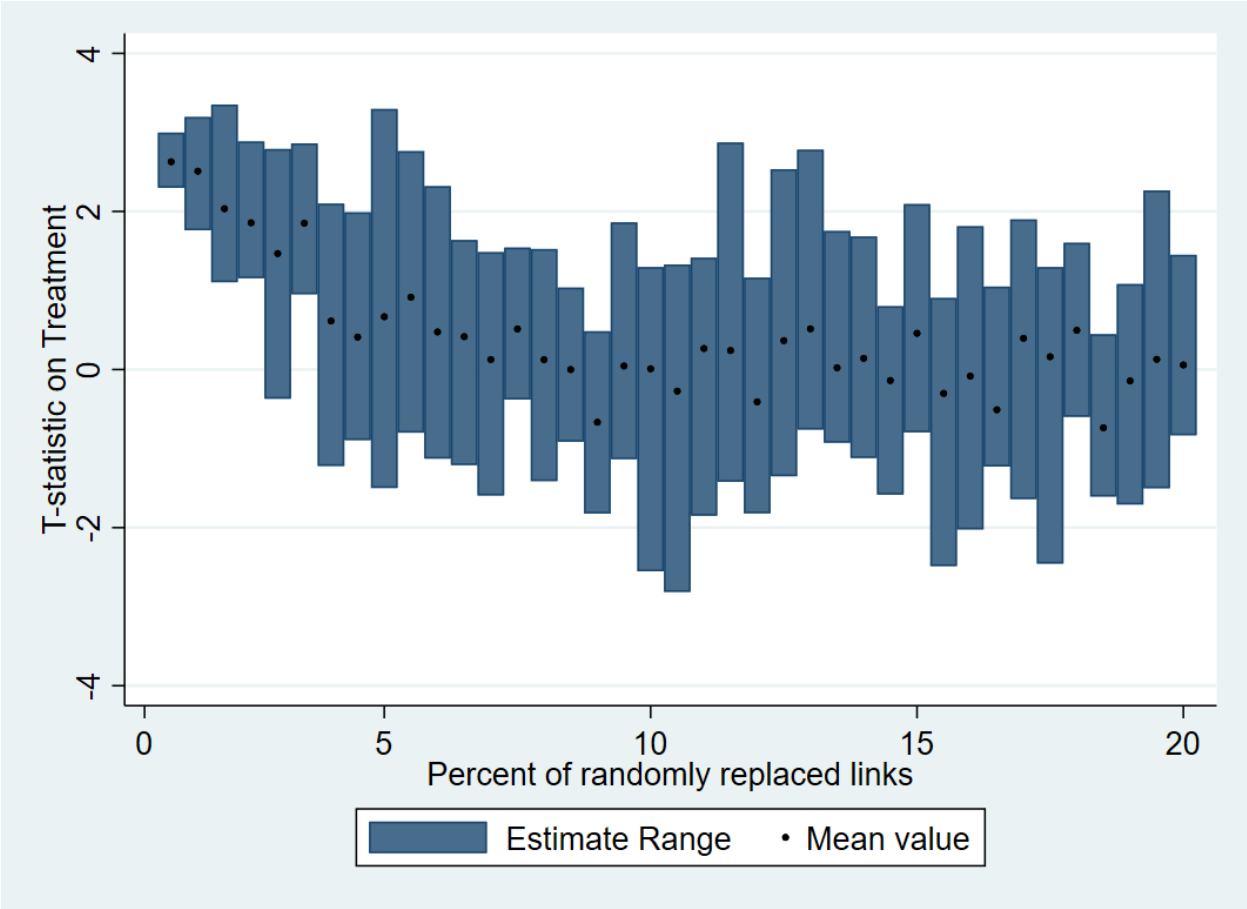


FIGURE A25: Joint Work Networks: In-degree Centrality – Robustness with Misspecified links

Notes: Figure shows the effect of the t-statistic on the ITT effect (assignment to treatment) with increasing numbers of randomly replaced links to model robustness of results to misspecified links in the data. Blue bars represent range of estimates and black dots are the mean value.



**FIGURE A26: Joint Work Networks: Out-degree Centrality – Robustness with Misspecified links**

*Notes:* Figure shows the effect of the t-statistic on the ITT effect (assignment to treatment) with increasing numbers of randomly replaced links to model robustness of results to misspecified links in the data. Blue bars represent range of estimates and black dots are the mean value.

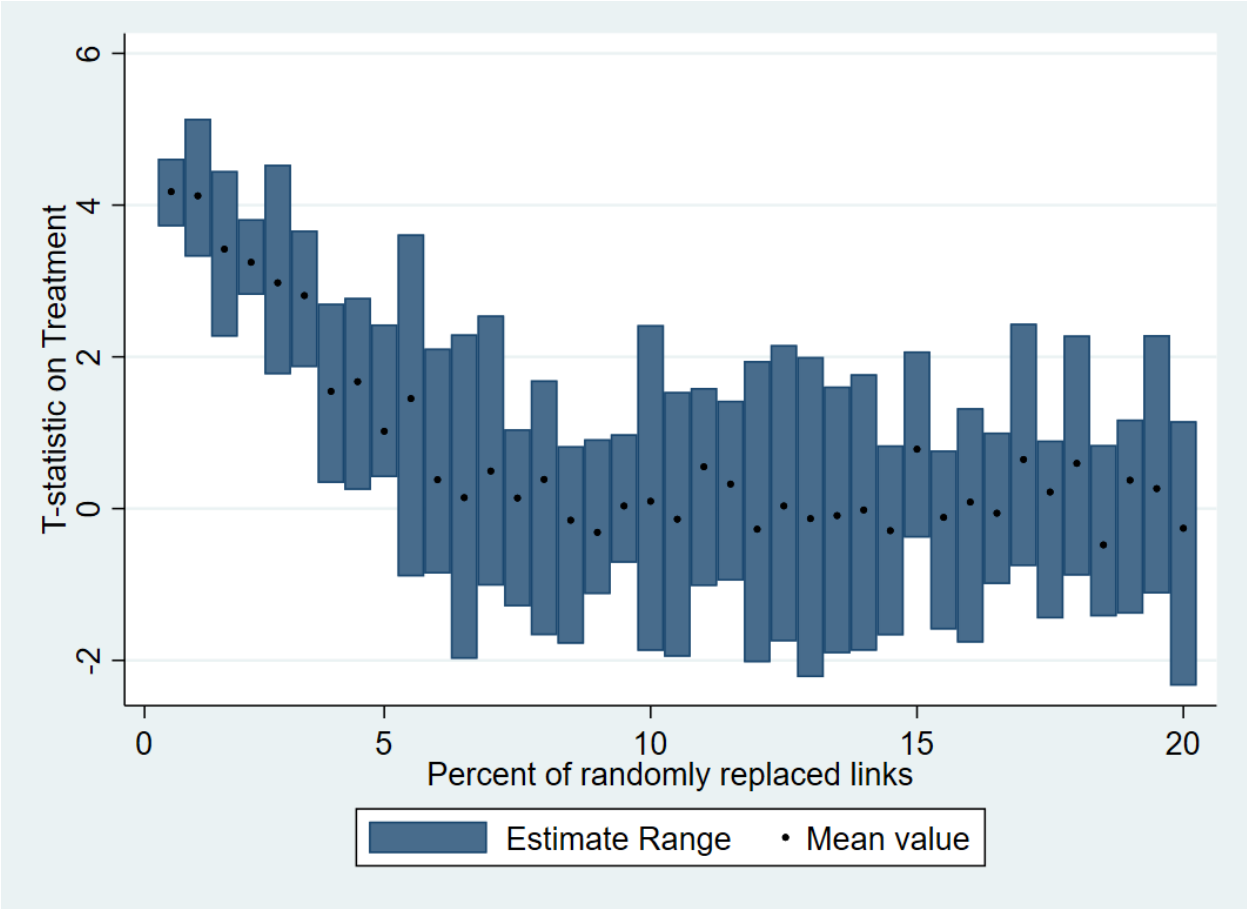
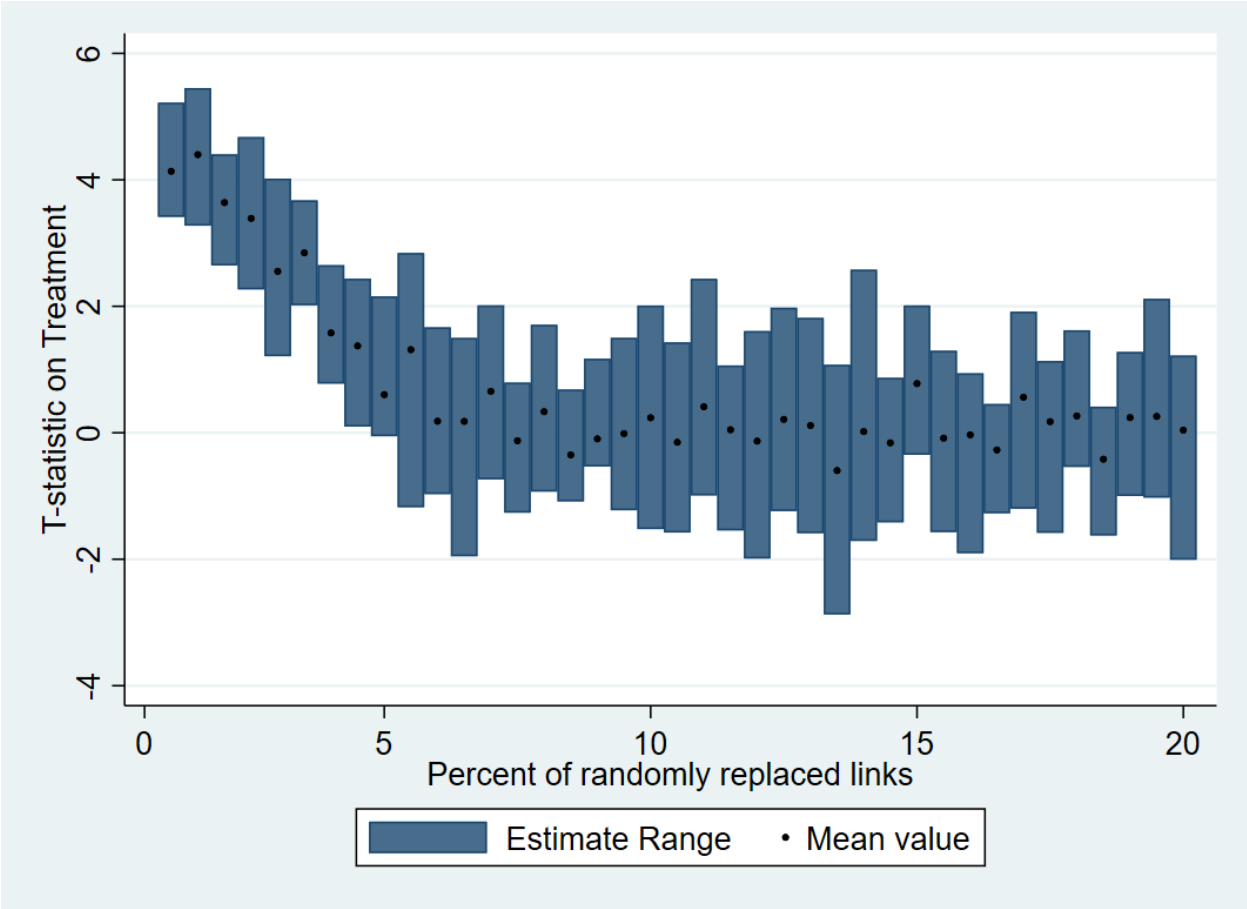


FIGURE A27: Joint Work Networks: Closeness Centrality – Robustness with Misspecified links

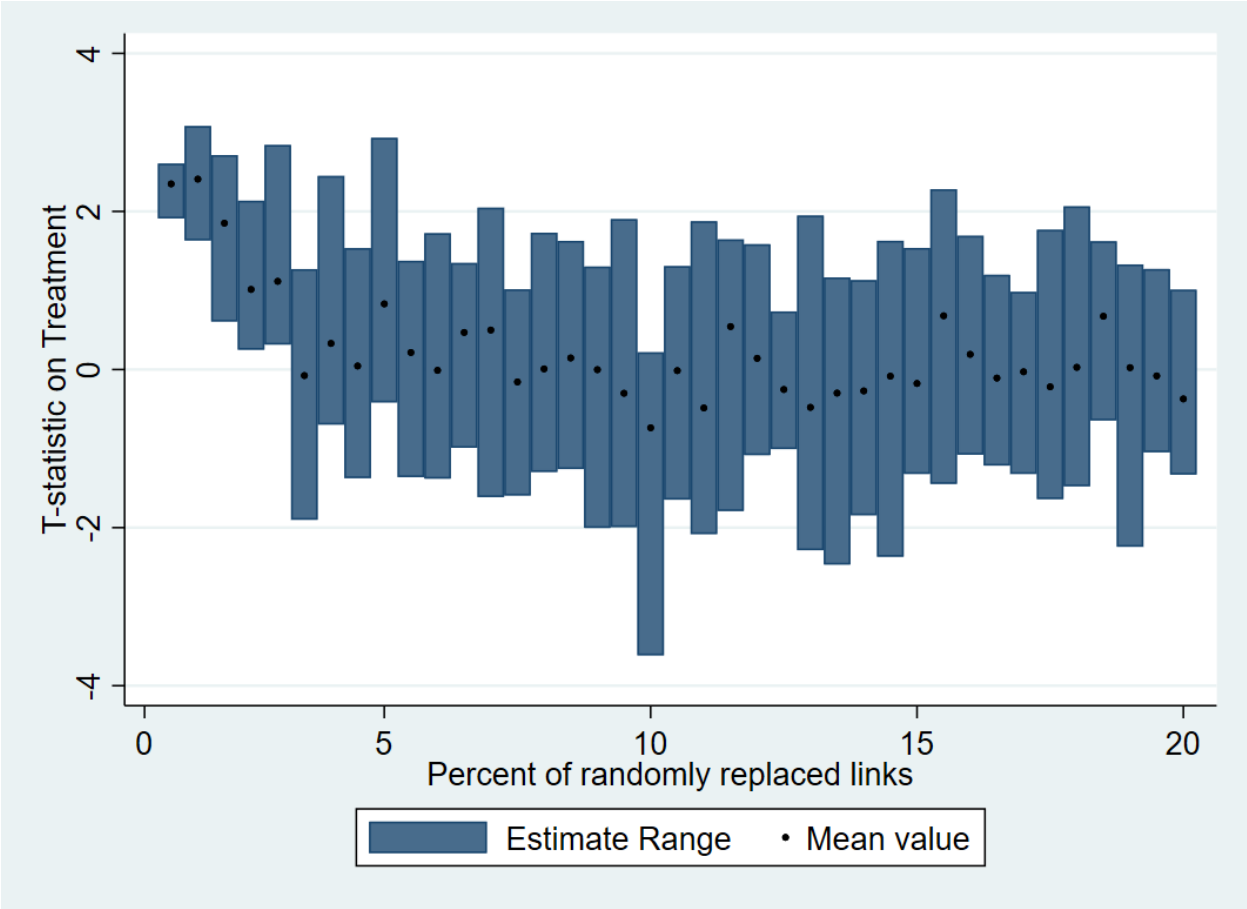
Notes: Figure shows the effect of the t-statistic on the ITT effect (assignment to treatment) with increasing numbers of randomly replaced links to model robustness of results to misspecified links in the data. Blue bars represent range of estimates and black dots are the mean value.



**FIGURE A28: Joint Work Networks: Betweenness Centrality – Robustness with Misspecified links**

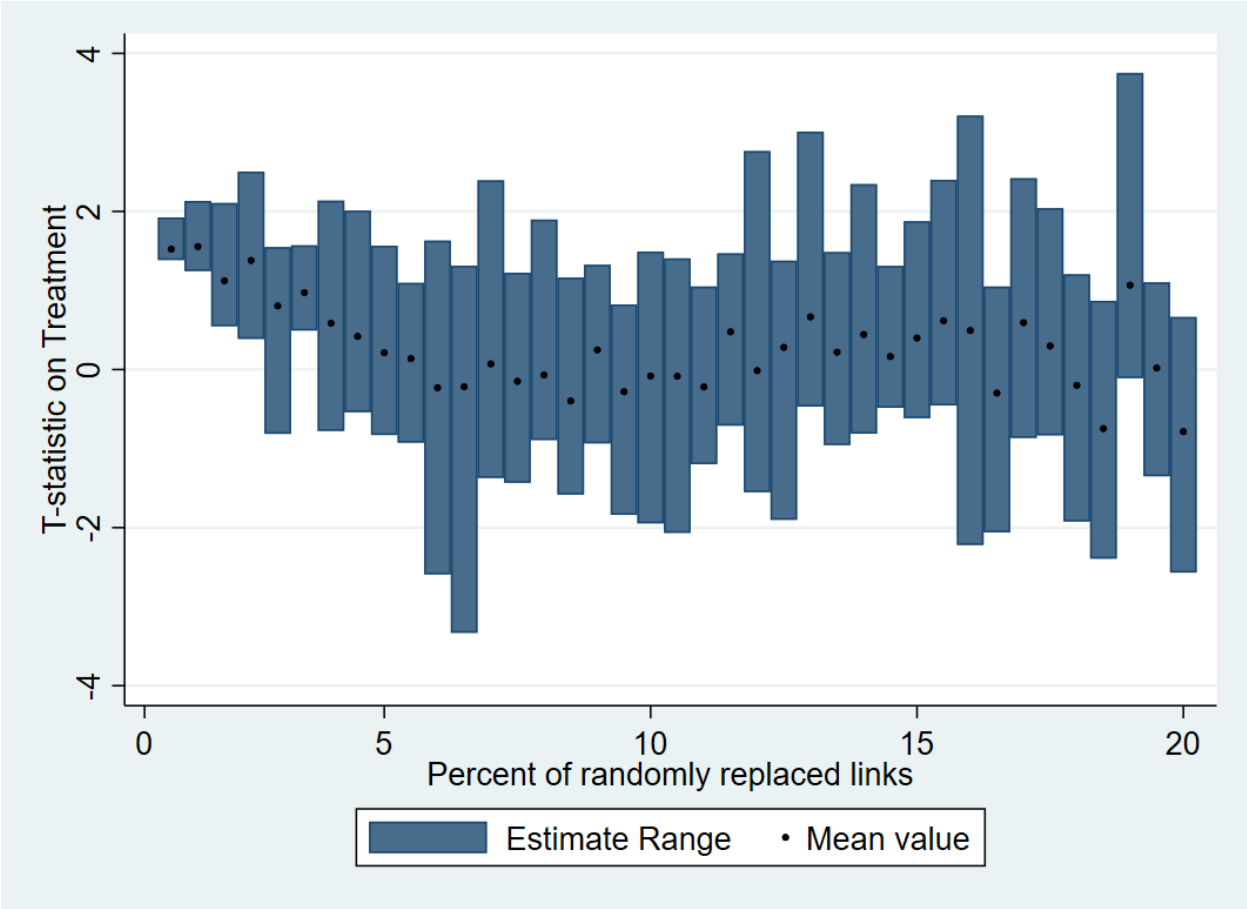
*Notes:* Figure shows the effect of the t-statistic on the ITT effect (assignment to treatment) with increasing numbers of randomly replaced links to model robustness of results to misspecified links in the data. Blue bars represent range of estimates and black dots are the mean value.





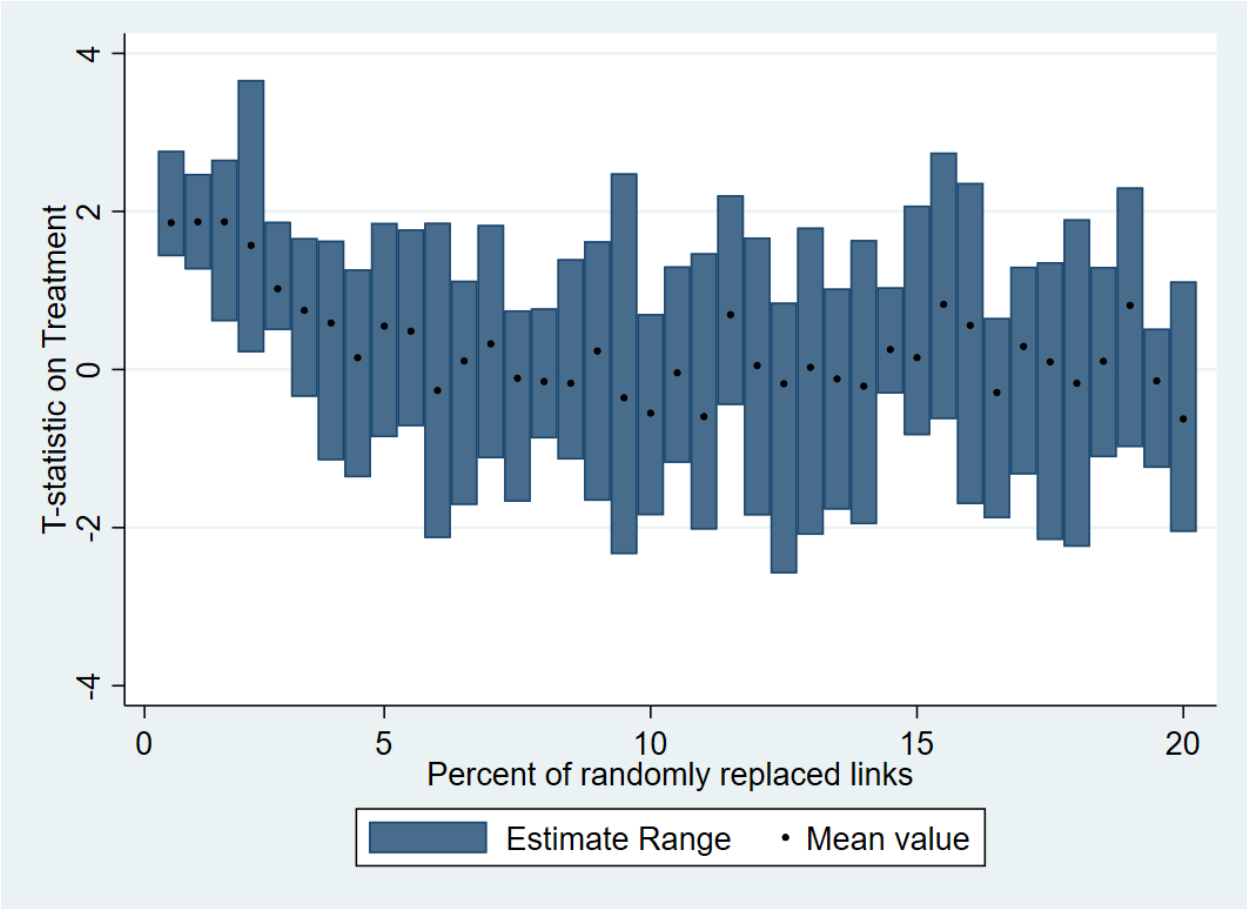
**FIGURE A29: Public Health Networks: In-degree Centrality – Robustness with Misspecified links**

*Notes:* Figure shows the effect of the t-statistic on the ITT effect (assignment to treatment) with increasing numbers of randomly replaced links to model robustness of results to misspecified links in the data. Blue bars represent range of estimates and black dots are the mean value.



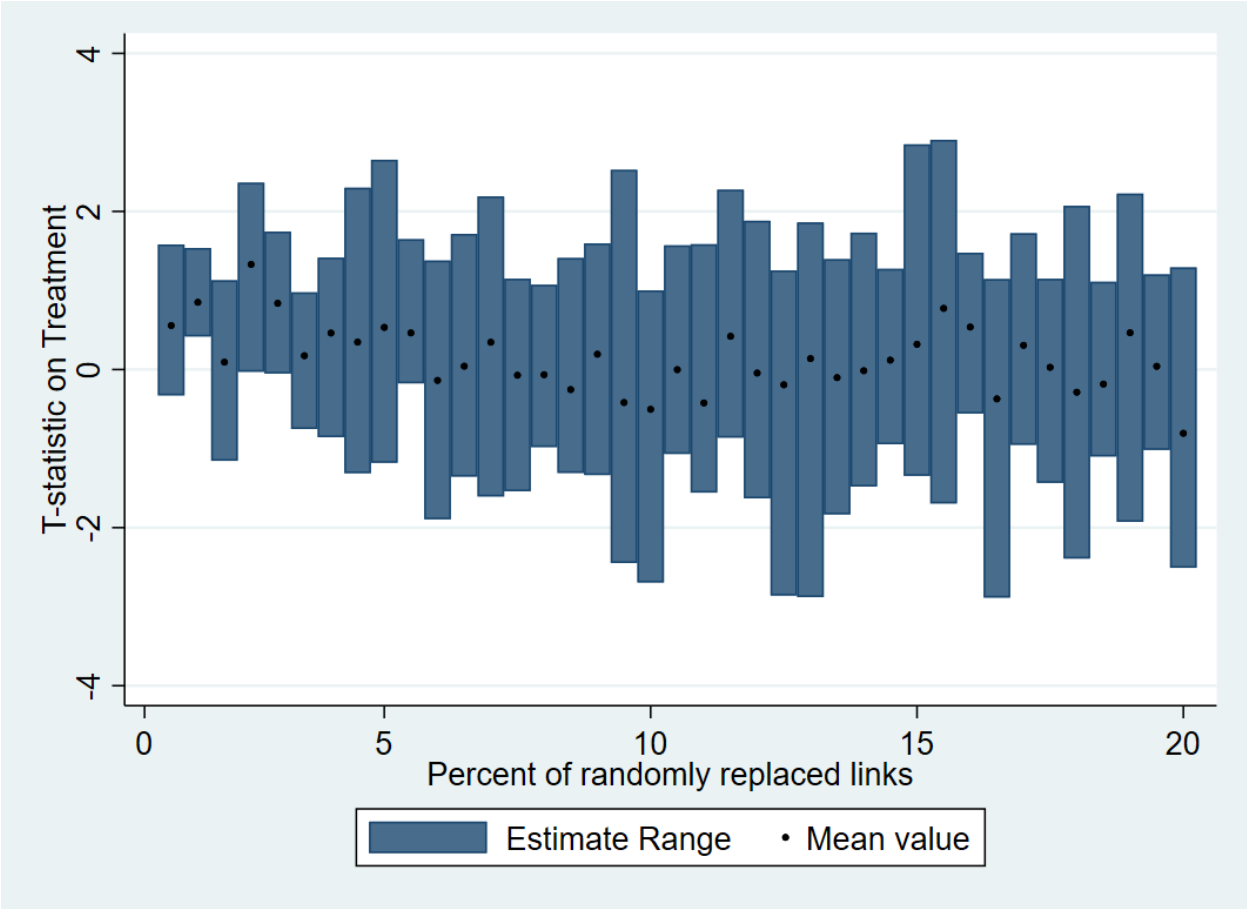
**FIGURE A30: Public Health Networks: Out-degree Centrality – Robustness with Misspecified links**

*Notes:* Figure shows the effect of the t-statistic on the ITT effect (assignment to treatment) with increasing numbers of randomly replaced links to model robustness of results to misspecified links in the data. Blue bars represent range of estimates and black dots are the mean value.



**FIGURE A31: Public Health Networks: Closeness Centrality – Robustness with Misspecified links**

*Notes:* Figure shows the effect of the t-statistic on the ITT effect (assignment to treatment) with increasing numbers of randomly replaced links to model robustness of results to misspecified links in the data. Blue bars represent range of estimates and black dots are the mean value.



**FIGURE A32: Public Health Networks: Betweenness Centrality – Robustness with Misspecified links**

*Notes:* Figure shows the effect of the t-statistic on the ITT effect (assignment to treatment) with increasing numbers of randomly replaced links to model robustness of results to misspecified links in the data. Blue bars represent range of estimates and black dots are the mean value.

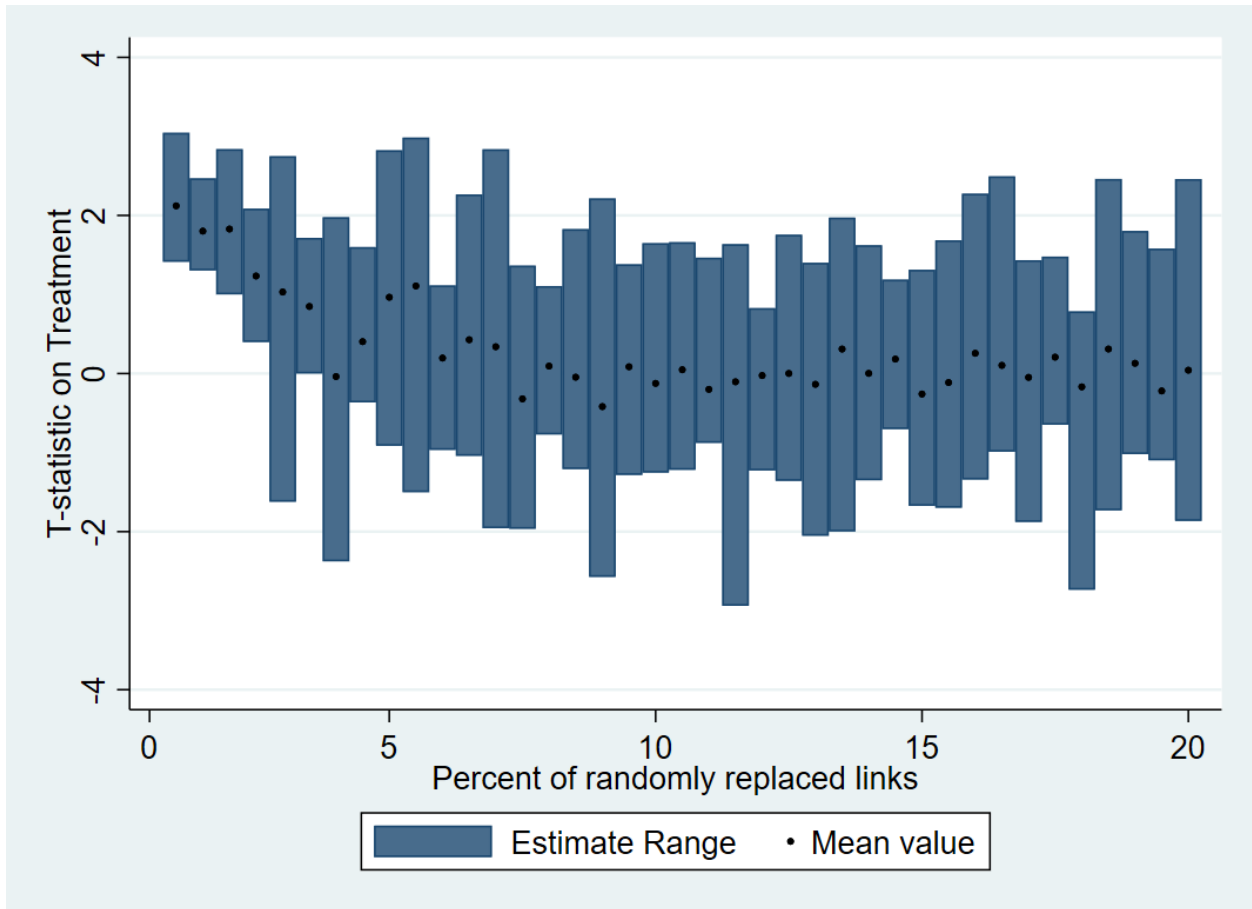


FIGURE A33: Close Friendship Networks: In-degree Centrality – Robustness with Misspecified links

*Notes:* Figure shows the effect of the t-statistic on the ITT effect (assignment to treatment) with increasing numbers of randomly replaced links to model robustness of results to misspecified links in the data. Blue bars represent range of estimates and black dots are the mean value.

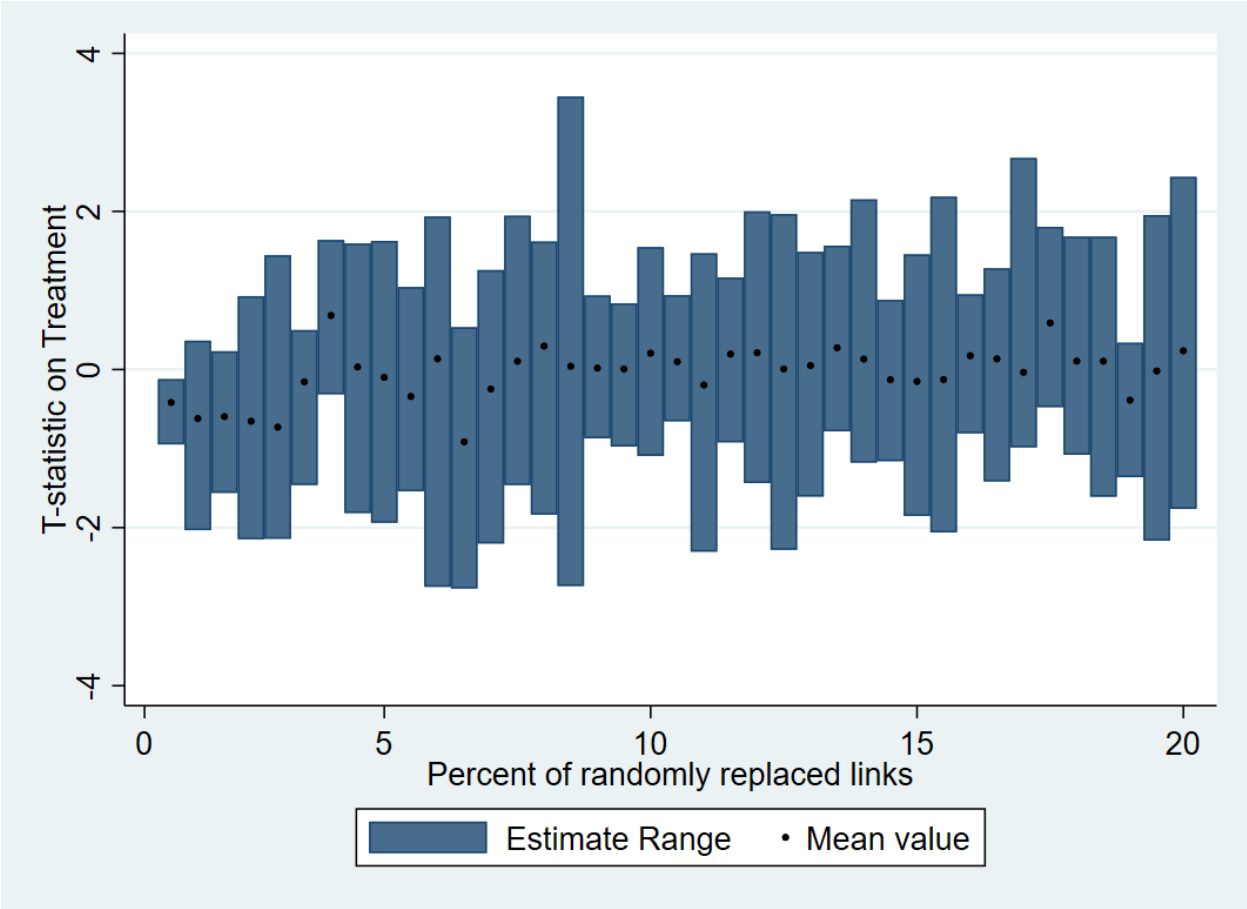


FIGURE A34: Close Friendship Networks: Out-degree Centrality – Robustness with Misspecified links

Notes: Figure shows the effect of the t-statistic on the ITT effect (assignment to treatment) with increasing numbers of randomly replaced links to model robustness of results to misspecified links in the data. Blue bars represent range of estimates and black dots are the mean value.

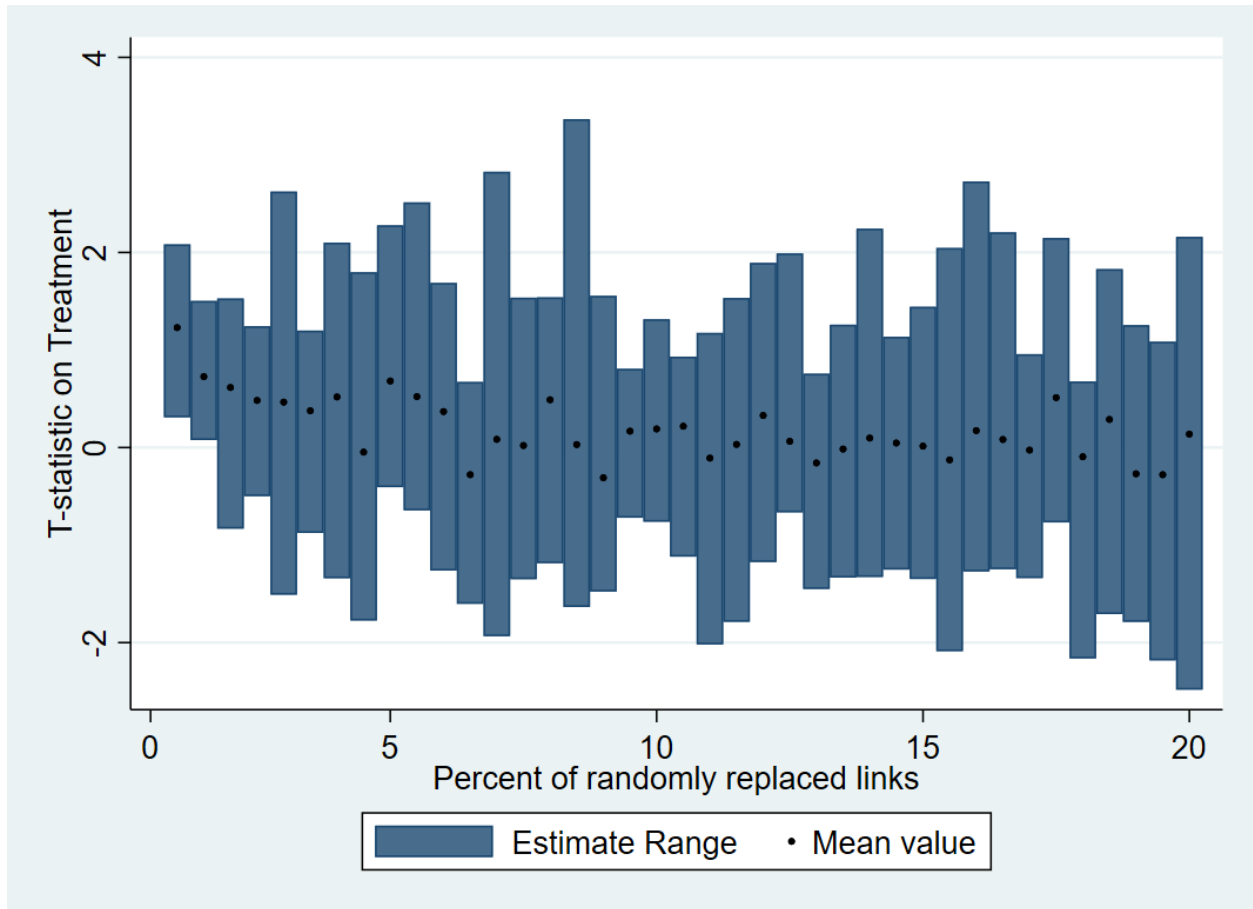
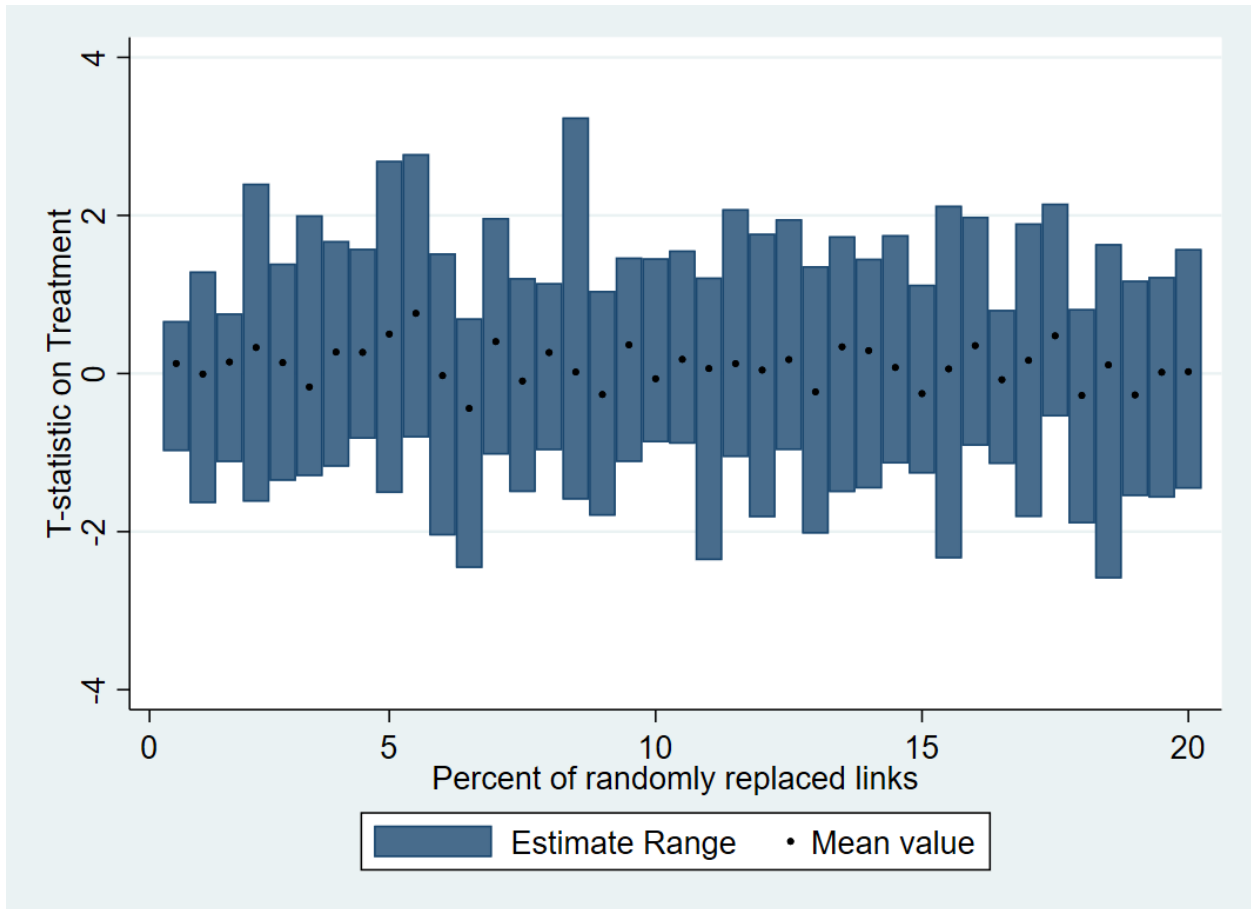


FIGURE A35: Close Friendship Networks: Closeness Centrality – Robustness with Misspecified links

*Notes:* Figure shows the effect of the t-statistic on the ITT effect (assignment to treatment) with increasing numbers of randomly replaced links to model robustness of results to misspecified links in the data. Blue bars represent range of estimates and black dots are the mean value.



**FIGURE A36: Close Friendship Networks: Betweenness Centrality – Robustness with Misspecified links**

*Notes:* Figure shows the effect of the t-statistic on the ITT effect (assignment to treatment) with increasing numbers of randomly replaced links to model robustness of results to misspecified links in the data. Blue bars represent range of estimates and black dots are the mean value.



TABLE A1  
GROUP BALANCE

Variable	(1) Overall Mean	(2) Mean Treat	(3) Mean Control	(4) Treat – Control
Teso tribe	0.267 (0.443)	0.268 (0.443)	0.266 (0.443)	0.002 (0.034)
Luhya tribe	0.682 (0.466)	0.678 (0.468)	0.688 (0.464)	-0.011 (0.036)
Age	37.104 (9.111)	37.208 (9.112)	36.981 (9.122)	0.227 (0.705)
Tropical livestock units	0.959 (1.141)	0.995 (1.197)	0.917 (1.070)	0.078 (0.088)
Baseline: Alcoholic drinks past week§	1.379 (1.790)	1.451 (1.879)	1.293 (1.679)	0.158 (0.138)
Baseline: Hours worked own farm past week	26.629 (16.884)	27.025 (17.366)	26.159 (16.307)	0.865 (1.306)
Baseline: Hours worked different farm past week	6.185 (12.565)	6.926 (12.261)	5.305 (12.883)	1.621* (0.970)
Baseline: Hours non-farm work past week	18.832 (22.228)	18.123 (21.237)	19.675 (23.357)	-1.552 (1.719)
Baseline: Hours engaged in housework	18.693 (12.320)	18.730 (12.332)	18.649 (12.325)	0.080 (0.953)
Distance to village center (median - kilometers)	0.428 (0.546)	0.443 (0.526)	0.410 (0.568)	0.033 (0.042)
Average distance to others' homesteads (demeaned - meters)†	-0.000 (635.730)	-2.565 (540.647)	3.048 (733.783)	-5.613 (49.193)
Number individuals living nearby‡	16.866 (8.882)	16.601 (8.960)	17.182 (8.793)	-0.581 (0.687)
Observations	674	366	308	674

Notes: Treat=Treatment. §Units as stated by respondent. †Village-demeaned average distance to others' homesteads. ‡Number of homesteads that are within the village-level median distance between all dyads. Stars indicate significant differences: \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01.

TABLE A1  
GROUP BALANCE (CONTINUED)

Variable	(1) Overall Mean	(2) Mean Treat	(3) Mean Control	(4) Treat – Control
Main plot area - measured acres	0.469 (0.401)	0.476 (0.426)	0.462 (0.370)	0.014 (0.031)
Asset index	-0.047 (0.899)	-0.066 (0.869)	-0.023 (0.933)	-0.044 (0.070)
Nights away in last week	0.252 (1.086)	0.260 (1.042)	0.244 (1.137)	0.016 (0.084)
Household size	4.816 (1.905)	4.858 (1.826)	4.766 (1.996)	0.092 (0.147)
Read English	0.601 (0.490)	0.623 (0.485)	0.575 (0.495)	0.048 (0.038)
Read Swahili	0.761 (0.427)	0.757 (0.430)	0.766 (0.424)	-0.009 (0.033)
Can do math problem	0.976 (0.152)	0.989 (0.104)	0.961 (0.194)	0.028** (0.012)
Primary occupation farmer	0.610 (0.488)	0.631 (0.483)	0.584 (0.494)	0.047 (0.038)
Years of education	8.454 (2.907)	8.623 (2.804)	8.253 (3.017)	0.370 (0.224)
Multiple spouses	0.068 (0.252)	0.077 (0.266)	0.058 (0.235)	0.018 (0.020)
Years lived in village	26.108 (15.379)	26.355 (14.901)	25.814 (15.947)	0.541 (1.190)
Hotelling test (p-value)				.24
Observations	674	366	308	674

Notes: Treat=Treatment. Stars indicate significant differences: \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01.

TABLE A2  
ATTRITED BALANCE

Variable	(1) Mean A	(2) Mean NA	(3) A vs NA	(4) Treat: A vs NA	(5) Control: A vs NA
Age	35.118 (8.231)	37.394 (9.167)	-2.276** (1.142)	-3.325** (1.629)	-0.195 (2.464)
Gender (Female=1)	0.500 (0.504)	0.500 (0.500)	0.000 (0.063)	0.000 (0.090)	0.000 (0.137)
Alcohol drinks past week (at baseline)§	1.706 (2.081)	1.388 (1.786)	0.318 (0.227)	0.137 (0.336)	0.278 (0.463)
Hours worked own farm past week (baseline)	27.059 (18.093)	26.584 (16.995)	0.475 (2.140)	3.417 (3.127)	-5.873 (4.464)
Hours worked different farm past week (baseline)	4.985 (12.800)	6.316 (12.730)	-1.330 (1.597)	-2.956 (2.191)	-1.877 (3.466)
Hours non-farm work past week (baseline)	22.750 (23.334)	18.552 (22.132)	4.198 (2.785)	5.848 (3.818)	2.396 (6.372)
Hours engaged in housework (baseline)	19.926 (11.101)	18.548 (12.114)	1.378 (1.511)	0.682 (2.205)	2.208 (3.344)
Hours in total past week (baseline)	74.721 (33.577)	69.999 (28.412)	4.721 (3.608)	6.991 (5.199)	-3.146 (7.615)
Observations	68	982	1,050	400	322

Notes: Table reports balance between attrited (A) and non-attrited (NA) individuals. Treat=Treatment. Attrition since baseline is 6.5%. Stars indicate significance differences: \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01.

TABLE A3  
PUBLIC HEALTH INFORMATION

	Full Sample		Male-Male		Female-Female		Mixed Gender		Same Gender	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Treat <sub><i>i</i></sub> - Treat <sub><i>j</i></sub>	0.01 (0.02)	0.02 (0.02)	0.01 (0.03)	0.03 (0.04)	0.02 (0.03)	0.05 (0.05)	0.00 (0.03)	-0.00 (0.03)	0.02 (0.02)	0.04 (0.03)
Treat <sub><i>i</i></sub> - Control <sub><i>j</i></sub>	0.00 (0.02)	0.00 (0.03)	0.01 (0.03)	0.06 (0.04)	0.02 (0.03)	0.00 (0.04)	-0.00 (0.03)	-0.01 (0.04)	0.01 (0.02)	0.03 (0.03)
Control <sub><i>i</i></sub> - Treat <sub><i>j</i></sub>	-0.00 (0.01)	-0.00 (0.02)	-0.01 (0.02)	0.01 (0.03)	0.03 (0.03)	0.03 (0.05)	-0.01 (0.02)	-0.01 (0.03)	0.01 (0.02)	0.01 (0.03)
<i>ij</i> village standardized distance	-0.06*** (0.01)	-0.16*** (0.02)	-0.02** (0.01)	-0.03 (0.03)	-0.11*** (0.01)	-0.32*** (0.04)	-0.04*** (0.01)	-0.15*** (0.03)	-0.07*** (0.01)	-0.17*** (0.03)
Immediate or extended family member of <i>j</i>	0.07*** (0.02)	0.09*** (0.02)	0.03 (0.02)	0.06** (0.03)	0.07** (0.03)	0.08* (0.05)	0.12*** (0.02)	0.13*** (0.03)	0.04** (0.02)	0.07*** (0.03)
Known <i>j</i> at least 10 years	0.07*** (0.02)	0.03 (0.02)	0.19*** (0.03)	0.20*** (0.05)	0.15*** (0.03)	0.05 (0.04)	0.04* (0.02)	0.00 (0.03)	0.13*** (0.02)	0.07** (0.03)
<i>j</i> is <i>i</i> 's spouse	0.48*** (0.03)	0.39*** (0.03)					0.45*** (0.03)	0.38*** (0.04)		
Constant	0.11 (0.13)	0.14 (0.15)	-0.21 (0.14)	-0.27* (0.16)	0.11 (0.16)	-0.12 (0.24)	0.01 (0.15)	0.11 (0.20)	0.23* (0.13)	0.20 (0.18)
Nearby subsample†	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Control-Control mean	0.33	0.42	0.34	0.38	0.26	0.33	0.35	0.48	0.30	0.35
Village/Enumerator FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Additional regressors‡	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	7331	3511	1736	797	1783	842	3812	1872	3519	1639

Notes: Dependent variable: whether *i* has received information from *j* about issues related to public health (e.g. COVID-19) in the past six months. †Only peer dyads whose homesteads are within the village median distance from one another are included in this sample – i.e., physically distant peer dyads in the same village are not included. ‡All estimations include village and enumerator fixed effects. Additional regressors include symmetric variables (sums and differences) of the following *i* and *j* variables: age, household size, years of education, asset index, nights away from home in the past week, baseline alcohol consumption, estimated farm size (acres), distance from the homestead to the village center, and binary variables indicating whether the household is polygamous and whether the individual can read in English. Standard errors clustered two-ways at the individual level. \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01.

TABLE A4  
CLOSE FRIENDSHIP

	Full Sample		Male-Male		Female-Female		Mixed Gender		Same Gender	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Treat <sub><i>i</i></sub> - Treat <sub><i>j</i></sub>	-0.01 (0.01)	0.01 (0.01)	-0.03 (0.03)	-0.02 (0.04)	0.01 (0.02)	0.03 (0.03)	0.00 (0.01)	0.02 (0.02)	-0.01 (0.02)	0.01 (0.02)
Treat <sub><i>i</i></sub> - Control <sub><i>j</i></sub>	-0.00 (0.01)	0.01 (0.02)	-0.02 (0.03)	0.00 (0.04)	0.01 (0.02)	0.03 (0.03)	-0.00 (0.01)	-0.01 (0.02)	-0.00 (0.02)	0.02 (0.02)
Control <sub><i>i</i></sub> - Treat <sub><i>j</i></sub>	0.01 (0.01)	0.01 (0.01)	-0.02 (0.02)	-0.03 (0.04)	0.03* (0.02)	0.04 (0.03)	0.01 (0.01)	0.01 (0.02)	0.00 (0.02)	0.01 (0.02)
<i>ij</i> village standardized distance	-0.02*** (0.00)	-0.08*** (0.02)	-0.05*** (0.01)	-0.16*** (0.04)	-0.03*** (0.01)	-0.07*** (0.03)	-0.01*** (0.00)	-0.06*** (0.02)	-0.04*** (0.01)	-0.11*** (0.02)
Immediate or extended family member of <i>j</i>	0.11*** (0.01)	0.11*** (0.02)	0.14*** (0.02)	0.13*** (0.03)	0.10*** (0.02)	0.09** (0.04)	0.07*** (0.01)	0.07*** (0.02)	0.14*** (0.02)	0.13*** (0.02)
Known <i>j</i> at least 10 years	0.07*** (0.01)	0.06*** (0.01)	0.13*** (0.02)	0.16*** (0.05)	0.04** (0.01)	0.04 (0.02)	0.03*** (0.01)	0.01 (0.01)	0.10*** (0.01)	0.11*** (0.02)
<i>j</i> is <i>i</i> 's spouse	0.76*** (0.02)	0.72*** (0.02)					0.84*** (0.02)	0.80*** (0.03)		
Constant	-0.01 (0.06)	-0.07 (0.10)	0.21 (0.16)	0.64** (0.33)	0.19** (0.10)	0.21 (0.18)	0.01 (0.05)	-0.07 (0.09)	0.01 (0.09)	-0.06 (0.16)
Nearby subsample†	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Control-Control mean	0.14	0.21	0.22	0.26	0.05	0.06	0.15	0.26	0.14	0.16
Village/Enumerator FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Additional regressors‡	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	7331	3511	1736	797	1783	842	3812	1872	3519	1639

Notes: Dependent variable: whether *i* is close friends with *j* (indicated as a 5 out of 5 on a Likert friendship scale). †Only peer dyads whose homesteads are within the village median distance from one another are included in this sample – i.e., physically distant peer dyads in the same village are not included. ‡All estimations include village and enumerator fixed effects. Additional regressors include symmetric variables (sums and differences) of the following *i* and *j* variables: age, household size, years of education, asset index, nights away from home in the past week, baseline alcohol consumption, estimated farm size (acres), distance from the homestead to the village center, and binary variables indicating whether the household is polygamous and whether the individual can read in English. Standard errors clustered two-ways at the individual level. \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01.

TABLE A5  
JOINT DRINKING

	Full Sample		Male-Male		Female-Female		Mixed Gender		Same Gender	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Treat <sub><i>i</i></sub> - Treat <sub><i>j</i></sub>	0.01 (0.01)	0.03* (0.02)	0.03 (0.04)	0.06 (0.05)	0.02 (0.02)	0.03 (0.02)	0.01 (0.01)	0.03 (0.02)	0.02 (0.02)	0.04 (0.03)
Treat <sub><i>i</i></sub> - Control <sub><i>j</i></sub>	-0.01 (0.01)	0.01 (0.02)	-0.06* (0.03)	-0.04 (0.05)	0.01 (0.01)	0.03 (0.03)	0.00 (0.01)	0.02 (0.02)	-0.02 (0.02)	-0.01 (0.03)
Control <sub><i>i</i></sub> - Treat <sub><i>j</i></sub>	0.01 (0.01)	0.02 (0.02)	0.03 (0.03)	0.05 (0.05)	0.01 (0.01)	0.02 (0.02)	-0.00 (0.01)	0.01 (0.01)	0.02 (0.02)	0.04 (0.03)
<i>ij</i> village standardized distance	-0.02*** (0.00)	-0.04*** (0.01)	-0.05*** (0.01)	-0.08** (0.04)	-0.02*** (0.01)	-0.04* (0.02)	-0.01 (0.01)	-0.02 (0.02)	-0.04*** (0.01)	-0.07*** (0.02)
Immediate or extended family member of <i>j</i>	0.08*** (0.01)	0.07*** (0.03)	0.16*** (0.03)	0.13*** (0.04)	0.03 (0.02)	0.03 (0.03)	0.02*** (0.01)	0.02** (0.01)	0.13*** (0.02)	0.12*** (0.02)
Known <i>j</i> at least 10 years	0.08*** (0.01)	0.08*** (0.01)	0.29*** (0.04)	0.36*** (0.06)	0.02 (0.01)	0.04** (0.02)	0.02** (0.01)	0.01 (0.01)	0.14*** (0.02)	0.15*** (0.03)
<i>j</i> is <i>i</i> 's spouse	0.01 (0.03)	0.01 (0.03)	0.01 (0.04)	0.06 (0.06)	0.01 (0.01)	0.01 (0.02)	0.12*** (0.03)	0.11*** (0.03)	0.04 (0.10)	0.01 (0.14)
Constant	-0.01 (0.06)	0.01 (0.09)	0.11 (0.16)	-0.34 (0.28)	0.08 (0.07)	0.16 (0.11)	-0.02 (0.06)	0.05 (0.11)	0.04 (0.10)	0.01 (0.14)
Nearby subsample†	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Control-Control mean	0.14	0.15	0.44	0.48	0.04	0.03	0.05	0.07	0.24	0.26
Village/Enumerator FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Additional regressors‡	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	7331	3511	1736	797	1783	842	3812	1872	3519	1639

Notes: Dependent variable: whether *i* has drunk with *j* in the past six months. †Only peer dyads whose homesteads are within the village median distance from one another are included in this sample – i.e., physically distant peer dyads in the same village are not included. ‡All estimations include village and enumerator fixed effects. Additional regressors include symmetric variables (sums and differences) of the following *i* and *j* variables: age, household size, years of education, asset index, nights away from home in the past week, baseline alcohol consumption, estimated farm size (acres), distance from the homestead to the village center, and binary variables indicating whether the household is polygamous and whether the individual can read in English. Standard errors clustered two-ways at the individual level. \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01.

TABLE A6  
AGRICULTURAL INFORMATION (UNCONDITIONAL ESTIMATES)

	Full Sample		Male-Male		Female-Female		Mixed Gender		Same Gender	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Treat <sub><i>i</i></sub> - Treat <sub><i>j</i></sub>	0.05*** (0.02)	0.07*** (0.02)	0.07*** (0.03)	0.11** (0.05)	0.06 (0.04)	0.09* (0.05)	0.04* (0.02)	0.06** (0.03)	0.06*** (0.02)	0.10*** (0.03)
Treat <sub><i>i</i></sub> - Control <sub><i>j</i></sub>	0.01 (0.02)	0.02 (0.02)	0.04 (0.03)	0.04 (0.05)	0.00 (0.03)	0.06 (0.04)	-0.00 (0.02)	-0.01 (0.03)	0.02 (0.02)	0.05 (0.03)
Control <sub><i>i</i></sub> - Treat <sub><i>j</i></sub>	0.02 (0.01)	0.03 (0.02)	0.06* (0.03)	0.05 (0.05)	0.00 (0.03)	0.02 (0.05)	0.01 (0.02)	0.03 (0.03)	0.03 (0.02)	0.04 (0.03)
<i>j</i> is <i>i</i> 's spouse	0.78*** (0.01)	0.73*** (0.02)					0.82*** (0.01)	0.77*** (0.02)		
Constant	0.16*** (0.01)	0.21*** (0.02)	0.19*** (0.02)	0.25*** (0.03)	0.19*** (0.03)	0.23*** (0.03)	0.13*** (0.01)	0.17*** (0.02)	0.19*** (0.02)	0.24*** (0.02)
Nearby subsample†	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Control-Control mean	0.21	0.29	0.19	0.25	0.19	0.23	0.22	0.34	0.19	0.24
Village/Enumerator FEs	No	No	No	No	No	No	No	No	No	No
Additional regressors‡	No	No	No	No	No	No	No	No	No	No
Observations	7331	3511	1736	797	1783	842	3812	1872	3519	1639

*Notes:* Dependent variable: whether *i* received any form of agricultural information from *j* in the past six months. †Only peer dyads whose homesteads are within the village median distance from one another are included in this sample – i.e., physically distant peer dyads in the same village are not included. ‡Unconditional estimations with exception of control for spouse in full sample and in the mixed gender subsample. Standard errors clustered two-ways at the individual level. \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01.

TABLE A7  
TRUST (UNCONDITIONAL ESTIMATES)

	Full Sample		Male-Male		Female-Female		Mixed Gender		Same Gender	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Treat <sub><i>i</i></sub> - Treat <sub><i>j</i></sub>	0.01 (0.01)	0.03* (0.02)	0.02 (0.03)	0.05 (0.05)	-0.02 (0.03)	0.01 (0.03)	0.02 (0.01)	0.05** (0.02)	-0.00 (0.02)	0.02 (0.03)
Treat <sub><i>i</i></sub> - Control <sub><i>j</i></sub>	-0.01 (0.01)	0.03* (0.02)	0.01 (0.03)	0.07 (0.04)	-0.03 (0.02)	0.03 (0.03)	-0.00 (0.01)	0.01 (0.02)	-0.01 (0.02)	0.05* (0.03)
Control <sub><i>i</i></sub> - Treat <sub><i>j</i></sub>	0.01 (0.01)	0.04* (0.02)	0.03 (0.03)	0.05 (0.05)	0.01 (0.02)	0.06* (0.04)	0.01 (0.01)	0.03 (0.02)	0.02 (0.02)	0.06* (0.03)
<i>j</i> is <i>i</i> 's spouse	0.83*** (0.02)	0.79*** (0.02)					0.86*** (0.02)	0.82*** (0.02)		
Constant	0.12*** (0.01)	0.14*** (0.01)	0.20*** (0.02)	0.23*** (0.03)	0.11*** (0.02)	0.12*** (0.02)	0.08*** (0.01)	0.10*** (0.02)	0.15*** (0.02)	0.17*** (0.02)
Nearby subsample†	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Control-Control mean	0.16	0.23	0.20	0.23	0.11	0.12	0.17	0.28	0.15	0.17
Village/Enumerator FEs	No	No	No	No	No	No	No	No	No	No
Additional regressors‡	No	No	No	No	No	No	No	No	No	No
Observations	7331	3511	1736	797	1783	842	3812	1872	3519	1639

Notes: Dependent variable: whether *i* trusts *j* to watch over valuable item for them for 30 days. †Only peer dyads whose homesteads are within the village median distance from one another are included in this sample – i.e., physically distant peer dyads in the same village are not included. ‡Unconditional estimations with exception of control for spouse in full sample and in the mixed gender subsample. Standard errors clustered two-ways at the individual level. \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01.



TABLE A8  
WORKED TOGETHER (UNCONDITIONAL ESTIMATES)

	Full Sample		Male-Male		Female-Female		Mixed Gender		Same Gender	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Treat <sub><i>i</i></sub> - Treat <sub><i>j</i></sub>	0.03 (0.02)	0.05** (0.02)	0.08** (0.04)	0.14*** (0.05)	0.02 (0.03)	0.05 (0.05)	0.01 (0.02)	0.02 (0.02)	0.05** (0.02)	0.09*** (0.04)
Treat <sub><i>i</i></sub> - Control <sub><i>j</i></sub>	0.01 (0.02)	0.02 (0.02)	0.03 (0.04)	0.03 (0.05)	-0.00 (0.03)	0.03 (0.04)	0.01 (0.02)	0.01 (0.02)	0.01 (0.02)	0.03 (0.03)
Control <sub><i>i</i></sub> - Treat <sub><i>j</i></sub>	0.02 (0.01)	0.03 (0.02)	0.07* (0.04)	0.11** (0.05)	0.03 (0.03)	0.04 (0.05)	0.00 (0.01)	0.01 (0.02)	0.05** (0.02)	0.07** (0.03)
<i>j</i> is <i>i</i> 's spouse	0.81*** (0.01)	0.76*** (0.02)					0.88*** (0.01)	0.84*** (0.02)		
Constant	0.15*** (0.01)	0.19*** (0.02)	0.23*** (0.03)	0.26*** (0.04)	0.17*** (0.02)	0.23*** (0.03)	0.09*** (0.01)	0.12*** (0.02)	0.20*** (0.02)	0.25*** (0.03)
Nearby subsample†	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Control-Control mean	0.19	0.28	0.23	0.26	0.17	0.23	0.19	0.30	0.20	0.25
Village/Enumerator FEs	No	No	No	No	No	No	No	No	No	No
Additional regressors‡	No	No	No	No	No	No	No	No	No	No
Observations	7331	3511	1736	797	1783	842	3812	1872	3519	1639

Notes: Dependent variable: whether *i* has worked together with *j* in the past six months. †Only peer dyads whose homesteads are within the village median distance from one another are included in this sample – i.e., physically distant peer dyads in the same village are not included. ‡Unconditional estimations with exception of control for spouse in full sample and in the mixed gender subsample. Standard errors clustered two-ways at the individual level. \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01.

TABLE A9  
KNOW PERSON (UNCONDITIONAL ESTIMATES)

	Full Sample		Male-Male		Female-Female		Mixed Gender		Same Gender	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Treat <sub><i>i</i></sub> - Treat <sub><i>j</i></sub>	0.06*** (0.02)	0.04** (0.02)	0.04 (0.03)	0.02 (0.03)	0.10** (0.04)	0.09** (0.04)	0.06*** (0.02)	0.02 (0.02)	0.07** (0.03)	0.06** (0.03)
Treat <sub><i>i</i></sub> - Control <sub><i>j</i></sub>	-0.02 (0.02)	-0.02 (0.02)	-0.02 (0.03)	-0.02 (0.03)	0.02 (0.04)	0.01 (0.04)	-0.03 (0.02)	-0.04 (0.02)	-0.00 (0.02)	-0.01 (0.03)
Control <sub><i>i</i></sub> - Treat <sub><i>j</i></sub>	0.02 (0.02)	0.01 (0.02)	0.02 (0.03)	0.01 (0.03)	0.04 (0.04)	0.06 (0.04)	0.01 (0.02)	-0.01 (0.02)	0.03 (0.03)	0.04 (0.03)
Constant	0.80*** (0.02)	0.89*** (0.02)	0.86*** (0.03)	0.92*** (0.03)	0.71*** (0.03)	0.80*** (0.03)	0.81*** (0.02)	0.91*** (0.02)	0.79*** (0.02)	0.86*** (0.02)
Nearby subsample†	No	Yes	No	Yes	No	No	No	Yes	No	Yes
Control-Control mean	0.80	0.89	0.30	0.86	0.71	0.80	0.81	0.91	0.79	0.86
Village/Enumerator FEs	No	No	No	No	No	No	No	No	No	No
Additional regressors‡	No	No	No	No	No	No	No	No	No	No
Observations	7331	3511	1736	797	1783	842	3812	1872	3519	1639

Notes: Dependent variable: whether *i* knows *j*. †Only peer dyads whose homesteads are within the village median distance from one another are included in this sample – i.e., physically distant peer dyads in the same village are not included. ‡All estimates are unconditional and include no control regressors of fixed effects. Standard errors clustered two-ways at the individual level. \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01.

TABLE A10  
SPEAK DAILY (UNCONDITIONAL ESTIMATES)

	Full Sample		Male-Male		Female-Female		Mixed Gender		Same Gender	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Treat <sub><i>i</i></sub> - Treat <sub><i>j</i></sub>	0.04* (0.02)	0.05 (0.03)	0.08** (0.04)	0.13** (0.06)	0.02 (0.03)	0.04 (0.05)	0.02 (0.02)	0.02 (0.03)	0.05* (0.02)	0.08** (0.04)
Treat <sub><i>i</i></sub> - Control <sub><i>j</i></sub>	0.00 (0.02)	0.01 (0.03)	0.04 (0.03)	0.11** (0.05)	-0.02 (0.03)	-0.01 (0.05)	-0.00 (0.02)	-0.02 (0.03)	0.01 (0.02)	0.05 (0.04)
Control <sub><i>i</i></sub> - Treat <sub><i>j</i></sub>	0.01 (0.02)	0.01 (0.03)	0.05 (0.03)	0.05 (0.05)	0.00 (0.03)	0.01 (0.05)	-0.00 (0.02)	-0.02 (0.03)	0.02 (0.02)	0.03 (0.04)
<i>j</i> is <i>i</i> 's spouse	0.77** (0.01)	0.65*** (0.02)					0.79*** (0.01)	0.65*** (0.02)		
Constant	0.19*** (0.01)	0.31*** (0.02)	0.19*** (0.03)	0.26*** (0.04)	0.20*** (0.02)	0.31*** (0.04)	0.19*** (0.02)	0.32*** (0.03)	0.20*** (0.02)	0.29*** (0.03)
Nearby subsample†	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Control-Control mean	0.24	0.38	0.19	0.26	0.20	0.31	0.27	0.46	0.20	0.29
Village/Enumerator FEs	No	No	No	No	No	No	No	No	No	No
Additional regressors‡	No	No	No	No	No	No	No	No	No	No
Observations	7331	3511	1736	797	1783	842	3812	1872	3519	1639

Notes: Dependent variable: whether *i* speaks with *j* daily. †Only peer dyads whose homesteads are within the village median distance from one another are included in this sample – i.e., physically distant peer dyads in the same village are not included. ‡All estimates are unconditional and include no control regressors of fixed effects with the exception of controlling for spousal relationship in the full sample and mixed gender subsample. Standard errors clustered two-ways at the individual level. \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01.

TABLE A11  
HELP DECREASING ALCOHOL (UNCONDITIONAL ESTIMATES)

	Full Sample		Male-Male		Female-Female		Mixed Gender		Same Gender	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Treat <sub><i>i</i></sub> - Treat <sub><i>j</i></sub>	0.02* (0.01)	0.03** (0.01)	0.03* (0.02)	0.07** (0.03)	0.02 (0.02)	0.03 (0.02)	0.01 (0.01)	0.02 (0.02)	0.02* (0.01)	0.05*** (0.02)
Treat <sub><i>i</i></sub> - Control <sub><i>j</i></sub>	0.00 (0.01)	0.02* (0.01)	0.00 (0.01)	0.02 (0.02)	0.00 (0.02)	0.03 (0.02)	0.00 (0.01)	0.01 (0.01)	0.00 (0.01)	0.03* (0.02)
Control <sub><i>i</i></sub> - Treat <sub><i>j</i></sub>	-0.00 (0.01)	0.01 (0.01)	0.01 (0.02)	0.01 (0.02)	-0.00 (0.01)	0.02 (0.02)	-0.00 (0.01)	0.01 (0.01)	0.00 (0.01)	0.01 (0.01)
<i>j</i> is <i>i</i> 's spouse	0.50*** (0.03)	0.49*** (0.03)					0.51*** (0.03)	0.51*** (0.03)		
Constant	0.02*** (0.01)	0.02*** (0.01)	0.04*** (0.01)	0.04** (0.02)	0.03** (0.01)	0.02 (0.01)	0.02** (0.01)	0.02 (0.01)	0.03*** (0.01)	0.03*** (0.01)
Nearby subsample†	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Control-Control mean	0.05	0.08	0.04	0.04	0.03	0.02	0.07	0.12	0.03	0.03
Village/Enumerator FEs	No	No	No	No	No	No	No	No	No	No
Additional regressors‡	No	No	No	No	No	No	No	No	No	No
Observations	7331	3511	1736	797	1783	842	3812	1872	3519	1639

Notes: Dependent variable: whether *i* has received help from *j* to decrease alcohol use in the past six months. †Only peer dyads whose homesteads are within the village median distance from one another are included in this sample – i.e., physically distant peer dyads in the same village are not included. ‡All estimates are unconditional and include no control regressors of fixed effects with the exception of controlling for spousal relationship in the full sample and mixed gender subsample. Standard errors clustered two-ways at the individual level. \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01.

TABLE A12  
 MULTIPLE HYPOTHESIS FULL SAMPLE

Outcome Variable	Coefficient	Std. Error	P-value	Westfall-Young
Know $j$	0.065	0.015	0.000	0.000
Help decreasing alcohol $j$	0.012	0.008	0.130	0.300
Agricultural info from $j$	0.036	0.015	0.016	0.020
Trust $j$	0.007	0.012	0.568	0.860
Worked with $j$	0.018	0.015	0.237	0.500
Speak daily with $j$	0.029	0.016	0.066	0.180
Public health info from $j$	0.013	0.020	0.535	0.860
Close friend with $j$	-0.006	0.011	0.585	0.860
Drank with $j$	0.011	0.013	0.377	0.700

*Notes:* Results with standard errors adjusted for the potential of false rejection of null hypotheses. This table shows Westfall-Young adjusted p-values (Westfall & Young, 1993) using a Stata command developed by Jones *et al.* (2019) and corresponds to the result on dyadic variable  $Treat_i - Treat_j$  in Column 1 of Tables 2 through 7 and Appendix Tables A3 through A5.

TABLE A13  
 MULTIPLE HYPOTHESIS NEARBY SUBSAMPLE

Outcome Variable	Coefficient	Std. Error	P-value	Westfall-Young
Know $j$	0.048	0.016	0.003	0.000
Help decreasing alcohol $j$	0.028	0.012	0.025	0.020
Agricultural info from $j$	0.077	0.021	0.000	0.000
Trust $j$	0.041	0.017	0.019	0.020
Worked with $j$	0.050	0.021	0.017	0.020
Speak daily with $j$	0.047	0.024	0.050	0.040
Public health info from $j$	0.019	0.024	0.437	0.520
Close friend with $j$	0.010	0.015	0.513	0.520
Drank with $j$	0.032	0.017	0.058	0.040

*Notes:* Results with standard errors adjusted for the potential of false rejection of null hypotheses. This table shows Westfall-Young adjusted p-values (Westfall & Young, 1993) using a Stata command developed by Jones *et al.* (2019) and corresponds to the result on dyadic variable  $Treat_i - Treat_j$  in Column 2 of Tables 2 through 7 and Appendix Tables A3 through A5.

TABLE A14  
 MULTIPLE HYPOTHESIS MALE DYADS

Outcome Variable	Coefficient	Std. Error	P-value	Westfall-Young
Know $j$	0.057	0.023	0.013	0.020
Help decreasing alcohol $j$	0.021	0.016	0.179	0.360
Agricultural info from $j$	0.058	0.028	0.040	0.080
Trust $j$	0.026	0.027	0.349	0.600
Worked with $j$	0.067	0.032	0.040	0.080
Speak daily with $j$	0.068	0.032	0.033	0.060
Public health info from $j$	0.015	0.027	0.585	0.600
Close friend with $j$	-0.031	0.026	0.230	0.430
Drank with $j$	0.031	0.036	0.388	0.600

*Notes:* Results with standard errors adjusted for the potential of false rejection of null hypotheses. This table shows Westfall-Young adjusted p-values (Westfall & Young, 1993) using a Stata command developed by Jones *et al.* (2019) and corresponds to the result on dyadic variable  $Treat_i - Treat_j$  in Column 3 of Tables 2 through 7 and Appendix Tables A3 through A5.

TABLE A15  
 MULTIPLE HYPOTHESIS NEARBY MALE DYADS

Outcome Variable	Coefficient	Std. Error	P-value	Westfall-Young
Know $j$	0.034	0.030	0.260	0.540
Help decreasing alcohol $j$	0.061	0.026	0.021	0.010
Agricultural info from $j$	0.078	0.048	0.102	0.240
Trust $j$	0.042	0.048	0.383	0.640
Worked with $j$	0.120	0.049	0.014	0.000
Speak daily with $j$	0.109	0.055	0.046	0.040
Public health info from $j$	0.033	0.038	0.388	0.640
Close friend with $j$	-0.023	0.041	0.579	0.640
Drank with $j$	0.059	0.052	0.262	0.540

*Notes:* Results with standard errors adjusted for the potential of false rejection of null hypotheses. This table shows Westfall-Young adjusted p-values (Westfall & Young, 1993) using a Stata command developed by Jones *et al.* (2019) and corresponds to the result on dyadic variable  $Treat_i - Treat_j$  in Column 4 of Tables 2 through 7 and Appendix Tables A3 through A5.



TABLE A16  
MULTIPLE HYPOTHESIS FEMALE DYADS

Outcome Variable	Coefficient	Std. Error	P-value	Westfall-Young
Know $j$	0.086	0.032	0.008	0.020
Help decreasing alcohol $j$	0.018	0.015	0.223	0.500
Agricultural info from $j$	0.042	0.032	0.192	0.460
Trust $j$	-0.034	0.023	0.151	0.430
Worked with $j$	0.012	0.029	0.685	0.900
Speak daily with $j$	0.014	0.028	0.624	0.900
Public health info from $j$	0.019	0.033	0.564	0.900
Close friend with $j$	0.009	0.016	0.584	0.900
Drank with $j$	0.016	0.016	0.335	0.730

*Notes:* Results with standard errors adjusted for the potential of false rejection of null hypotheses. This table shows Westfall-Young adjusted p-values (Westfall & Young, 1993) using a Stata command developed by Jones *et al.* (2019) and corresponds to the result on dyadic variable  $Treat_i - Treat_j$  in Column 5 of Tables 2 through 7 and Appendix Tables A3 through A5.

TABLE A17  
 MULTIPLE HYPOTHESIS NEARBY FEMALE DYADS

Outcome Variable	Coefficient	Std. Error	P-value	Westfall-Young
Know $j$	0.073	0.040	0.071	0.140
Help decreasing alcohol $j$	0.028	0.020	0.157	0.310
Agricultural info from $j$	0.092	0.041	0.027	0.030
Trust $j$	-0.013	0.035	0.713	0.750
Worked with $j$	0.036	0.045	0.420	0.630
Speak daily with $j$	0.020	0.044	0.651	0.750
Public health info from $j$	0.051	0.045	0.257	0.520
Close friend with $j$	0.031	0.028	0.259	0.520
Drank with $j$	0.032	0.023	0.173	0.310

*Notes:* Results with standard errors adjusted for the potential of false rejection of null hypotheses. This table shows Westfall-Young adjusted p-values (Westfall & Young, 1993) using a Stata command developed by Jones *et al.* (2019) and corresponds to the result on dyadic variable  $Treat_i - Treat_j$  in Column 6 of Tables 2 through 7 and Appendix Tables A3 through A5.

TABLE A18  
 MULTIPLE HYPOTHESIS MIXED-GENDER DYADS

Outcome Variable	Coefficient	Std. Error	P-value	Westfall-Young
Know $j$	0.059	0.017	0.001	0.000
Help decreasing alcohol $j$	0.007	0.011	0.516	0.900
Agricultural info from $j$	0.025	0.017	0.144	0.390
Trust $j$	0.021	0.014	0.140	0.390
Worked with $j$	0.003	0.016	0.847	0.950
Speak daily with $j$	0.018	0.018	0.323	0.670
Public health info from $j$	0.003	0.026	0.897	0.950
Close friend with $j$	0.005	0.011	0.671	0.920
Drank with $j$	0.011	0.012	0.382	0.770

*Notes:* Results with standard errors adjusted for the potential of false rejection of null hypotheses. This table shows Westfall-Young adjusted p-values (Westfall & Young, 1993) using a Stata command developed by Jones *et al.* (2019) and corresponds to the result on dyadic variable  $Treat_i - Treat_j$  in Column 7 of Tables 2 through 7 and Appendix Tables A3 through A5.

TABLE A19  
 MULTIPLE HYPOTHESIS NEARBY MIXED-GENDER DYADS

Outcome Variable	Coefficient	Std. Error	P-value	Westfall-Young
Know $j$	0.040	0.017	0.020	0.030
Help decreasing alcohol $j$	0.018	0.017	0.294	0.460
Agricultural info from $j$	0.064	0.024	0.009	0.010
Trust $j$	0.061	0.022	0.005	0.010
Worked with $j$	0.026	0.022	0.234	0.460
Speak daily with $j$	0.032	0.028	0.251	0.460
Public health info from $j$	-0.001	0.031	0.977	0.980
Close friend with $j$	0.017	0.017	0.322	0.460
Drank with $j$	0.030	0.019	0.107	0.180

*Notes:* Results with standard errors adjusted for the potential of false rejection of null hypotheses. This table shows Westfall-Young adjusted p-values (Westfall & Young, 1993) using a Stata command developed by Jones *et al.* (2019) and corresponds to the result on dyadic variable  $Treat_i - Treat_j$  in Column 8 of Tables 2 through 7 and Appendix Tables A3 through A5.

TABLE A20  
 MULTIPLE HYPOTHESIS SAME-GENDER DYADS

Outcome Variable	Coefficient	Std. Error	P-value	Westfall-Young
Know $j$	0.071	0.020	0.000	0.000
Help decreasing alcohol $j$	0.018	0.011	0.092	0.150
Agricultural info from $j$	0.049	0.022	0.024	0.040
Trust $j$	-0.008	0.019	0.681	0.690
Worked with $j$	0.040	0.022	0.070	0.120
Speak daily with $j$	0.043	0.022	0.047	0.040
Public health info from $j$	0.017	0.022	0.424	0.690
Close friend with $j$	-0.013	0.015	0.401	0.690
Drank with $j$	0.018	0.021	0.408	0.690

*Notes:* Results with standard errors adjusted for the potential of false rejection of null hypotheses. This table shows Westfall-Young adjusted p-values (Westfall & Young, 1993) using a Stata command developed by Jones *et al.* (2019) and corresponds to the result on dyadic variable  $Treat_i - Treat_j$  in Column 9 of Tables 2 through 7 and Appendix Tables A3 through A5.

TABLE A21  
 MULTIPLE HYPOTHESIS NEARBY SAME-GENDER DYADS

Outcome Variable	Coefficient	Std. Error	P-value	Westfall-Young
Know $j$	0.055	0.024	0.026	0.020
Help decreasing alcohol $j$	0.043	0.016	0.008	0.000
Agricultural info from $j$	0.088	0.031	0.005	0.000
Trust $j$	0.014	0.029	0.626	0.720
Worked with $j$	0.078	0.034	0.020	0.020
Speak daily with $j$	0.065	0.035	0.066	0.040
Public health info from $j$	0.038	0.031	0.225	0.270
Close friend with $j$	0.006	0.024	0.791	0.760
Drank with $j$	0.044	0.029	0.136	0.130

*Notes:* Results with standard errors adjusted for the potential of false rejection of null hypotheses. This table shows Westfall-Young adjusted p-values (Westfall & Young, 1993) using a Stata command developed by Jones *et al.* (2019) and corresponds to the result on dyadic variable  $Treat_i - Treat_j$  in Column 10 of Tables 2 through 7 and Appendix Tables A3 through A5.

TABLE A22  
LINK PREDICTIONS (LOGIT – MARGINAL EFFECTS)

	Advice from $j$		Speak with $j$ daily		Worked with $j$		Health Info from $j$		Close Friend with $j$	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Treat $_i$ - Treat $_j$	0.05*** (0.02)	0.02 (0.01)	0.04** (0.02)	0.03* (0.02)	0.01 (0.02)	0.00 (0.01)	0.01 (0.01)	0.01 (0.01)	0.00 (0.01)	0.00 (0.01)
Treat $_i$ - Control $_j$	0.02 (0.02)	0.00 (0.01)	0.01 (0.02)	0.02 (0.02)	0.00 (0.02)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.01 (0.01)
Control $_i$ - Treat $_j$	0.02* (0.01)	0.02 (0.01)	0.01 (0.01)	0.02* (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)	0.01 (0.01)
$i, j$ village standardized distance	-0.08*** (0.01)	-0.07*** (0.01)	-0.15*** (0.01)	-0.07*** (0.01)	-0.07*** (0.01)	-0.04*** (0.00)	-0.07*** (0.01)	-0.07*** (0.01)	-0.04*** (0.00)	-0.04*** (0.00)
$j$ is $i$ 's spouse	0.65*** (0.06)	0.43*** (0.03)	0.59*** (0.08)	0.61*** (0.05)	0.48*** (0.05)	0.49*** (0.04)	0.59*** (0.08)	0.48*** (0.05)	0.49*** (0.04)	0.49*** (0.04)
Male $_i$ - Male $_j$	0.11*** (0.03)	0.22*** (0.03)	0.13*** (0.03)	0.15*** (0.03)	-0.30*** (0.05)	0.11*** (0.02)	0.13*** (0.03)	-0.30*** (0.05)	0.11*** (0.02)	0.11*** (0.02)
Male $_i$ - Female $_j$	-0.05* (0.03)	0.08*** (0.03)	-0.00 (0.03)	-0.07** (0.03)	0.12*** (0.03)	0.00 (0.01)	-0.00 (0.03)	0.12*** (0.03)	0.00 (0.01)	0.00 (0.01)
Female $_i$ - Male $_j$	-0.01 (0.02)	0.07*** (0.03)	0.05** (0.02)	-0.01 (0.02)	0.05* (0.03)	-0.19*** (0.03)	0.05** (0.02)	0.05* (0.03)	-0.19*** (0.03)	-0.19*** (0.03)
Village/Enumerator FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Additional symmetric regressors‡	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	7331	7331	7331	7331	7331	7331	7331	7331	7331	7331

*Notes:* †Additional regressors include symmetric household and demographic controls, which include sums and differences of household size, years of education, age, asset index, estimated farm size, distance from village center, nights away from home in the past week, baseline alcohol consumption, and binary variables indicating whether the individual can read English and whether they have multiple spouses. Robust standard errors clustered at the individual level. \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01.

TABLE A23  
CENTRALITY MEASURES FOR PUBLIC HEALTH NETWORK

	In-degree			Out-degree			Closeness			Betweenness		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Assigned to treatment	0.08 (0.08)	0.13** (0.06)	0.16 (0.10)	0.09* (0.05)	0.05 (0.03)	0.09* (0.05)	0.10* (0.06)	0.08* (0.04)	0.09 (0.06)	0.04 (0.07)	0.01 (0.07)	0.16 (0.10)
Treatment assignment $\times$ male		-0.07 (0.15)			-0.08 (0.15)							-0.30** (0.13)
Male	0.06 (0.11)	-0.08 (0.12)	-0.04 (0.14)	0.05 (0.04)	0.27*** (0.04)	0.31*** (0.05)	0.28*** (0.07)	0.40*** (0.08)	0.41*** (0.09)	0.08 (0.09)	0.25** (0.10)	0.40*** (0.11)
Age		0.03*** (0.00)	0.03*** (0.00)		0.01** (0.00)	0.01** (0.00)		0.02*** (0.00)	0.02*** (0.00)		0.02*** (0.00)	0.01*** (0.00)
Baseline: Alcoholic drinks past week		-0.07*** (0.02)	-0.06*** (0.02)		0.01 (0.01)	0.01 (0.01)		0.00 (0.02)	0.00 (0.02)		-0.01 (0.02)	-0.00 (0.02)
Main plot area - measured acres		-0.05 (0.09)	-0.05 (0.09)		0.12** (0.05)	0.12** (0.05)		0.09 (0.07)	0.09 (0.07)		0.21** (0.10)	0.20** (0.10)
Asset index		0.36*** (0.04)	0.36*** (0.04)		0.01 (0.02)	0.01 (0.02)		0.09*** (0.03)	0.09*** (0.03)		0.17*** (0.05)	0.17*** (0.05)
Years of education		0.03* (0.02)	0.03* (0.02)		-0.06*** (0.01)	-0.06*** (0.01)		-0.03*** (0.01)	-0.03*** (0.01)		-0.02 (0.02)	-0.02 (0.02)
Constant	-0.06 (0.23)	-0.62** (0.25)	-0.65** (0.27)	-0.75*** (0.15)	-1.74*** (0.14)	-1.77*** (0.14)	-0.78*** (0.18)	-2.02*** (0.21)	-2.02*** (0.22)	-0.36 (0.24)	-1.52*** (0.32)	-1.62*** (0.32)
Additional regressors <sup>†</sup>	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Village/Enumerator FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	674	674	674	674	674	674	674	674	674	674	674	674

Notes: Dependent variable is the measure of network centrality (standardized at the village level) listed above the column. Coefficients can be interpreted as standard deviations. In-degree is the number of incoming links to an individual, out-degree is the number of outgoing links to others, closeness centrality measures how close an individual is to others in their network based on degree of separation, and betweenness centrality measures the number of pathways between peers that go through a particular individual. <sup>†</sup> Additional regressors not shown include the nights away from home in the past week, distance from the homestead to the village center, and binary variables indicating whether the household is polygamous and whether the individual can read in English. All estimations include village and enumerator fixed effects. Standard errors clustered at the household level and bootstrapped with 1000 repetitions. \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01.



TABLE A24  
CENTRALITY MEASURES FOR CLOSE FRIENDSHIP NETWORK

	In-degree			Out-degree			Closeness			Betweenness		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Assigned to treatment	0.09* (0.05)	0.10** (0.04)	0.13* (0.07)	-0.04 (0.03)	-0.01 (0.03)	0.01 (0.03)	0.02 (0.05)	0.06 (0.04)	0.09* (0.05)	-0.00 (0.06)	0.01 (0.06)	0.05 (0.07)
Treatment assignment $\times$ male			-0.07 (0.11)			-0.05 (0.05)			-0.06 (0.07)			-0.07 (0.08)
Male	1.47*** (0.08)	1.58*** (0.09)	1.62*** (0.09)	1.92*** (0.05)	1.80*** (0.05)	1.83*** (0.05)	1.79*** (0.05)	1.76*** (0.06)	1.79*** (0.07)	1.72*** (0.08)	1.69*** (0.08)	1.72*** (0.08)
Age		-0.00 (0.00)	-0.00 (0.00)		-0.00** (0.00)	-0.00** (0.00)		-0.01** (0.00)	-0.01** (0.00)		-0.01** (0.00)	-0.01** (0.00)
Baseline: Alcoholic drinks past week		-0.04*** (0.01)	-0.04*** (0.01)		0.02* (0.01)	0.02* (0.01)		-0.01 (0.01)	-0.01 (0.01)		-0.00 (0.02)	0.00 (0.02)
Main plot area - measured acres		0.34*** (0.07)	0.34*** (0.07)		0.14*** (0.04)	0.14*** (0.04)		0.30*** (0.05)	0.30*** (0.05)		0.28*** (0.08)	0.28*** (0.08)
Asset index		0.14*** (0.03)	0.14*** (0.03)		0.02 (0.02)	0.02 (0.02)		0.14*** (0.03)	0.14*** (0.03)		0.04 (0.03)	0.04 (0.03)
Years of education		-0.01 (0.01)	-0.01 (0.01)		-0.02*** (0.01)	-0.02*** (0.01)		-0.03*** (0.01)	-0.03*** (0.01)		0.00 (0.01)	0.00 (0.01)
Constant	-0.90*** (0.12)	-0.89*** (0.19)	-0.91*** (0.19)	-0.34*** (0.08)	0.05 (0.13)	0.04 (0.14)	-0.51*** (0.08)	0.01 (0.16)	-0.01 (0.17)	-0.44*** (0.09)	-0.26 (0.19)	-0.28 (0.19)
Additional regressors <sup>†</sup>	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Village/Enumerator FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	674	674	674	674	674	674	674	674	674	674	674	674

Notes: Dependent variable is the measure of network centrality (standardized at the village level) listed above the column. Coefficients can be interpreted as standard deviations. In-degree is the number of incoming links to an individual, out-degree is the number of outgoing links to others, closeness centrality measures how close an individual is to others in their network based on degree of separation, and betweenness centrality measures the number of pathways between peers that go through a particular individual. <sup>†</sup> Additional regressors not shown include the nights away from home in the past week, distance from the homestead to the village center, and binary variables indicating whether the household is polygamous and whether the individual can read in English. All estimations include village and enumerator fixed effects. Standard errors clustered at the household level and bootstrapped with 1000 repetitions. \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.01.

## **B Qualitative Counselor Report Examples**

In this program, counselors took detailed reports during visits to households. Examples of recommendations by counselors to engage in farmwork include: “Involving herself in farming to forget the changaa intake;” “Taking up farm responsibilities after work to keep them busy so as to avoid drinking buddies;” “He identified idleness as an obstacle to his recovery journey. I encouraged him to involve himself in farming and other things that can benefit his family;” “As a family they have agreed to concentrate in their half acre farm to maximize the production. In my therapy session today I stressed on the need to have a short achievable economic plan to kill idleness.”

Other reports indicate rapid success from this strategy. For example: “S— has not used any alcoholic drink since the session started. He is quite committed to following the road to sobriety. He was at the farm when I arrived indicating that he is keeping busy and keeping the mind off alcohol;” “R— has been able to avoid toxic friends, concentrate on farm work, avoid free alcohol offers and unnecessary hangouts;” “Has had a total behavior change as he helps a lot around the house and in the family farm which was not the case when he used to drink;” “The client has made remarkable changes in that today he reported that he did not take any alcohol and was confirmed by his wife J—. He has been in line following to the latter [sic] the solutions he had come up with to abstain from taking a drink. He, for example has been keeping busy with his farm work engaging him so much hence abstinence;” “P— and E— show satisfactory changes. The couple confirmed they have not taken any alcohol and they have engaged fully in their farming activities, avoided influential [sic] friends.”

## C Imputation Methodology

To generate complete networks, I use an imputation methodology proposed by Conley & Udry (2010) and used, for example, by Maertens (2017) in that paper’s Appendix. In the survey, each individual was asked questions about their relationship with twelve randomly selected other individuals from the village sample. Thus, there is information about relationship ties of 7,331 dyadic links out of the total sample of 24,738 potential links (excluding self links in which  $i=i$ , which are excluded from all analyses). I use the following estimation to predict out of sample links:

$$E_{zij} = \alpha + \beta_1 T_i T_j + \beta_2 T_i C_j + \beta_3 C_i C_j + \beta_4 D_{ij} + \beta_5 M_i M_j + \beta_6 M_i F_j + \beta_7 F_i M_j + \beta_8 Spouse_{ij} + \beta_9 (X_i \pm X_j) + \beta_{10} (Y_{it-1} \pm Y_{jt-1}) + \theta_{v,e} + \varepsilon_{ij} \quad (3)$$

where  $M_i M_j$ ,  $M_i F_j$ , and  $F_i M_j$  are binary variables that, respectively, indicate whether both  $i$  and  $j$  are male,  $i$  is male and  $j$  is female, and  $i$  is female and  $j$  is male. The left out group is whether both peers are female. Binary variable *Spouse* indicates whether the two peers are married and cohabiting (2.7% of the sample). All other variables are defined as in Equation 1. Only variables with observations for all links can be used in these predictive estimations, and thus variables on Table 1 that only contain data based on questions asked to individual  $i$  and the twelve randomly selected individuals  $j$  cannot be included as explanatory variables in these predictive estimations.

Predicted ratios for each relationship variable (e.g. Receives agricultural information from  $j$ ) are transformed into binary variables in line with the original distribution of the sample links. For example, 16.8% of individuals in the subsample in which there are data trust their peer to watch over a valuable item for them. I thus transform the predicted probabilities in the full sample such that over a particular predicted ratio, the share of individuals who trust their peer is similar to the original sample. I also find that the predicted links match the actual links among sampled relationships relatively well – with correct matches ranging from 76% to 88% depending on the relationship variable. In the robustness checks section I describe checks for potential misspecification of predicted links, and find that they are robust to approximately a 5 percent error rate indicating more than 1,200 links would need to be misspecified to effect the results.

## D Centrality Equations

Closeness centrality, first described by Bavelas (1950), measures the centrality of an individual in a particular network by the social distance between each individual  $i$  and his/her peer  $j$ . For example, if  $i$  is connected to  $j$ , and  $j$  is connected to  $k$ , but  $i$  and  $k$  are not directly connected,

then the social distance between  $i$  and  $k$  is two (two degrees of separation). Closeness centrality is therefore measured in the following way:

$$C_i = \frac{1}{\sum_j \psi_{ij}}$$

where  $\psi_{ij}$  is the social distance between the network nodes (individuals) of  $i$  and  $j$ . By this measure, those with a higher closeness value in the network are more central.

Betweenness centrality measures the number of times individual  $i$  acts as the shortest path between two other peers,  $j$  and  $k$  (Freeman, 1977). This measure is often effective at measuring the influence of peers. The equation for betweenness centrality is given as:

$$B_i = \sum_{i \neq j \neq k} \frac{\rho_{ijk}}{\rho_{jk}}$$

where  $i$ ,  $j$ , and  $k$  are individuals in the network, variable  $\rho_{jk}$  represents the total number of paths between  $j$  and  $k$  in the network, and  $\rho_{ijk}$  is the total number of paths between  $j$  and  $k$  that pass through  $i$ . The higher the share of paths that pass through  $i$  as a share of total paths, the larger the betweenness centrality for individual  $i$ .