



Research article

Psychometric properties and measurement invariance of the Perth Alexithymia Questionnaire Short Form (PAQ-S) in Arabic, English, Italian, Spanish, Turkish, and Ukrainian

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Table S1. The PAQ-S Questionnaire.

Item	Sentence
1	When I'm feeling bad (feeling an unpleasantemotion), I can't find the right words todescribe those feelings.
2	When I'm feeling bad, I can't tell whetherI'm sad, angry, or scared.
3	I tend to ignore how I feel.
4	When I'm feeling good (feeling a pleasantemotion), I can't find the right words todescribe those feelings.
5	When I'm feeling good, I can't tell whetherI'm happy, excited, or amused.
6	I don't pay attention to my emotions.

Table S2. Descriptive statistics for PAQ-S items.

PAQ1	Spain	Italy	Lebanon	Nigeria	Türkiye	Ukraine
Mean	3.518	3.428	3.756	4.380	3.244	3.492
Std. Deviation	1.729	1.681	1.793	1.964	1.620	1.589
PAQ2						
Mean	2.631	2.763	3.493	3.886	2.651	2.958
Std. Deviation	1.616	1.566	1.820	2.091	1.664	1.695
PAQ3						
Mean	3.131	2.814	3.694	3.936	2.698	3.220
Std. Deviation	1.748	1.637	1.674	1.942	1.805	1.734
PAQ4						
Mean	2.871	3.109	3.651	3.499	2.727	3.000
Std. Deviation	1.746	1.635	1.763	2.035	1.735	1.774
PAQ5						
Mean	2.418	2.524	3.678	3.187	2.410	2.553
Std. Deviation	1.582	1.495	1.815	1.969	1.673	1.709
PAQ6						
Mean	2.820	2.223	3.569	3.016	2.349	2.438
Std. Deviation	1.613	1.445	1.726	1.916	1.639	1.602

Network Analysis for PAQ-S items & DS14 items

Table S3. Summary of Network for PAQ-S & DS14.

	Number of nodes	Number of non-zero edges	Sparsity
Total sample	20	117/190	0.384
Male	20	99/190	0.479
Female	20	117/190	0.384
Country			
1	20	82 / 190	0.568
2	20	79 / 190	0.584
3	20	108 / 190	0.432
4	20	94 / 190	0.505
5	20	84 / 190	0.558
6	20	95 / 190	0.500

Note: 1= Spain. 2= Italy. 3= Lebanon. 4= Nigeria. 5= Türkiye. 6 =Ukraine. PAQ: Alexithymia measured with PAQ-S. DS: Personality Type D measured with DS14.

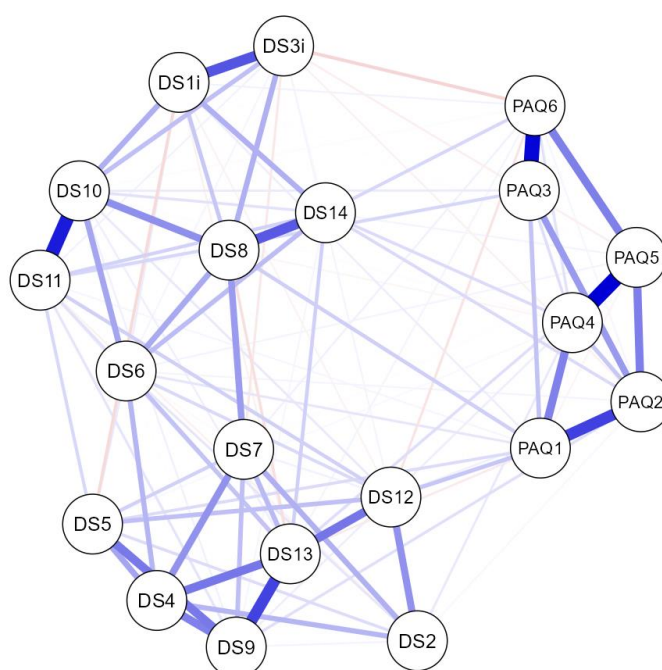


Figure S1. Network plot for total sample. *Note: PAQ: Alexithymia measured with PAQ-S. DS: Personality Type D measured with DS14.*

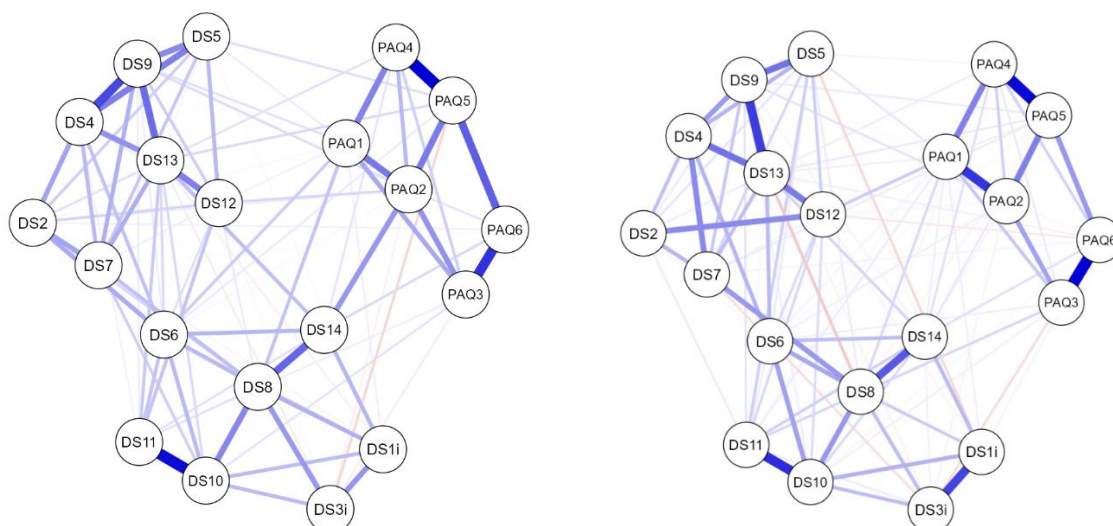


Figure S2. Male & Female network plot. Note: *PAQ*: Alexithymia measured with *PAQ-S*. *DS*: Personality Type *D* measured with *DS14*.

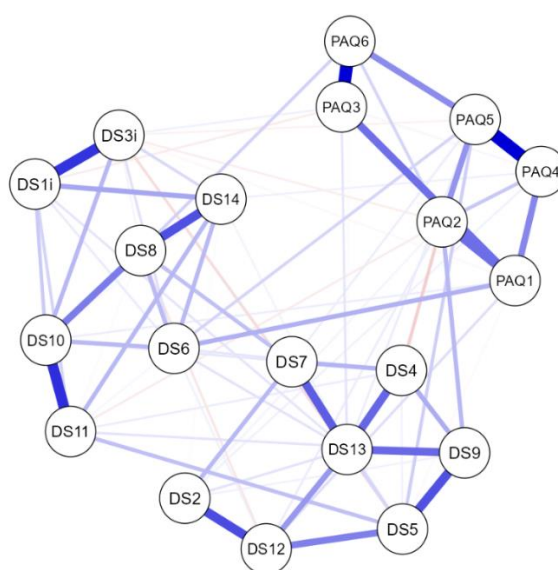


Figure S3. Network plot for Spanish sample. Note: *PAQ*: Alexithymia measured with *PAQ-S*. *DS*: Personality Type *D* measured with *DS14*.

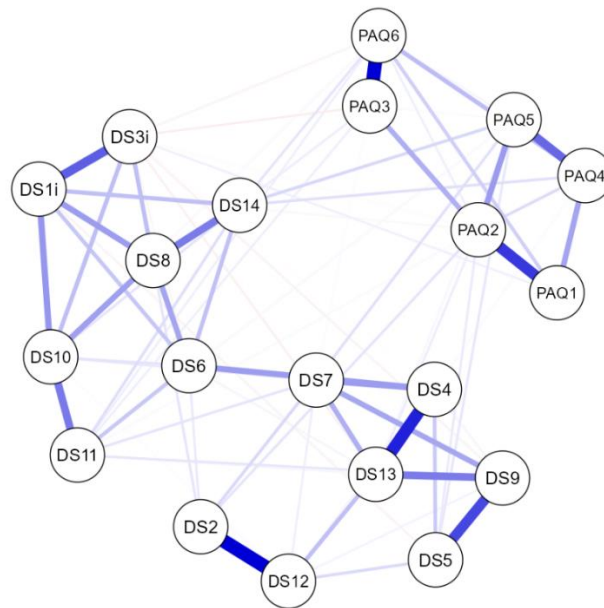


Figure S4. Network plot for Italian sample. Note: *PAQ*: Alexithymia measured with *PAQ-S*. *DS*: Personality Type *D* measured with *DS14*.

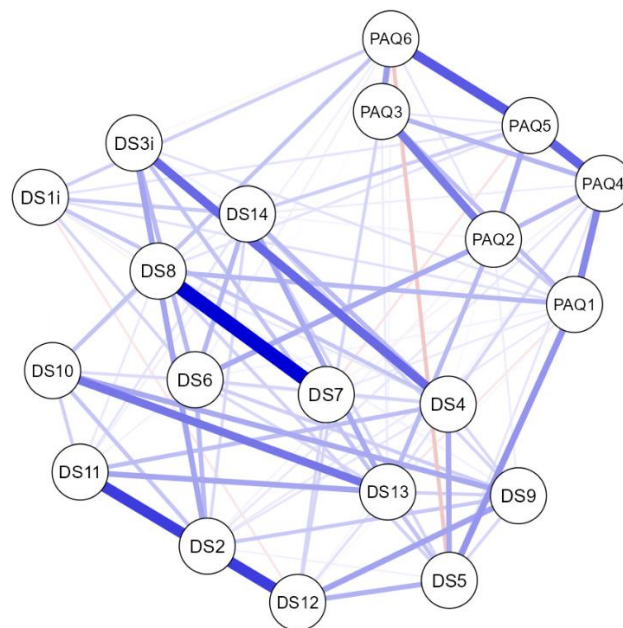


Figure S5. Network plot for Lebanese sample. Note that: *PAQ*: Alexithymia measured with *PAQ-S*. *DS*: Personality Type *D* measured with *DS14*.

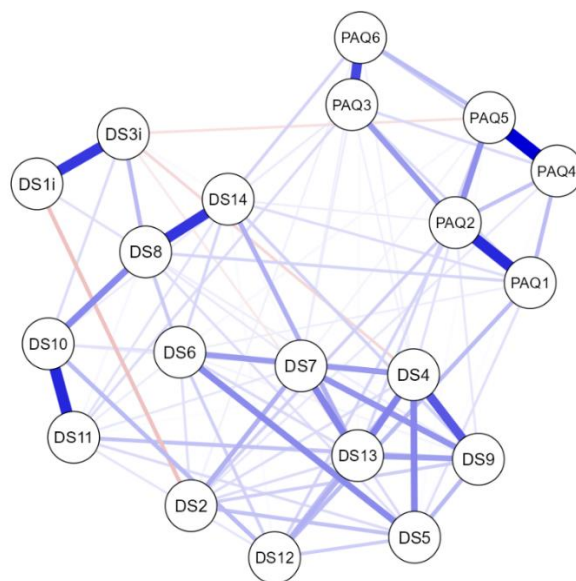


Figure S6. Network plot for nigerian sample. Note: *PAQ*: Alexithymia measured with *PAQ-S*. *DS*: Personality Type *D* measured with *DS14*.

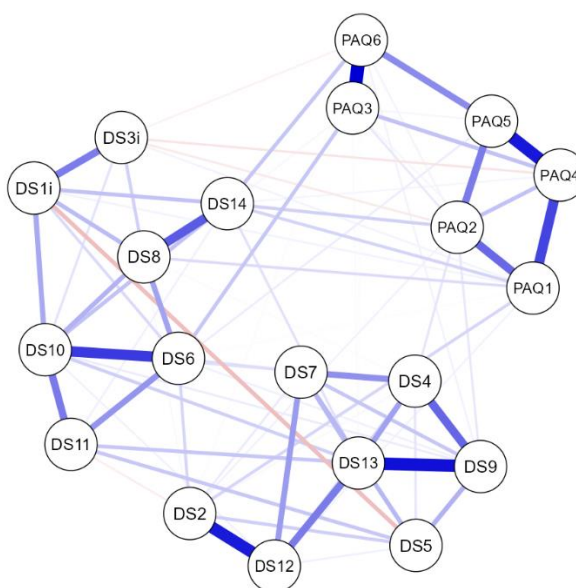


Figure S7. Network plot for turkish sample. Note that: *PAQ*: Alexithymia measured with *PAQ-S*. *DS*: Personality Type *D* measured with *DS14*.

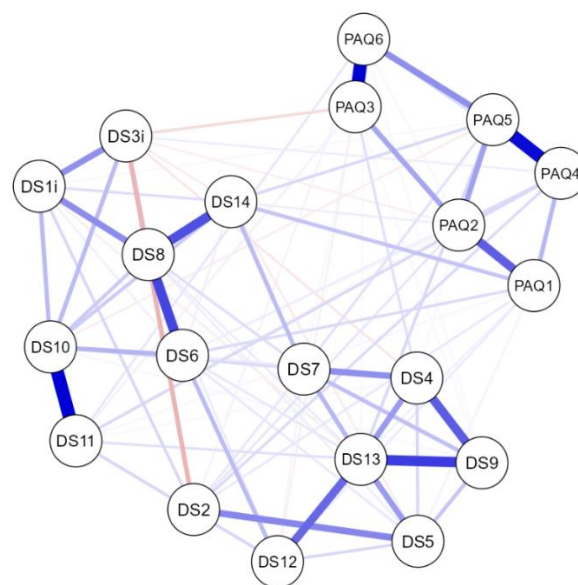


Figure S8. Network plot for ukrainian sample. *Note: PAQ: Alexithymia measured with PAQ-S. DS: Personality Type D measured with DS14.*

Network Analysis for PAQ-S items

Table S4. Summary of Network for PAQ-S.

Group	Nodes	Non-zero Edges	Sparsity
General	6	14/15	0.067
Male	6	11/15	0.267
Female	6	13/15	0.133
Spain	6	11/15	0.267
Italy	6	12/15	0.200
Lebanon	6	14/15	0.067
Nigeria	6	15/15	0.000
Türkiye	6	14/15	0.067
Ukraine	6	12/15	0.200

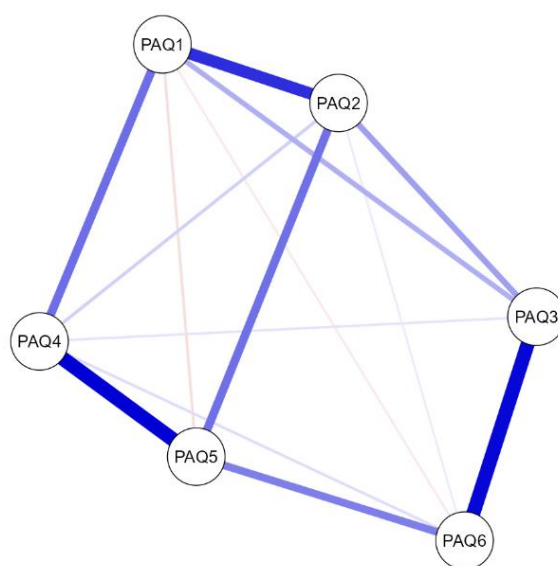


Figure S9. Network plot for total sample.

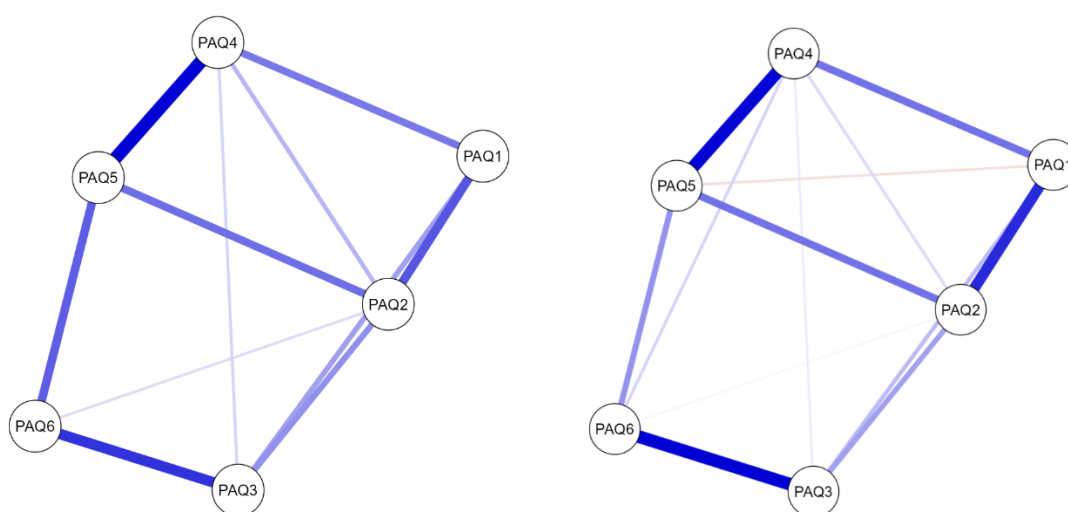


Figure S10. Network plot for male and female sample.

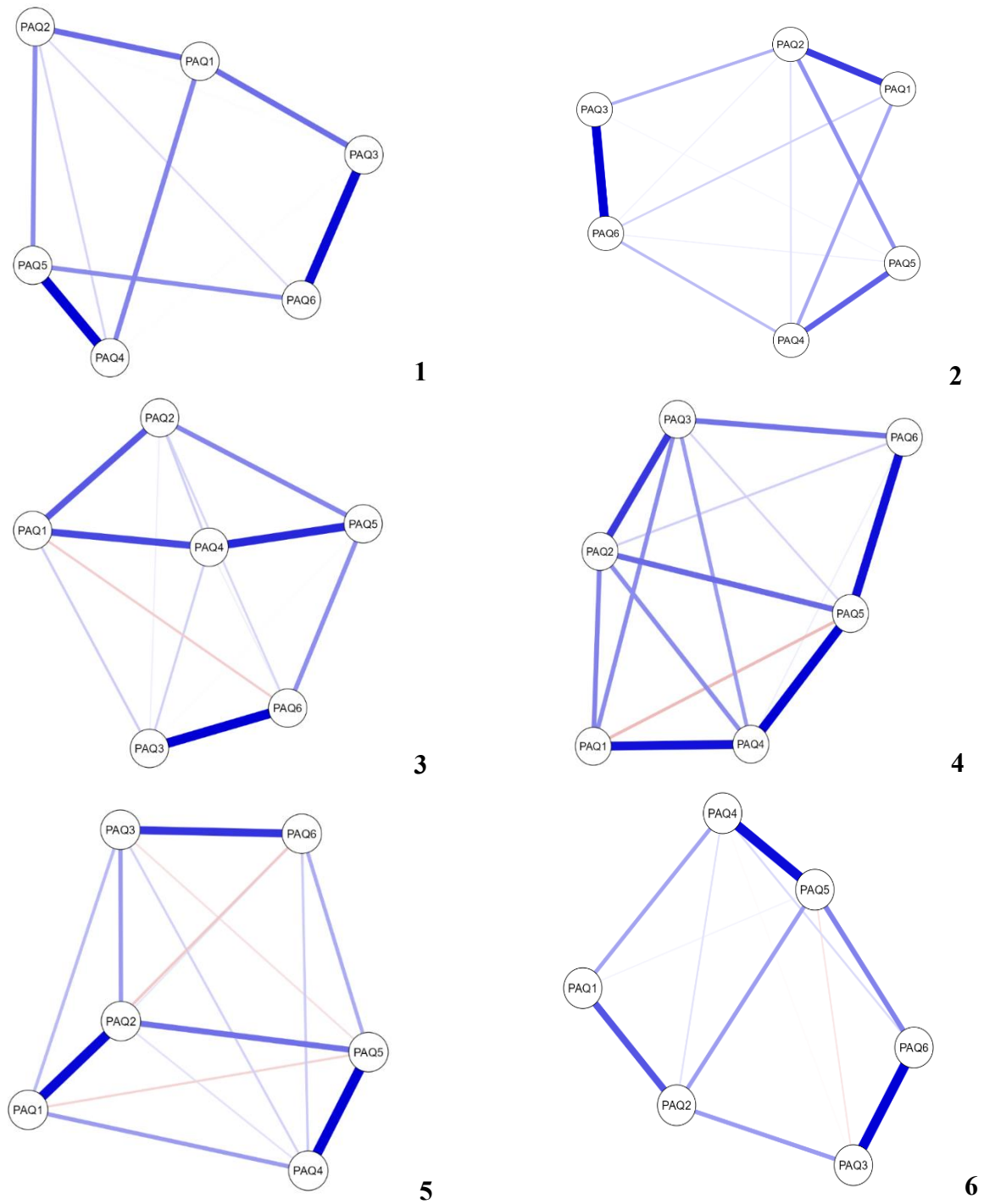


Figure S11. Network plots. Note: 1= Spain. 2= Italy. 3= Lebanon. 4= Nigeria. 5= Türkiye. 6 =Ukraine.

Table S5. Weights matrix per group and variable.

Group	Variable	PAQ1	PAQ2	PAQ3	PAQ4	PAQ5	PAQ6
Total	PAQ1	0.000					
	PAQ2	0.386	0.000				
	PAQ3	0.148	0.176	0.000			
	PAQ4	0.269	0.083	0.050	0.000		
	PAQ5	−0.059	0.264	0.000	0.471	0.000	
	PAQ6	−0.040	0.035	0.458	0.061	0.236	0.000
Male	PAQ1	0.000					
	PAQ2	0.292	0.000				
	PAQ3	0.165	0.189	0.000			
	PAQ4	0.233	0.125	0.074	0.000		
	PAQ5	0.000	0.250	0.000	0.441	0.000	
	PAQ6	0.000	0.061	0.353	0.000	0.279	0.000
Female	PAQ1	0.000					
	PAQ2	0.407	0.000				
	PAQ3	0.128	0.178	0.000			
	PAQ4	0.268	0.072	0.040	0.000		
	PAQ5	−0.062	0.269	0.000	0.477	0.000	
	PAQ6	0.000	0.015	0.484	0.082	0.205	0.000
Spain	PAQ1	0.000					
	PAQ2	0.320	0.000				
	PAQ3	0.315	0.005	0.000			
	PAQ4	0.266	0.091	0.004	0.000		
	PAQ5	0.000	0.249	0.000	0.552	0.000	
	PAQ6	0.000	0.076	0.535	0.000	0.250	0.000
Italy	PAQ1	0.000					
	PAQ2	0.471	0.000				
	PAQ3	0.000	0.189	0.000			
	PAQ4	0.211	0.077	0.000	0.000		
	PAQ5	0.000	0.262	0.016	0.380	0.000	
	PAQ6	0.105	0.031	0.608	0.162	0.035	0.000
Lebanon	PAQ1	0.000					
	PAQ2	0.181	0.000				
	PAQ3	0.166	0.287	0.000			
	PAQ4	0.344	0.164	0.143	0.000		
	PAQ5	−0.100	0.216	0.061	0.368	0.000	
	PAQ6	0.000	0.068	0.202	0.025	0.349	0.000
Nigeria	PAQ1	0.000					

Group	Variable	PAQ1	PAQ2	PAQ3	PAQ4	PAQ5	PAQ6
	PAQ2	0.476	0.000				
	PAQ3	0.132	0.194	0.000			
	PAQ4	0.191	0.056	0.084	0.000		
	PAQ5	−0.082	0.275	−0.059	0.489	0.000	
	PAQ6	−0.105	0.047	0.389	0.098	0.159	0.000
Türkiye	PAQ1	0.000					
	PAQ2	0.350	0.000				
	PAQ3	0.105	0.034	0.000			
	PAQ4	0.386	0.099	0.097	0.000		
	PAQ5	0.000	0.255	0.004	0.454	0.000	
	PAQ6	−0.103	0.084	0.535	0.031	0.235	0.000
Ukraine	PAQ1	0.000					
	PAQ2	0.370	0.000				
	PAQ3	0.000	0.218	0.000			
	PAQ4	0.198	0.062	−0.007	0.000		
	PAQ5	0.025	0.214	−0.054	0.532	0.000	
	PAQ6	0.000	0.000	0.555	0.078	0.271	0.000

Table S6. Centrality measures per group and variable.

Group	Variable	Betweenness	Closeness	Strength	Expected Influence
Total	PAQ1	−1.101	−0.367	−0.137	−1.399
	PAQ2	−1.101	0.327	0.430	0.971
	PAQ3	0.550	−0.887	−1.051	−0.141
	PAQ4	−0.275	0.030	0.293	0.868
	PAQ5	1.376	1.784	1.555	0.652
	PAQ6	0.550	−0.887	−1.090	−0.951
Men	PAQ1	−0.886	−0.722	−1.112	−1.112
	PAQ2	−0.886	0.217	0.825	0.825
	PAQ3	−0.221	−0.732	−0.333	−0.333
	PAQ4	−0.221	−0.088	0.440	0.440
	PAQ5	1.771	1.889	1.266	1.266
	PAQ6	0.443	−0.564	−1.085	−1.085
Women	PAQ1	−1.101	−0.514	−0.375	−1.382
	PAQ2	−1.101	0.811	0.540	1.048
	PAQ3	0.550	−0.938	−0.787	−0.295
	PAQ4	−0.275	0.057	0.522	1.030
	PAQ5	1.376	1.522	1.404	0.417
	PAQ6	0.550	−0.938	−1.305	−0.819
Spain	PAQ1	0.645	1.330	0.132	0.132

Group	Variable	Betweenness	Closeness	Strength	Expected Influence
	PAQ2	−1.291	−1.345	−1.454	−1.454
	PAQ3	−0.323	−0.264	−0.287	−0.287
	PAQ4	−0.323	−0.258	0.252	0.252
	PAQ5	1.614	1.025	1.628	1.628
	PAQ6	−0.323	−0.488	−0.271	−0.271
Italy	PAQ1	−1.088	−0.059	−0.516	−0.516
	PAQ2	1.814	1.757	1.517	1.517
	PAQ3	0.363	−0.677	−0.299	−0.299
	PAQ4	−0.363	0.431	−0.159	−0.159
	PAQ5	−0.363	−0.399	−1.313	−1.313
	PAQ6	−0.363	−1.053	0.770	0.770
Lebanon	PAQ1	−0.791	−0.616	−0.609	−1.351
	PAQ2	−0.791	−0.138	0.149	0.527
	PAQ3	−0.791	−0.845	−0.198	0.195
	PAQ4	0.791	1.085	0.927	1.271
	PAQ5	1.581	1.392	1.220	0.400
	PAQ6	0.000	−0.879	−1.490	−1.042
Nigeria	PAQ1	−0.761	−0.022	0.382	−0.950
	PAQ2	1.523	1.528	0.968	1.503
	PAQ3	−0.190	−0.938	−0.817	−0.233
	PAQ4	−0.761	−0.492	−0.256	0.768
	PAQ5	0.952	0.840	1.116	0.005
	PAQ6	−0.761	−0.915	−1.392	−1.093
Türkiye	PAQ1	−0.429	−0.195	0.183	−0.929
	PAQ2	−0.945	−0.469	−0.947	−0.262
	PAQ3	−0.945	−1.226	−1.379	−0.629
	PAQ4	0.086	0.601	1.330	1.672
	PAQ5	1.632	1.656	0.222	0.731
	PAQ6	0.601	−0.367	0.590	−0.584
Ukraine	PAQ1	−1.614	−1.565	−1.663	−1.592
	PAQ2	0.323	0.482	0.019	0.304
	PAQ3	0.323	−0.157	−0.172	−0.759
	PAQ4	−0.645	−0.107	0.092	0.293
	PAQ5	1.291	1.503	1.458	1.172
	PAQ6	0.323	−0.157	0.265	0.581

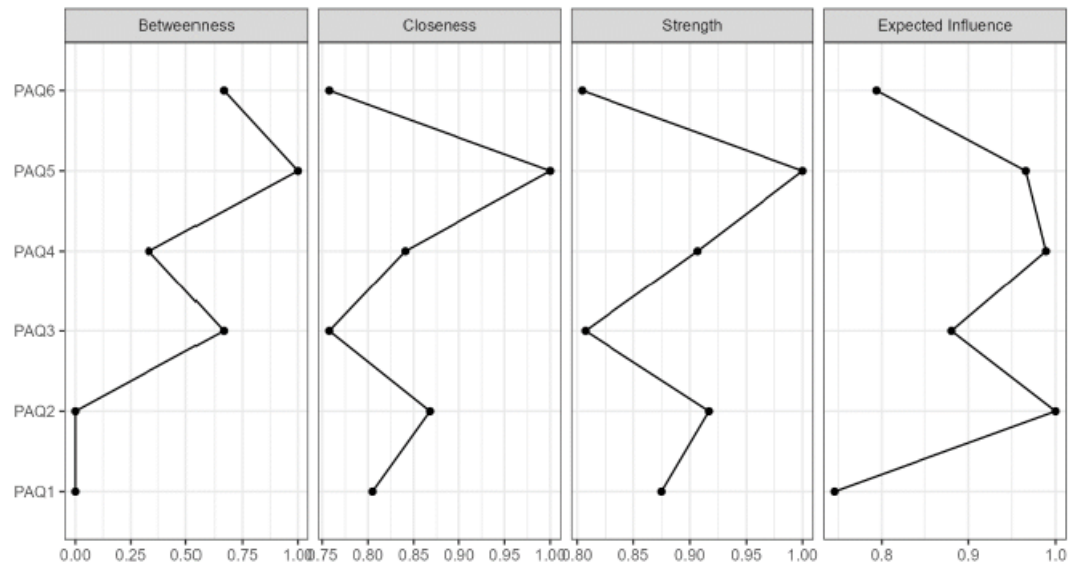


Figure S12. Centrality Plot for total sample.

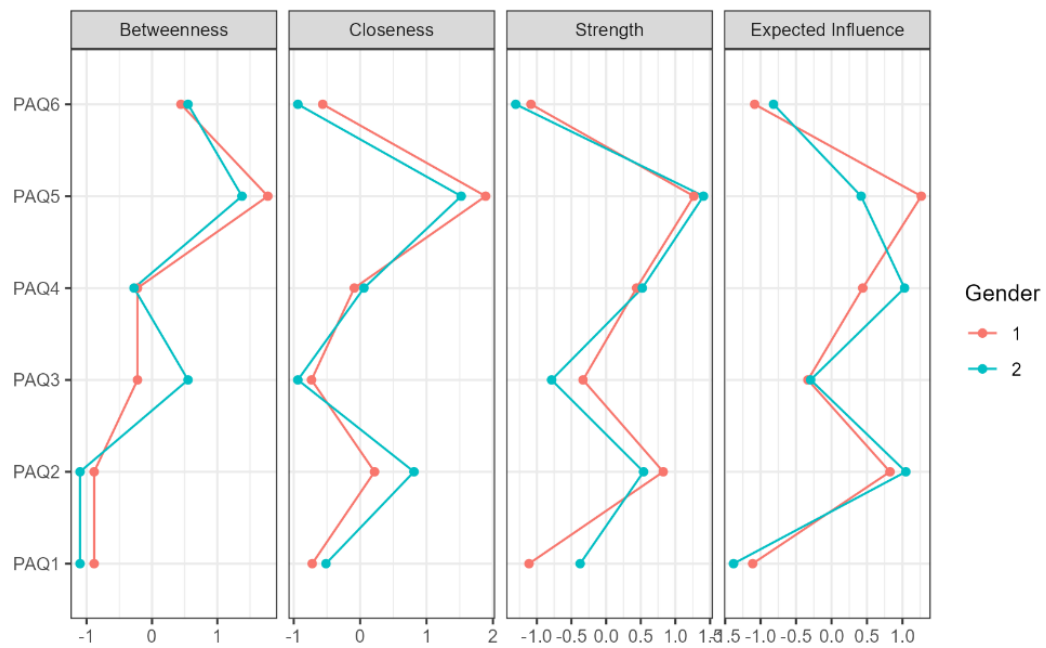


Figure S13. Centrality Plot for male (1) and female (2) samples.

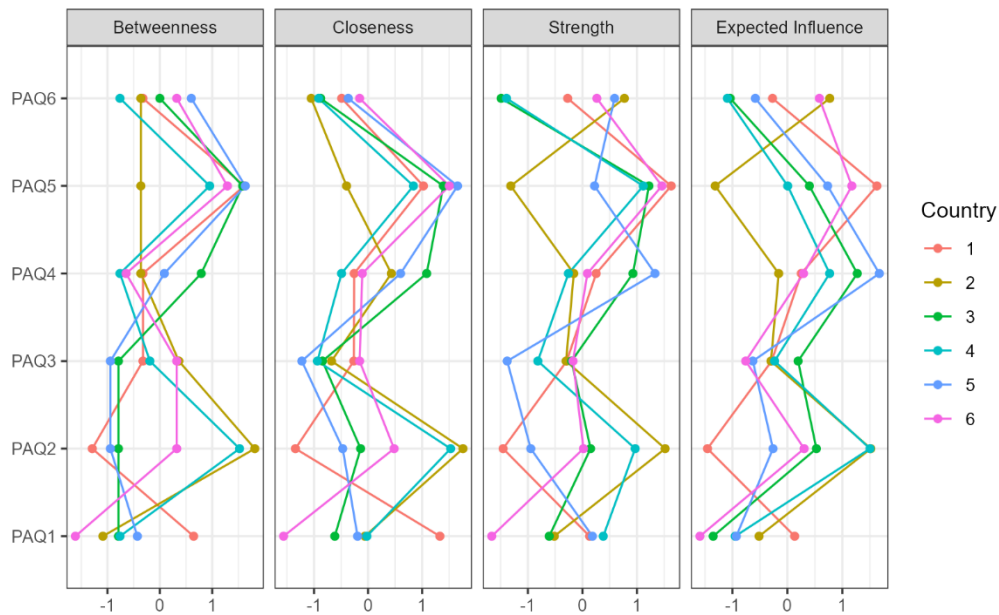


Figure S14. Centrality Plot by country. Note: 1= Spain. 2= Italy. 3= Lebanon. 4= Nigeria. 5= Türkiye. 6=Ukraine.

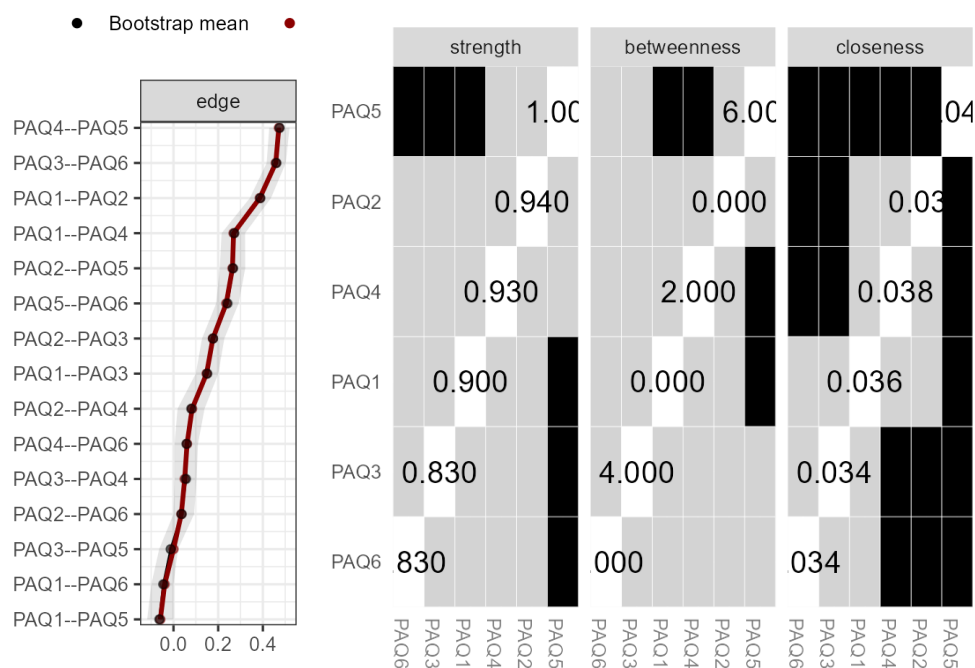


Figure S15. Edge stability (first image) and centrality stability (second image) for total sample. [It is suggested that the CS coefficient should not be below 0.25 and preferably should be above 0.5. According Epskamp et al. (2018) a correlation stability coefficient of 0.7 or higher is a useful threshold].

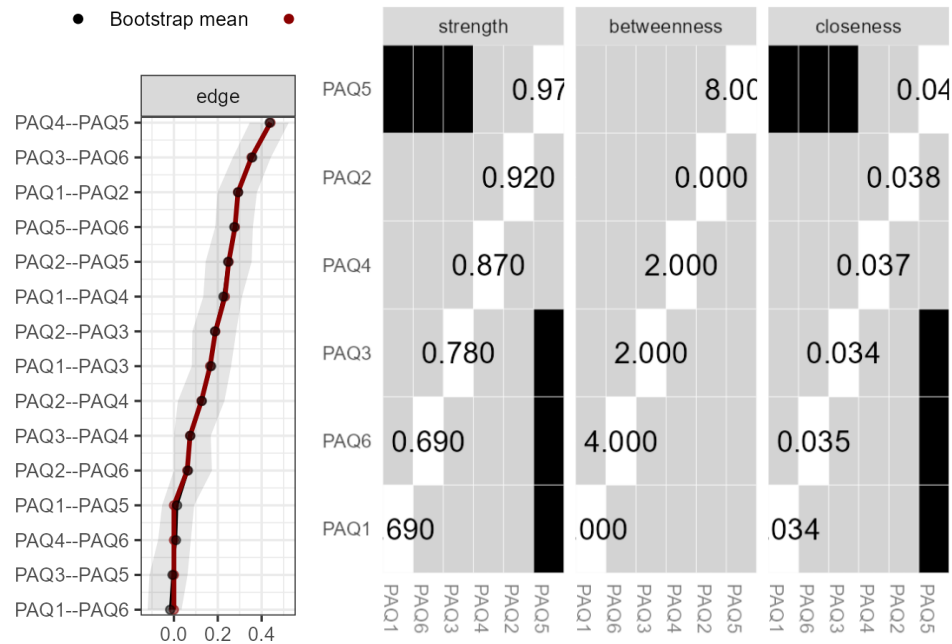


Figure S16. Edge stability (first image) and centrality stability (second image) for male sample. [It is suggested that the CS coefficient should not be below 0.25 and preferably should be above 0.5. According Epskamp et al. (2018) a correlation stability coefficient of 0.7 or higher is a useful threshold].

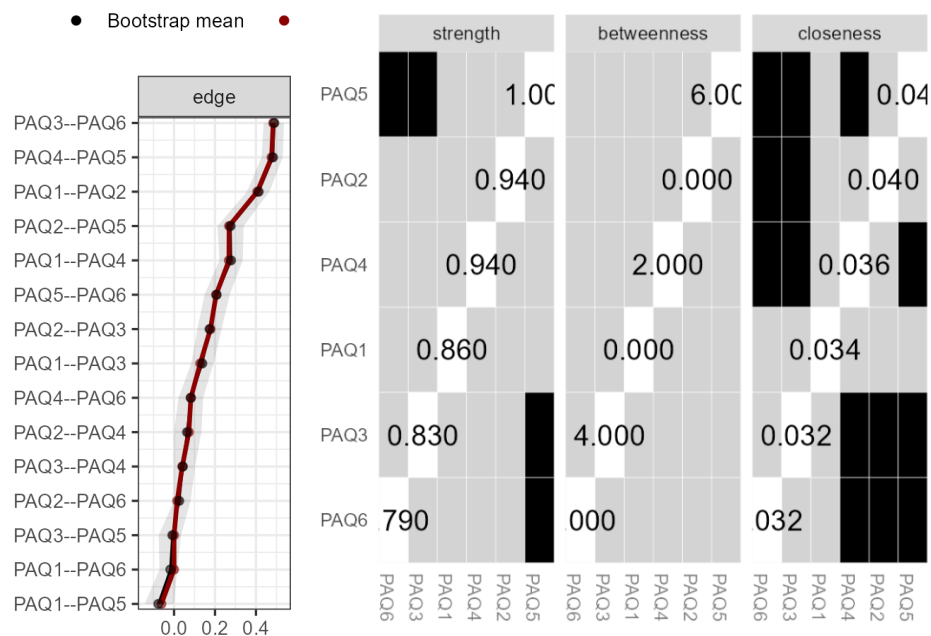


Figure S17. Edge stability (first image) and centrality stability (second image) for female sample. [It is suggested that the CS coefficient should not be below 0.25 and preferably should be above 0.5. According Epskamp et al. (2018) a correlation stability coefficient of 0.7 or higher is a useful threshold].

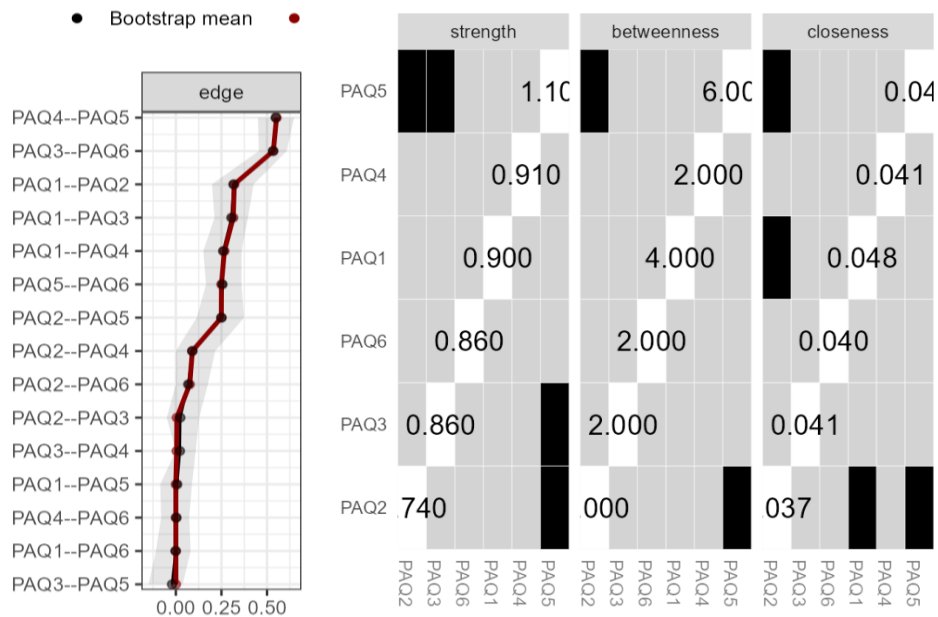


Figure S18. Edge stability (first image) and centrality stability (second image) for Spanish sample. [It is suggested that the CS coefficient should not be below 0.25 and preferably should be above 0.5. According Epskamp et al. (2018) a correlation stability coefficient of 0.7 or higher is a useful threshold].

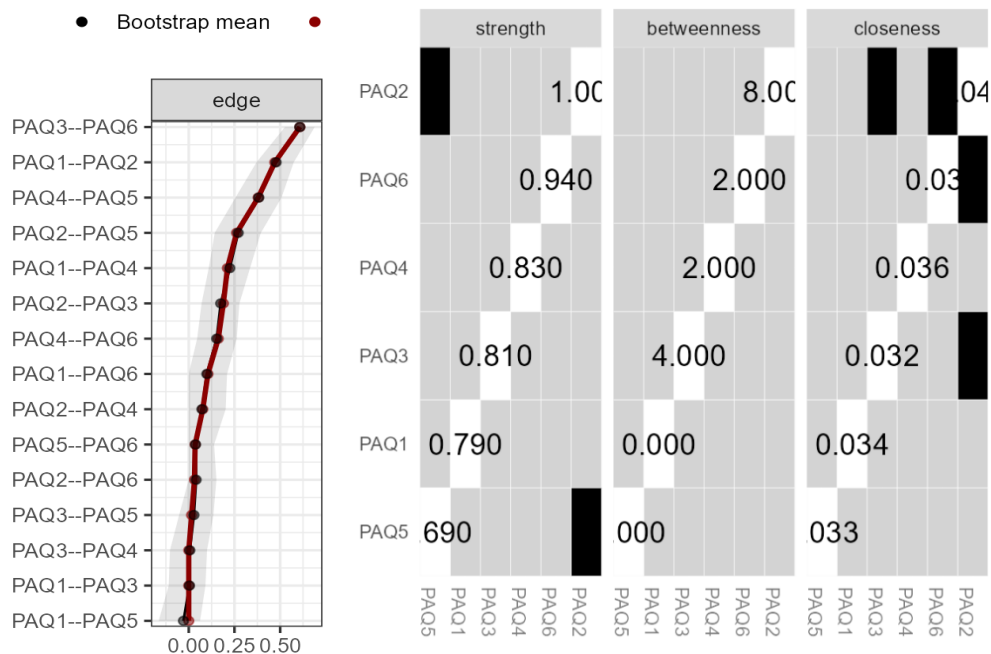


Figure S19. Edge stability (first image) and centrality stability (second image) for Italian sample. [It is suggested that the CS coefficient should not be below 0.25 and preferably should be above 0.5. According Epskamp et al. (2018) a correlation stability coefficient of 0.7 or higher is a useful threshold].

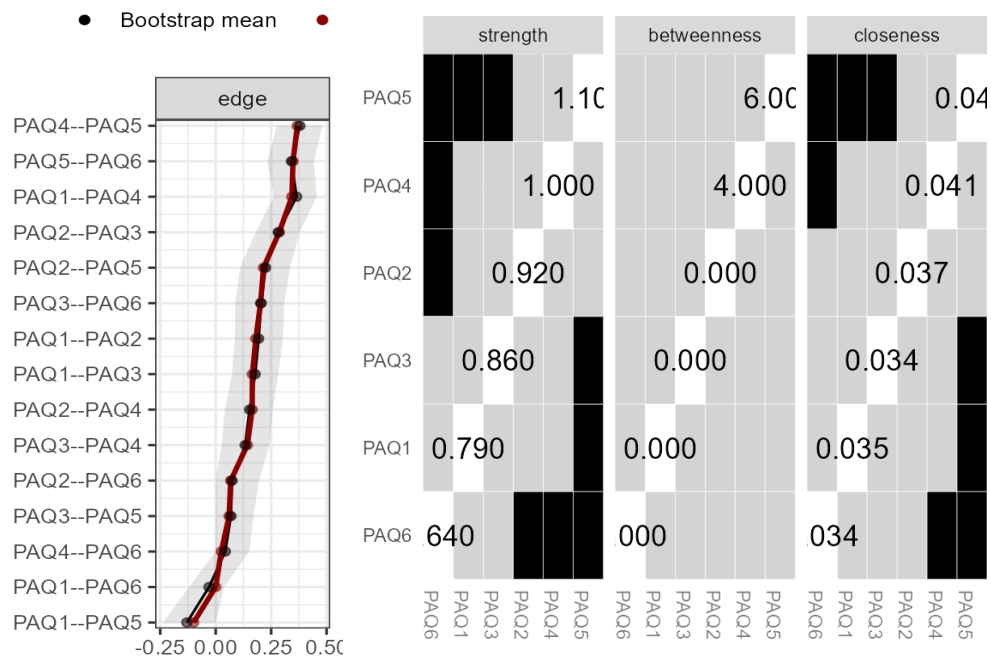


Figure S20. Edge stability (first image) and centrality stability (second image) for Lebanese sample. [It is suggested that the CS coefficient should not be below 0.25 and preferably should be above 0.5. According Epskamp et al. (2018) a correlation stability coefficient of 0.7 or higher is a useful threshold].

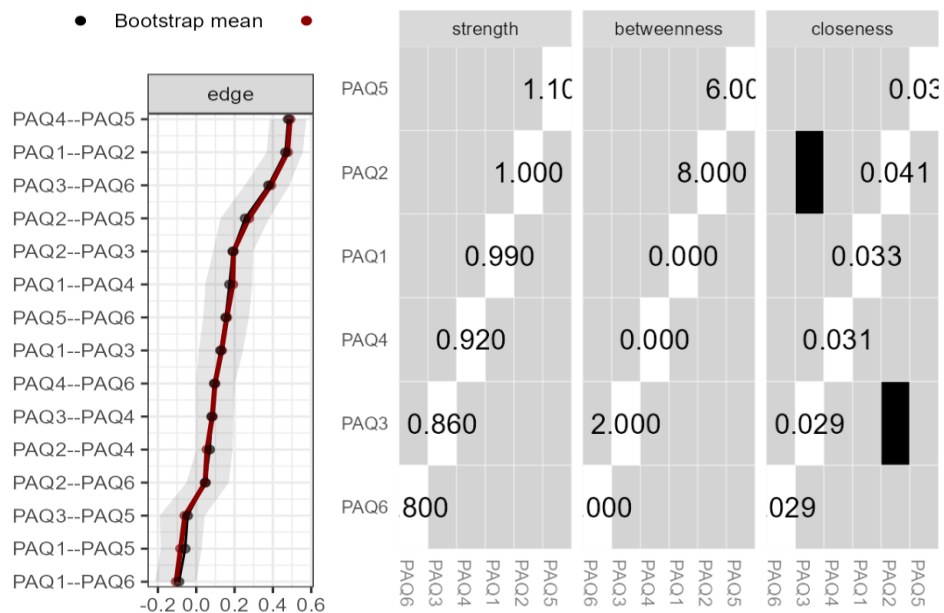


Figure S21. Edge stability (first image) and centrality stability (second image) for Nigerian sample. [It is suggested that the CS coefficient should not be below 0.25 and preferably should be above 0.5. According Epskamp et al. (2018) a correlation stability coefficient of 0.7 or higher is a useful threshold].

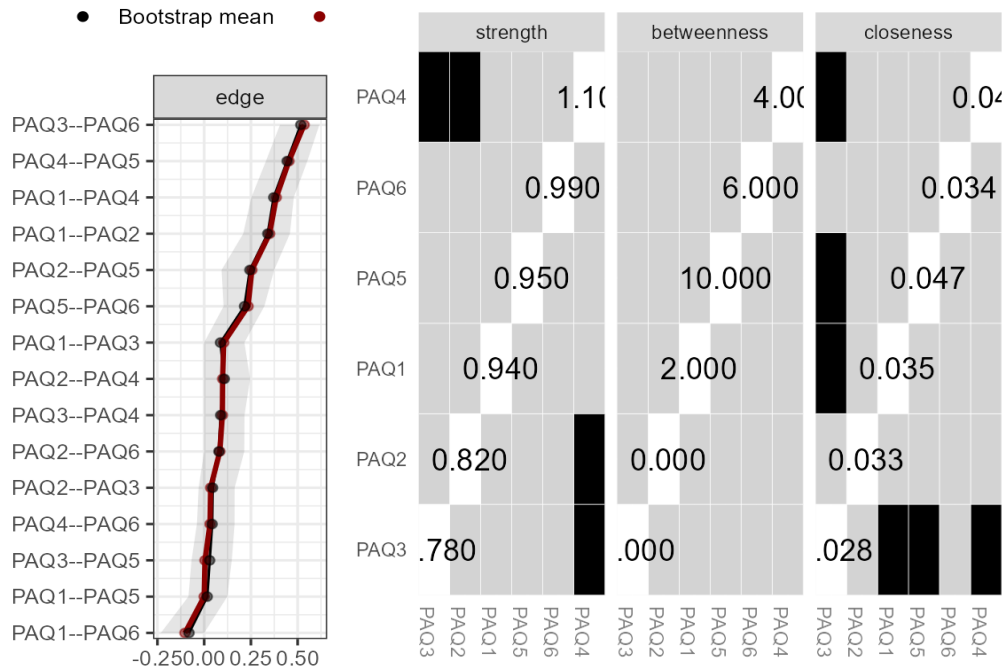


Figure S22. Edge stability (first image) and centrality stability (second image) for Turkish sample. [It is suggested that the CS coefficient should not be below 0.25 and preferably should be above 0.5. According Epskamp et al. (2018) a correlation stability coefficient of 0.7 or higher is a useful threshold].

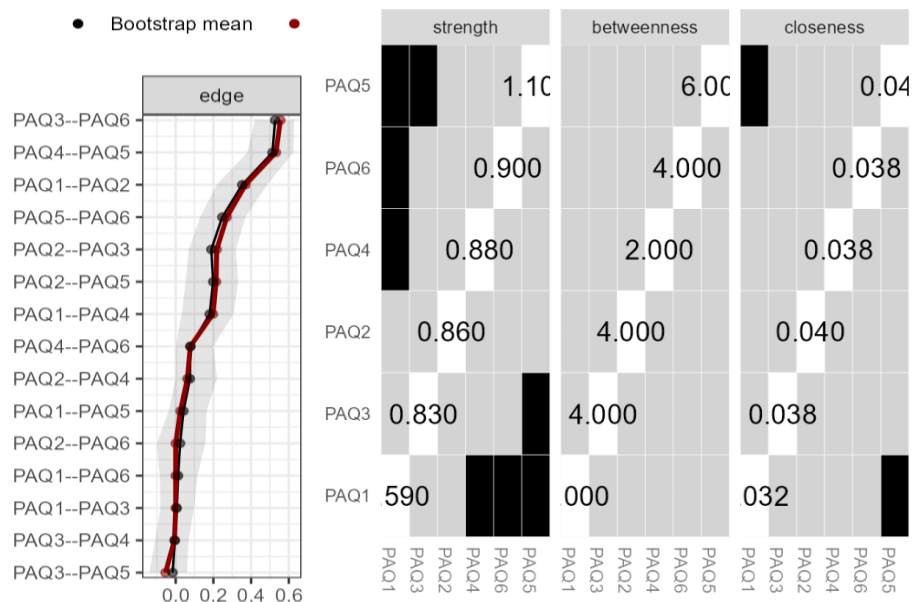


Figure S23. Edge stability (first image) and centrality stability (second image) for Ukrainian sample. [It is suggested that the CS coefficient should not be below 0.25 and preferably should be above 0.5. According Epskamp et al. (2018) a correlation stability coefficient of 0.7 or higher is a useful threshold].



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