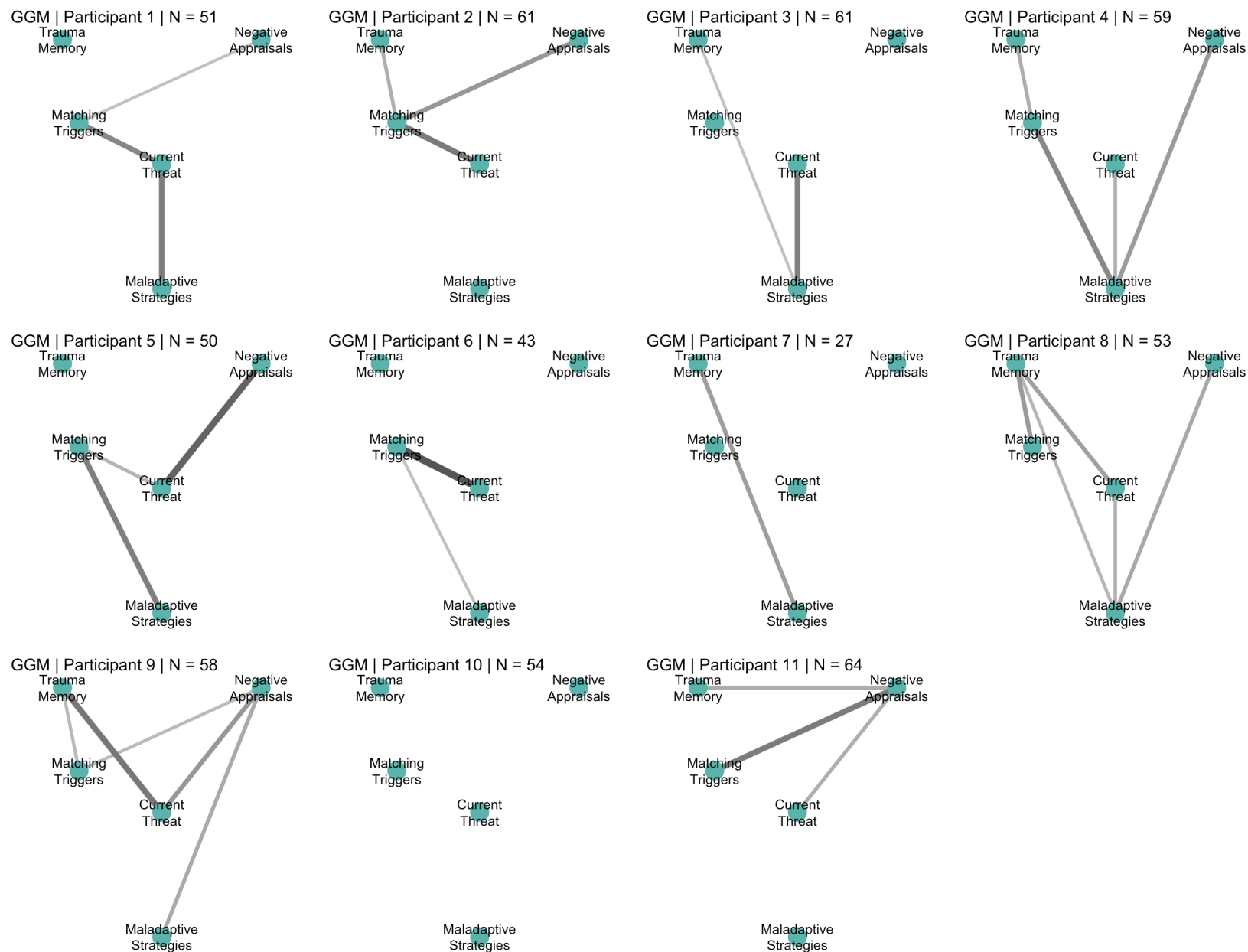


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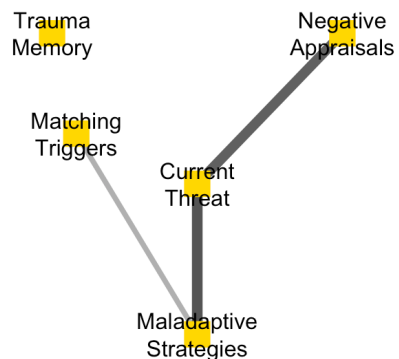
Figure S1. Graphical Gaussian Models of the relationship between the Ehlers and Clark Model components for the individual study participants (N=11; 581 observations)



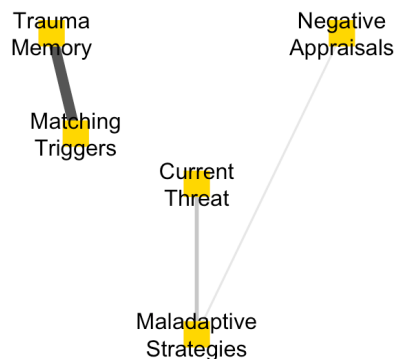
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Figure S2. Ising Models derived from MSN data of the study participants (N=11; 581 observations)

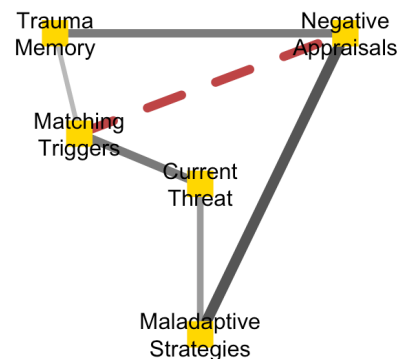
Ising | Participant 1; N = 34



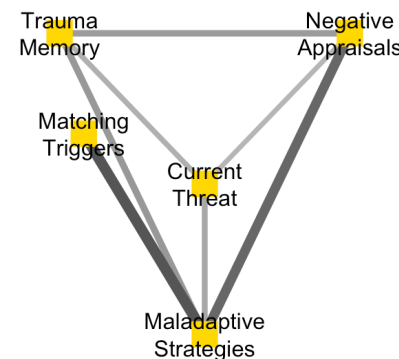
Ising | Participant 2; N = 43



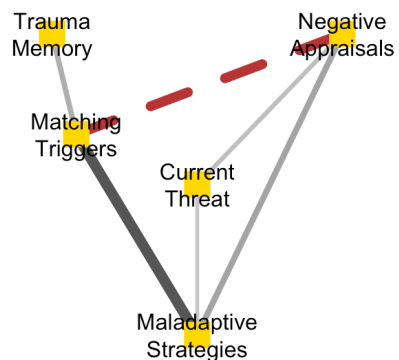
Ising | Participant 3; N = 51



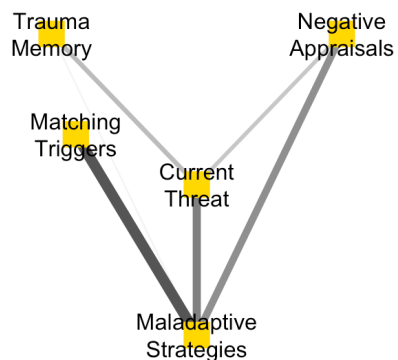
Ising | Participant 4; N = 60



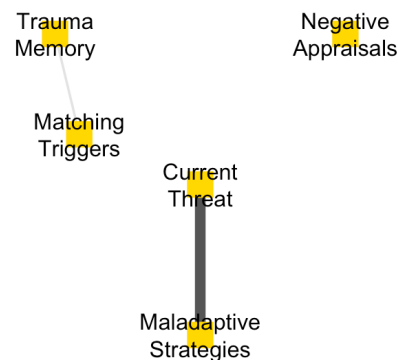
Ising | Participant 5; N = 52



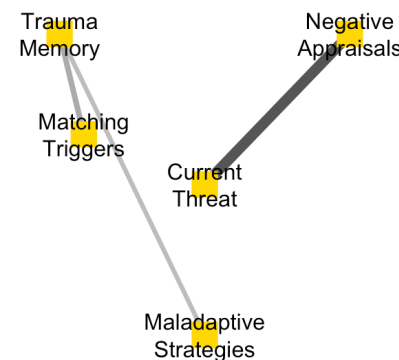
Ising | Participant 6; N = 29



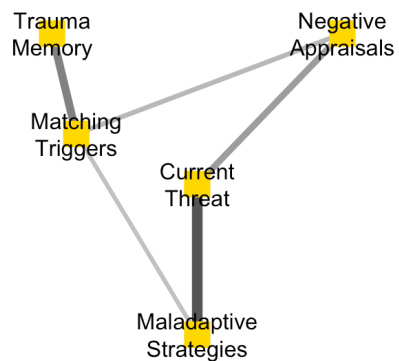
Ising | Participant 7; N = 25



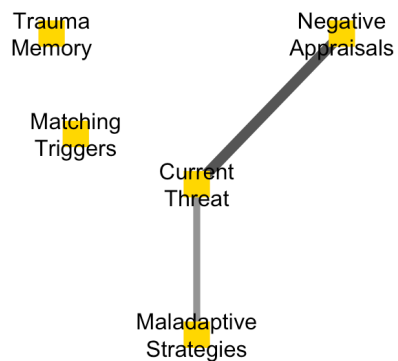
Ising | Participant 8; N = 47



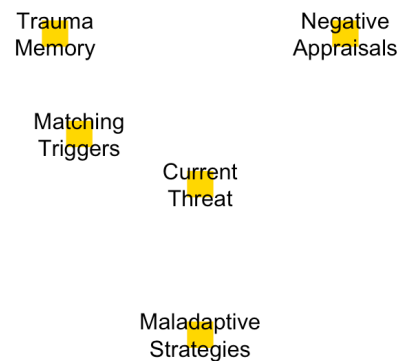
Ising | Participant 9; N = 60



Ising | Participant 10; N = 35

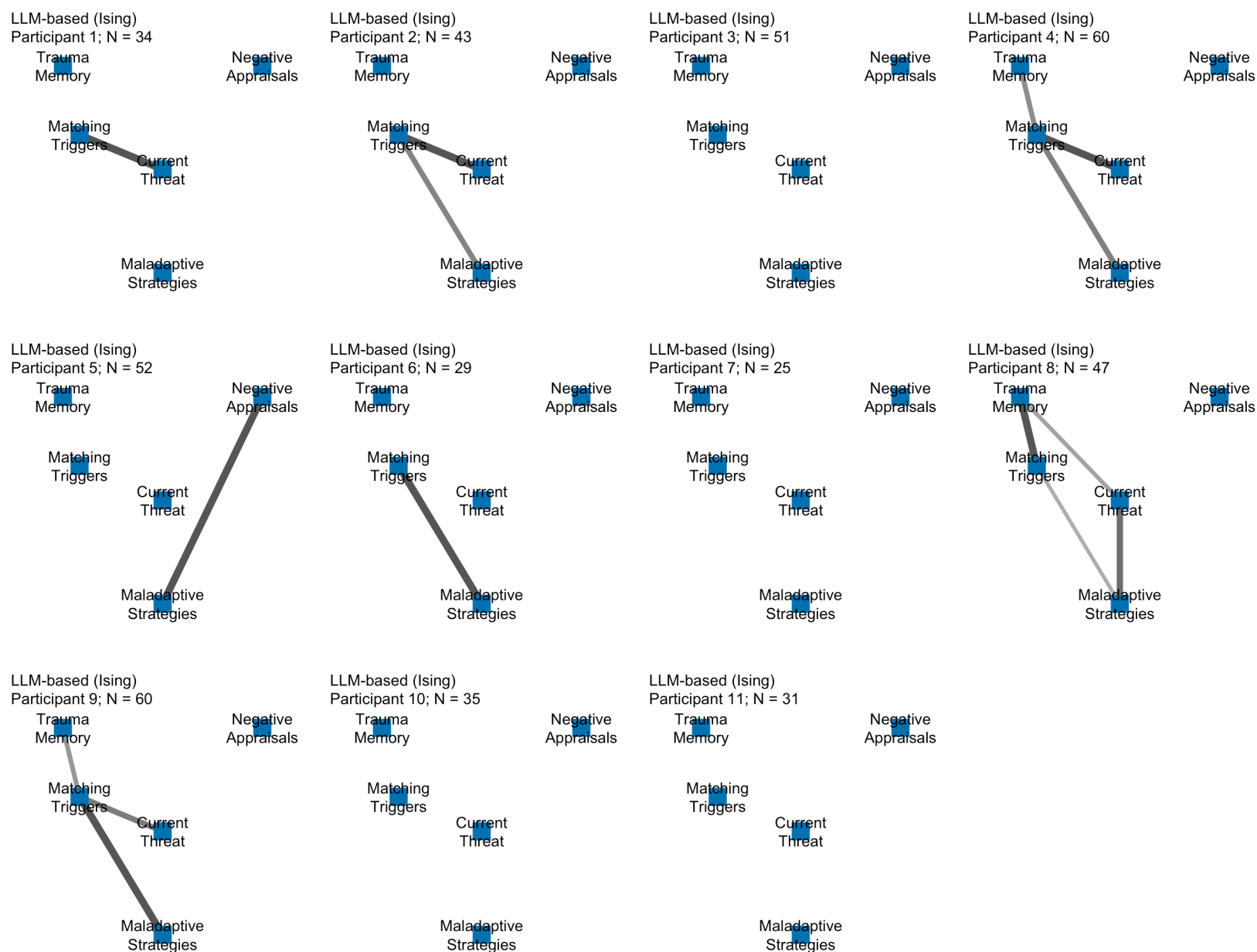


Ising | Participant 11; N = 31



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Figure S3. Ising Models derived from LLM data of the study participants (N=11; 467 observations)



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Figure S4. Momentary Structured Networks (MSN) of the study participants (N=11; 581 observations)

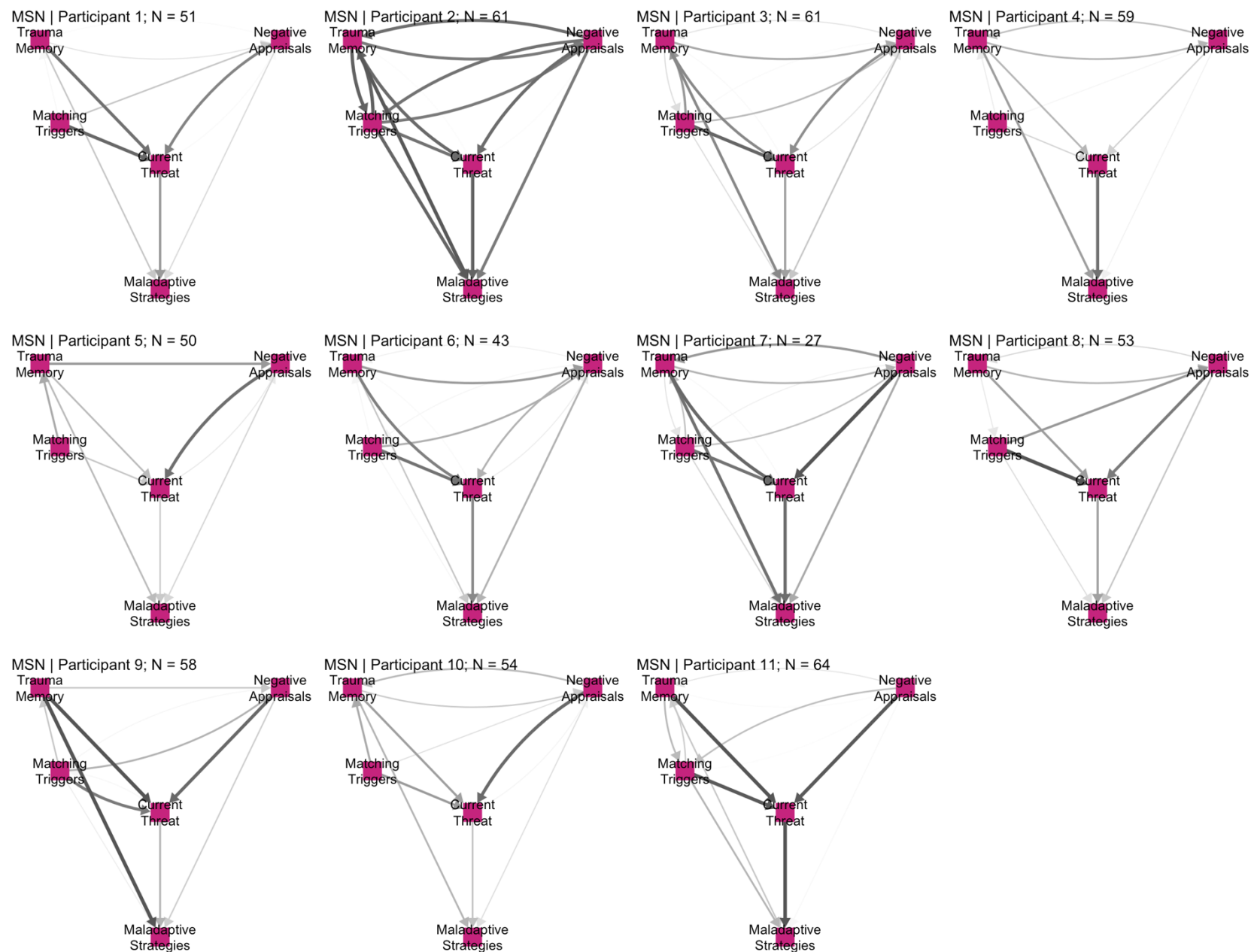
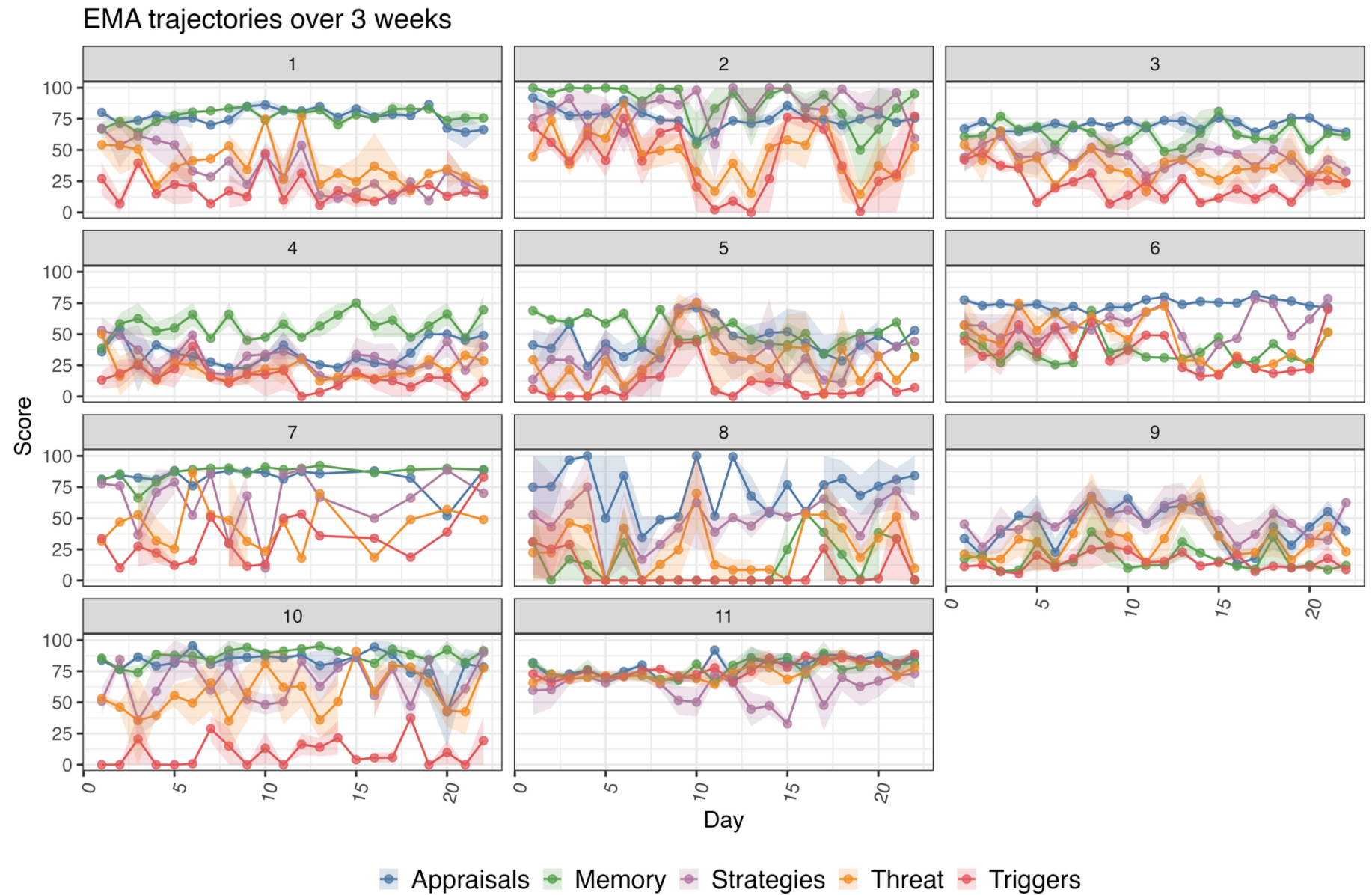


Figure S5. Ecological momentary assessment (EMA) trajectories over the 3-week study period. Mixed-effects linear models showed no significant temporal trends in symptom levels, supporting the assumption of stationarity.



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Figure S6. Multilevel VAR (mlVAR) networks

mlVAR (temporal) | N = 11 | Obs = 307

Trauma
Memory

Negative
Appraisals

Matching
Triggers

Current
Threat

Maladaptive
Strategies

mlVAR (contemporaneous) | N = 11 | Obs = 307

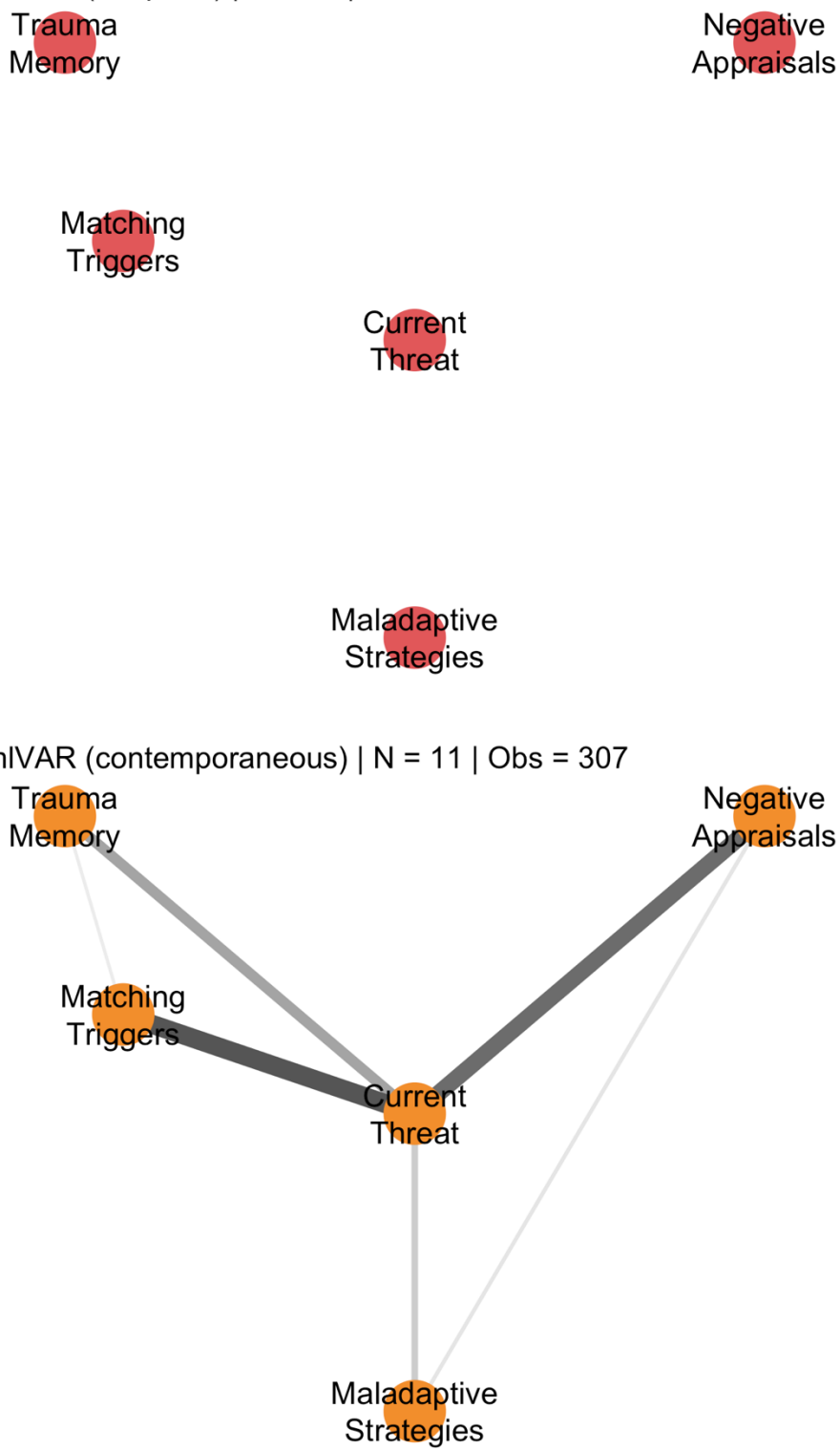
Trauma
Memory

Negative
Appraisals

Matching
Triggers

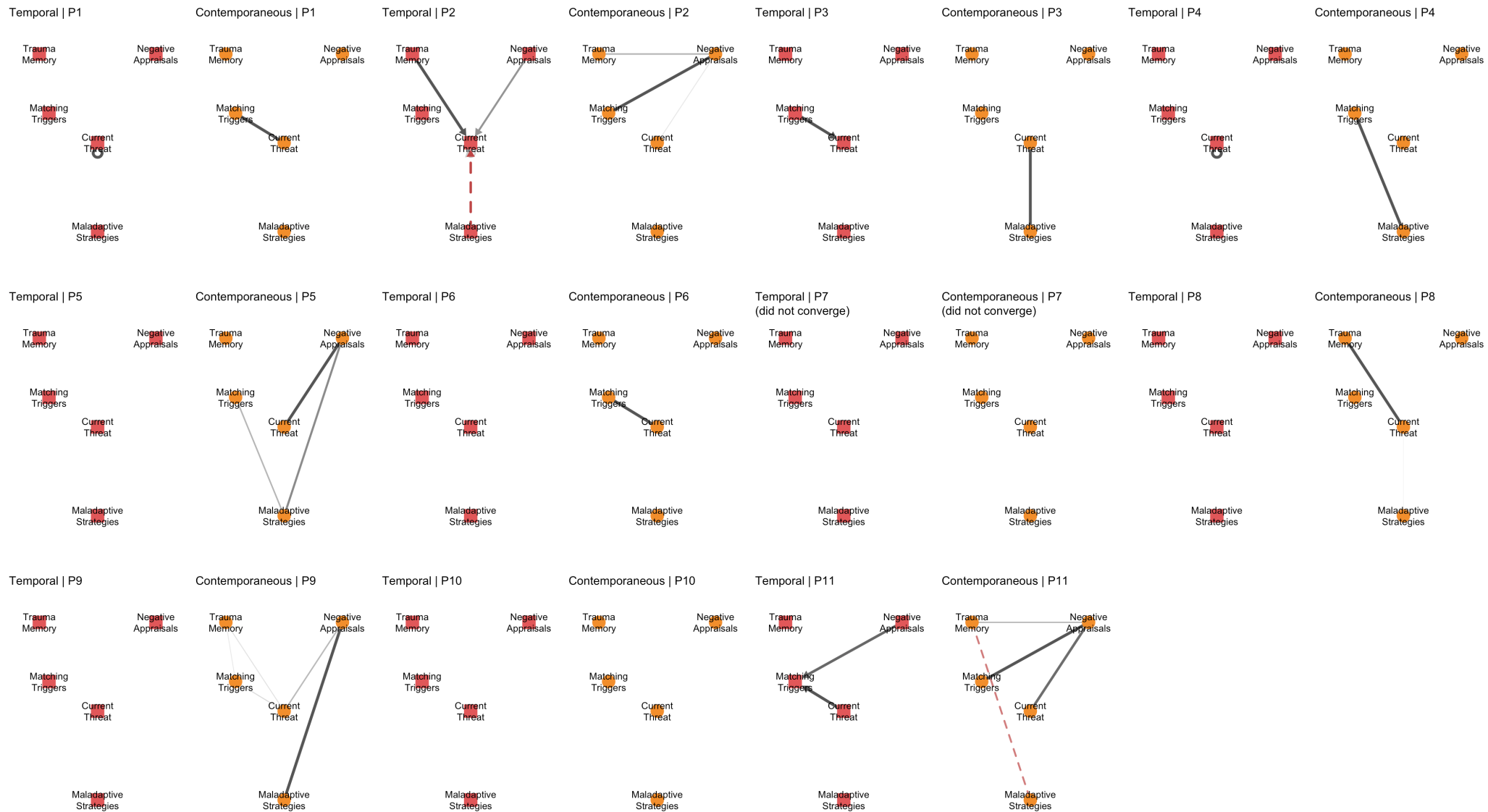
Current
Threat

Maladaptive
Strategies



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Figure S7. Individual VAR networks extracted from mlVAR.



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Table S1. Pairwise complexity comparisons between network methods.

Comparison	Mean_1	SD_1	Mean_2	SD_2	t	df	p	p_FDR	p_Bonf
CONCORD vs MSN	0.85	0.13	0.77	0.09	2.29	10	0.045089	0.05153	0.360712
CONCORD vs Ising (LLM data)	0.85	0.13	0.10	0.12	11.55	10	4.17E-07	3.34E-06	3.34E-06
MSN vs Ising (MSN data)	0.77	0.09	0.37	0.22	5.36	10	0.000321	0.000513	0.002567
Ising (LLM data) vs Ising (MSN data)	0.10	0.12	0.37	0.22	-4.03	10	0.002407	0.003209	0.019254
Ising (LLM data) vs GGM	0.10	0.12	0.23	0.16	-5.76	10	0.000183	0.000365	0.00146
Ising (MSN data) vs GGM	0.37	0.22	0.23	0.16	1.87	10	0.091193	0.091193	0.729547
CONCORD vs GGM	0.85	0.13	0.23	0.16	8.66	10	5.85E-06	2.27E-05	4.68E-05
MSN vs GGM	0.77	0.09	0.23	0.16	8.30	10	8.51E-06	2.27E-05	6.81E-05

p = original p-value; p_FDR = FDR-adjusted p-value ; p_Bonf = Bonferonni-corrected p-value

Table S2. Participant-level edge count, density, and network complexity (MSN, GGM, and MSN-based Ising models).

ID	MSN_count	MSN_density	MSN_complexity	Ising_count	Ising_density	Ising_complexity	GGM_count	GGM_density	GGM_complexity	n_obs
1	11	0.55	0.767786	3	0.3	0.24785	3	0.3	0.24785	51
2	15	0.75	0.857002	3	0.3	0.290917	3	0.3	0.231594	61
3	15	0.75	0.857002	6	0.6	0.592391	2	0.2	0.129203	61
4	10	0.5	0.734698	7	0.7	0.668374	4	0.4	0.371353	59
5	9	0.45	0.595391	6	0.6	0.576135	3	0.3	0.24785	50
6	14	0.7	0.854991	6	0.6	0.565579	2	0.2	0.129203	43
7	14	0.7	0.839911	2	0.2	0.172271	1	0.1	0.043068	27
8	10	0.5	0.653065	3	0.3	0.290917	5	0.5	0.467489	53
9	12	0.6	0.759383	5	0.5	0.483744	5	0.5	0.483744	58
10	11	0.55	0.767786	2	0.2	0.129203	0	0	0	54
11	13	0.65	0.798597	0	0	0	3	0.3	0.231594	64

Towards a CONCORD Between Patient Perspective and Ecological Case Formulation – Supplementary Materials

Table S3. Participant-level edge count, density, and network complexity (CONCORD and LLM-based Ising models).

ID	CONCORD_count	CONCORD_density	CONCORD_complexity	Ising_count	Ising_density	Ising_complexity	n_obs
1	12	0.6	0.848368	1	0.1	0.043068	34
2	15	0.75	0.985925	2	0.2	0.129203	43
3	13	0.65	0.852619	0	0	0	51
4	13	0.65	0.947354	3	0.3	0.231594	60
5	13	0.65	0.852619	1	0.1	0.043068	52
6	11	0.55	0.847586	1	0.1	0.043068	29
7	12	0.6	0.848368	0	0	0	25
8	8	0.4	0.492428	4	0.4	0.344541	47
9	12	0.6	0.872752	3	0.3	0.231594	60
10	14	0.7	0.880237	0	0	0	35
11	14	0.7	0.939739	0	0	0	31

Table S4. Network model associations in mixed-effects linear regressions, accounting for individual slopes and intercepts (all edges).

Comparison	N	Participants	Beta	SE	df	t	p	p_FDR
CONCORD vs MSN	220	11	0.551933	0.066169	9.999921	8.341218	8.15E-06	4.08E-05
CONCORD vs Ising (LLM-based)	140	7	0.514654	0.099166	6.000001	5.189835	0.002035	0.005087
MSN vs Ising	200	10	0.115772	0.076981	9.000073	1.503895	0.166863	0.208578
CONCORD vs GGM	200	10	0.195297	0.11312	8.999827	1.726462	0.118341	0.197235
MSN vs GGM	200	10	0.044596	0.098485	9.001393	0.452815	0.661398	0.661398

p = original p-value; p_FDR = FDR-adjusted p-value; empty networks were excluded from analysis.

Towards a CONCORD Between Patient Perspective and Ecological Case Formulation – Supplementary Materials

Table S5. Network model associations in mixed-effects linear regressions, accounting for individual slopes and intercepts (non-zero edges only).

Comparison	N	Participants	Beta	SE	df	t	p	p_FDR
CONCORD vs MSN	104	11	0.398112	0.106873	7.760875	3.725108	0.006153	0.015382
CONCORD vs Ising (LLM-based)	24	4	0.686595	0.155005	22	4.429492	0.000211	0.001057
MSN vs Ising	76	10	0.153753	0.204448	6.950185	0.752039	0.476718	0.657084
CONCORD vs GGM	58	9	0.140166	0.210278	7.254571	0.666577	0.525667	0.657084
MSN vs GGM	54	9	0.02737	0.283449	7.830269	0.096562	0.9255	0.9255

p = original p-value; p_FDR = FDR-adjusted p-value; empty networks were excluded from analysis.

Table S6. Network overlap metrics.

Reference	N	Sensitivity_M	Sensitivity_SD	Specificity_M	Specificity_SD	Precision_M	Precision_SD	Accuracy_M	Accuracy_SD	F1_M	F1_SD
CONCORD predicts GGM	11	0.98	0.06	0.12	0.18	0.31	0.19	0.35	0.20	0.44	0.21
CONCORD predicts Ising (LLM data)	11	1.00	0.00	0.11	0.19	0.17	0.20	0.22	0.23	0.24	0.26
CONCORD predicts MSN	11	0.78	0.16	0.89	0.11	0.89	0.12	0.81	0.09	0.82	0.12
MSN predicts CONCORD	11	0.89	0.12	0.73	0.14	0.78	0.16	0.81	0.09	0.82	0.12
MSN predicts GGM	11	0.92	0.13	0.04	0.06	0.27	0.14	0.28	0.13	0.39	0.18
MSN predicts Ising (EMA data)	11	0.89	0.16	0.01	0.04	0.37	0.22	0.35	0.20	0.48	0.24

Towards a CONCORD Between Patient Perspective and Ecological Case Formulation – Supplementary Materials

Table S7. Sensitivity analysis: network overlap metrics for robust edges (weight ≥ 0.10)

Reference	N	Sensitivity_M	Sensitivity_SD	Specificity_M	Specificity_SD	Precision_M	Precision_SD	Accuracy_M	Accuracy_SD	F1_M	F1_SD
CONCORD predicts GGM	11	0.93	0.12	0.16	0.18	0.31	0.18	0.35	0.19	0.43	0.20
CONCORD predicts Ising (LLM data)	11	1.00	0.00	0.16	0.19	0.17	0.21	0.26	0.22	0.25	0.26
CONCORD predicts MSN	11	0.76	0.15	0.85	0.12	0.83	0.14	0.79	0.08	0.78	0.11
MSN predicts CONCORD	11	0.83	0.14	0.77	0.13	0.76	0.15	0.79	0.08	0.78	0.11
MSN predicts GGM	11	0.85	0.21	0.09	0.10	0.26	0.15	0.30	0.14	0.38	0.20
MSN predicts Ising (EMA data)	11	0.87	0.15	0.10	0.12	0.37	0.22	0.37	0.17	0.48	0.22

Towards a CONCORD Between Patient Perspective and Ecological Case Formulation –
Supplementary Materials

Table S8. Theory alignment metrics for robust edges only (weight ≥ 0.10)

Measure	n	Mean	SD	SE	CI_lower	CI_upper
Theoretical_edges_mean	11	0.28	0.05	0.01	0.25	0.31
NonTheoretical_edges_mean	11	0.11	0.02	0.01	0.09	0.12
Agreement_contrast	11	0.17	0.05	0.02	0.14	0.21
Theory_ratio	11	2.73	0.89	0.27	2.13	3.33
Balanced_accuracy	11	0.66	0.06	0.02	0.62	0.71
Sensitivity	11	0.82	0.14	0.04	0.72	0.91
Specificity	11	0.51	0.09	0.03	0.45	0.57
Theoretical_precision	11	0.53	0.04	0.01	0.50	0.56
Jaccard	11	0.47	0.07	0.02	0.42	0.52
Jaccard_random	11	0.33	0.03	0.01	0.31	0.34
Jaccard_above_random	11	0.14	0.06	0.02	0.10	0.18
Jaccard_adjusted	11	0.21	0.09	0.03	0.15	0.28

Table S9. Theory alignment inferential tests for robust edges (weight ≥ 0.10)

Test	Estimate	t	df	p_value
Theory versus non-theory weights	0.17	10.59	10	9.36E-07
Observed versus random Jaccard	0.14	7.74	10	1.58E-05
Adjusted Jaccard greater than zero	0.21	7.58	10	9.45E-06
Corrected odds ratio greater than one	4.38	6.44	10	3.7E-05

Table S10. Theoretical OR test for robust edges (weight ≥ 0.10)

n	Geometric_mean_OR	Geometric_sd_OR	CI_lower	CI_upper
11	4.38	2.14	2.63	7.30

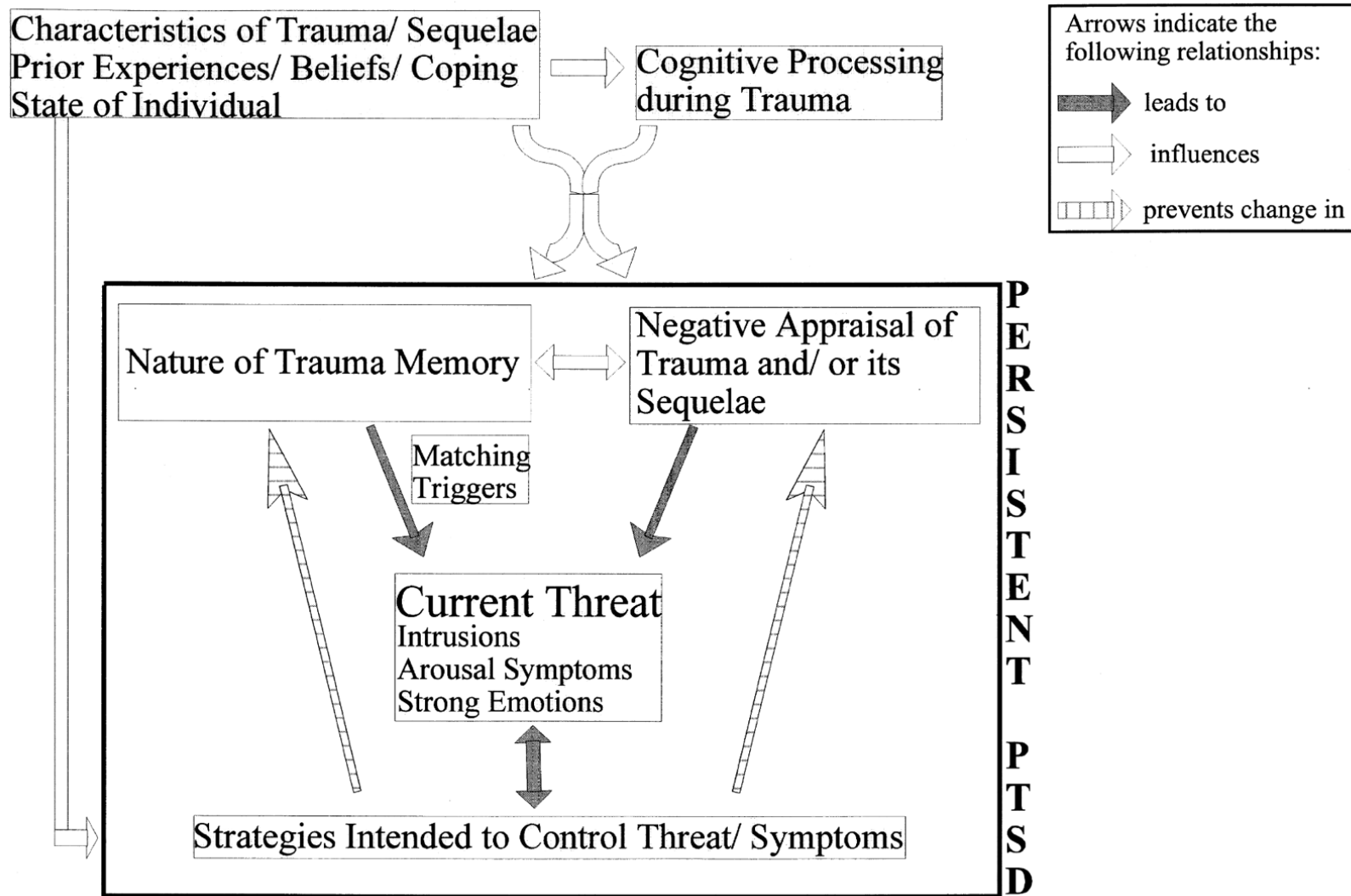


Figure S13. A cognitive model of PTSD. Taken from Ehlers and Clark (2000)

Towards a CONCORD Between Patient Perspective and Ecological Case Formulation –
Supplementary Materials

Table S11. Parent-conditioned edges

Edge	Mean	CI_lower	CI_upper
Threat → Strategies	0.55	0.24	0.82
Triggers → Threat	0.55	0.28	0.80
Appraisals → Threat	0.47	0.20	0.74
Triggers → Strategies	0.43	0.18	0.70
Memory → Strategies	0.42	0.06	0.83
Appraisals → Strategies	0.42	0.13	0.71
Triggers → Memory	0.30	0.09	0.54
Memory → Threat	0.30	0.05	0.54
Triggers → Appraisals	0.18	0.05	0.38
Memory → Appraisals	0.12	0.02	0.29
Strategies → Threat	0.11	0.01	0.31
Appraisals → Memory	0.09	0.00	0.27
Threat → Appraisals	0.08	0.00	0.26
Strategies → Memory	0.05	0.00	0.12
Strategies → Appraisals	0.03	0.00	0.09
Threat → Memory	0.02	0.00	0.06
Strategies → Triggers	0.01	0.00	0.05
Memory → Triggers	0.01	0.00	0.04
Appraisals → Triggers	0.00	0.00	0.00
Threat → Triggers	0.00	0.00	0.00

Table S12. Child-conditioned edges

Edge	Mean	CI_lower	CI_upper
Triggers → Threat	0.54	0.25	0.84
Triggers → Memory	0.39	0.08	0.75
Triggers → Strategies	0.38	0.12	0.65
Threat → Strategies	0.31	0.08	0.57
Appraisals → Threat	0.24	0.06	0.47
Triggers → Appraisals	0.24	0.03	0.54
Appraisals → Strategies	0.17	0.04	0.37
Memory → Strategies	0.14	0.00	0.33
Memory → Threat	0.13	0.00	0.31
Threat → Appraisals	0.09	0.00	0.30
Strategies → Threat	0.08	0.00	0.22
Memory → Appraisals	0.04	0.01	0.10
Strategies → Appraisals	0.02	0.00	0.06
Strategies → Memory	0.02	0.00	0.07
Strategies → Triggers	0.01	0.00	0.04

Towards a CONCORD Between Patient Perspective and Ecological Case Formulation –
Supplementary Materials

Memory → Triggers	0.01	0.00	0.03
Appraisals → Memory	0.00	0.00	0.00
Appraisals → Triggers	0.00	0.00	0.00
Threat → Memory	0.00	0.00	0.00
Threat → Triggers	0.00	0.00	0.00

Table S13. Edge prevalence

Parent	Child	Edge	n	Present_n	Prevalence	CI_lower	CI_upper
Memory	Strategies	Memory → Strategies	11	11	100.00%	71.51%	100.00%
Threat	Strategies	Threat → Strategies	11	11	100.00%	71.51%	100.00%
Triggers	Strategies	Triggers → Strategies	11	11	100.00%	71.51%	100.00%
Triggers	Threat	Triggers → Threat	11	11	100.00%	71.51%	100.00%
Appraisals	Strategies	Appraisals → Strategies	11	10	90.91%	58.72%	99.77%
Appraisals	Threat	Appraisals → Threat	11	10	90.91%	58.72%	99.77%
Triggers	Memory	Triggers → Memory	11	10	90.91%	58.72%	99.77%
Triggers	Appraisals	Triggers → Appraisals	11	9	81.82%	48.22%	97.72%
Memory	Threat	Memory → Threat	11	8	72.73%	39.03%	93.98%
Strategies	Threat	Strategies → Threat	11	4	36.36%	10.93%	69.21%
Threat	Appraisals	Threat → Appraisals	11	4	36.36%	10.93%	69.21%
Memory	Appraisals	Memory → Appraisals	11	3	27.27%	6.02%	60.97%
Appraisals	Memory	Appraisals → Memory	11	1	9.09%	0.23%	41.28%
Memory	Triggers	Memory → Triggers	11	1	9.09%	0.23%	41.28%
Strategies	Appraisals	Strategies → Appraisals	11	1	9.09%	0.23%	41.28%
Strategies	Triggers	Strategies → Triggers	11	1	9.09%	0.23%	41.28%
Appraisals	Triggers	Appraisals → Triggers	11	0	0.00%	0.00%	28.49%
Strategies	Memory	Strategies → Memory	11	0	0.00%	0.00%	28.49%
Threat	Memory	Threat → Memory	11	0	0.00%	0.00%	28.49%
Threat	Triggers	Threat → Triggers	11	0	0.00%	0.00%	28.49%

Table S14. Source-Sink Indices (SSI)

Node	n	Mean	SD	SE	CI_lower	CI_upper
Strategies	11	-1.25	0.22	0.07	-1.40	-1.10
Threat	11	-0.68	0.35	0.11	-0.92	-0.44
Memory	11	0.16	0.33	0.10	-0.07	0.38
Appraisals	11	0.29	0.20	0.06	0.16	0.42
Triggers	11	1.48	0.24	0.07	1.32	1.64

Towards a CONCORD Between Patient Perspective and Ecological Case Formulation –
Supplementary Materials

Table S15. Strength centrality measures

Node	Measure	n	Mean	SD	SE	CI_lower	CI_upper
Triggers	Out-strength	11	1.51	0.24	0.07	1.34	1.67
Triggers	In-strength	11	0.02	0.05	0.02	-0.01	0.06
Appraisals	Out-strength	11	0.70	0.30	0.09	0.50	0.90
Appraisals	In-strength	11	0.41	0.23	0.07	0.25	0.56
Memory	Out-strength	11	0.59	0.28	0.08	0.40	0.77
Memory	In-strength	11	0.43	0.19	0.06	0.30	0.56
Threat	In-strength	11	1.21	0.31	0.09	1.00	1.41
Threat	Out-strength	11	0.53	0.13	0.04	0.44	0.62
Strategies	In-strength	11	1.42	0.24	0.07	1.26	1.58
Strategies	Out-strength	11	0.17	0.08	0.02	0.11	0.23

Table S16. Parent and child role frequencies

Node	Role	n	Mean	SD	SE	CI_lower	CI_upper
Triggers	Parent	11	93.18%	11.68%	3.52%	85.34%	100.00%
Triggers	Child	11	4.55%	10.11%	3.05%	0.00%	11.34%
Appraisals	Parent	11	47.73%	17.52%	5.28%	35.96%	59.49%
Appraisals	Child	11	38.64%	20.50%	6.18%	24.86%	52.41%
Memory	Parent	11	52.27%	17.52%	5.28%	40.51%	64.04%
Memory	Child	11	25.00%	0.00%	0.00%	25.00%	25.00%
Threat	Parent	11	34.09%	12.61%	3.80%	25.62%	42.56%
Threat	Child	11	75.00%	15.81%	4.77%	64.38%	85.62%
Strategies	Parent	11	13.64%	17.19%	5.18%	2.09%	25.18%
Strategies	Child	11	97.73%	7.54%	2.27%	92.66%	100.00%

Figure S14. CONCORD theoretical alignment metrics. Standard bars represent 95% confidence interval. Horizontal dotted line is at 0.50.

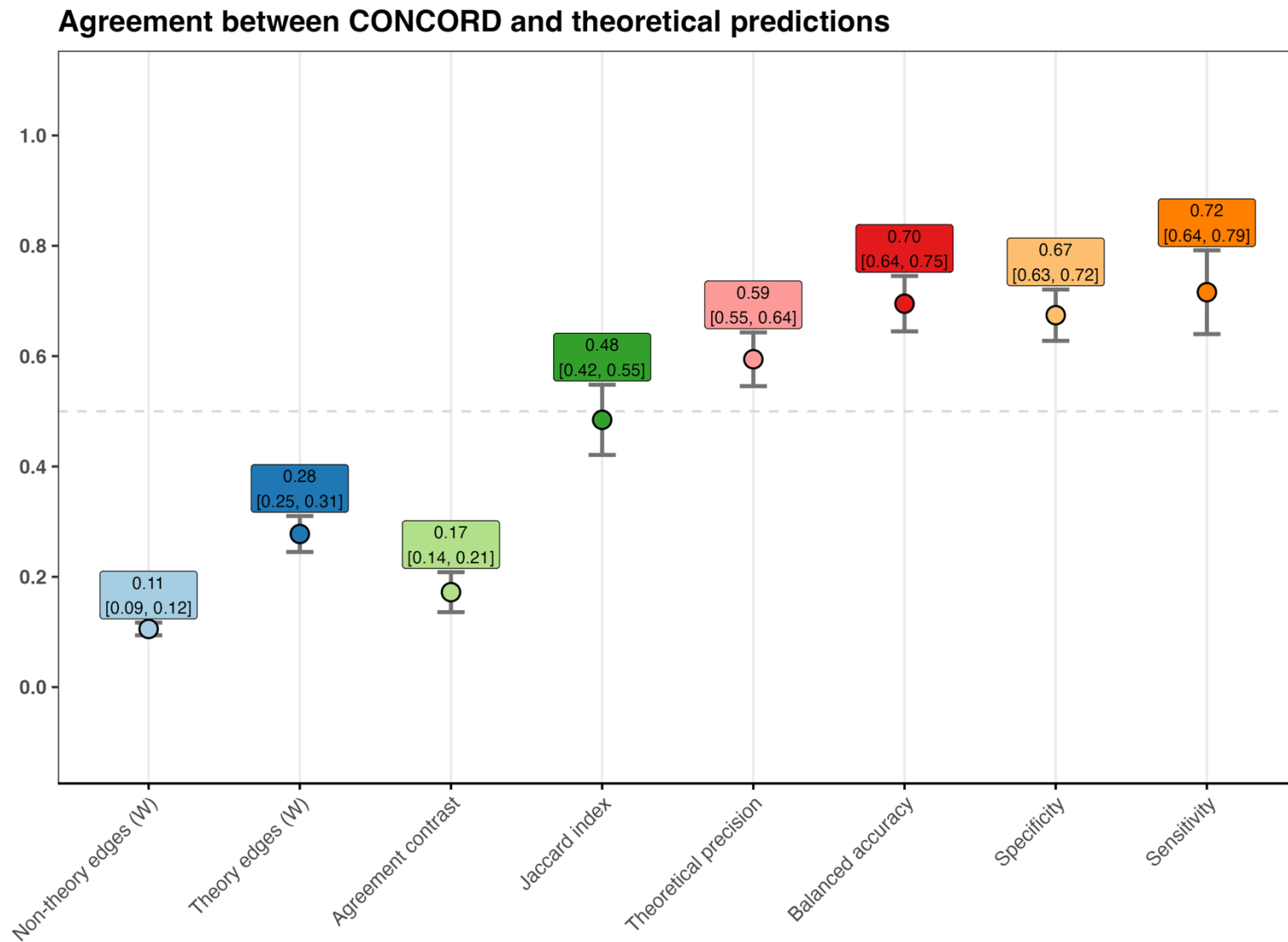


Figure S15. CONCORD theoretical alignment metrics. Standard bars represent 95% confidence interval. Horizontal dotted line is at 0.50.

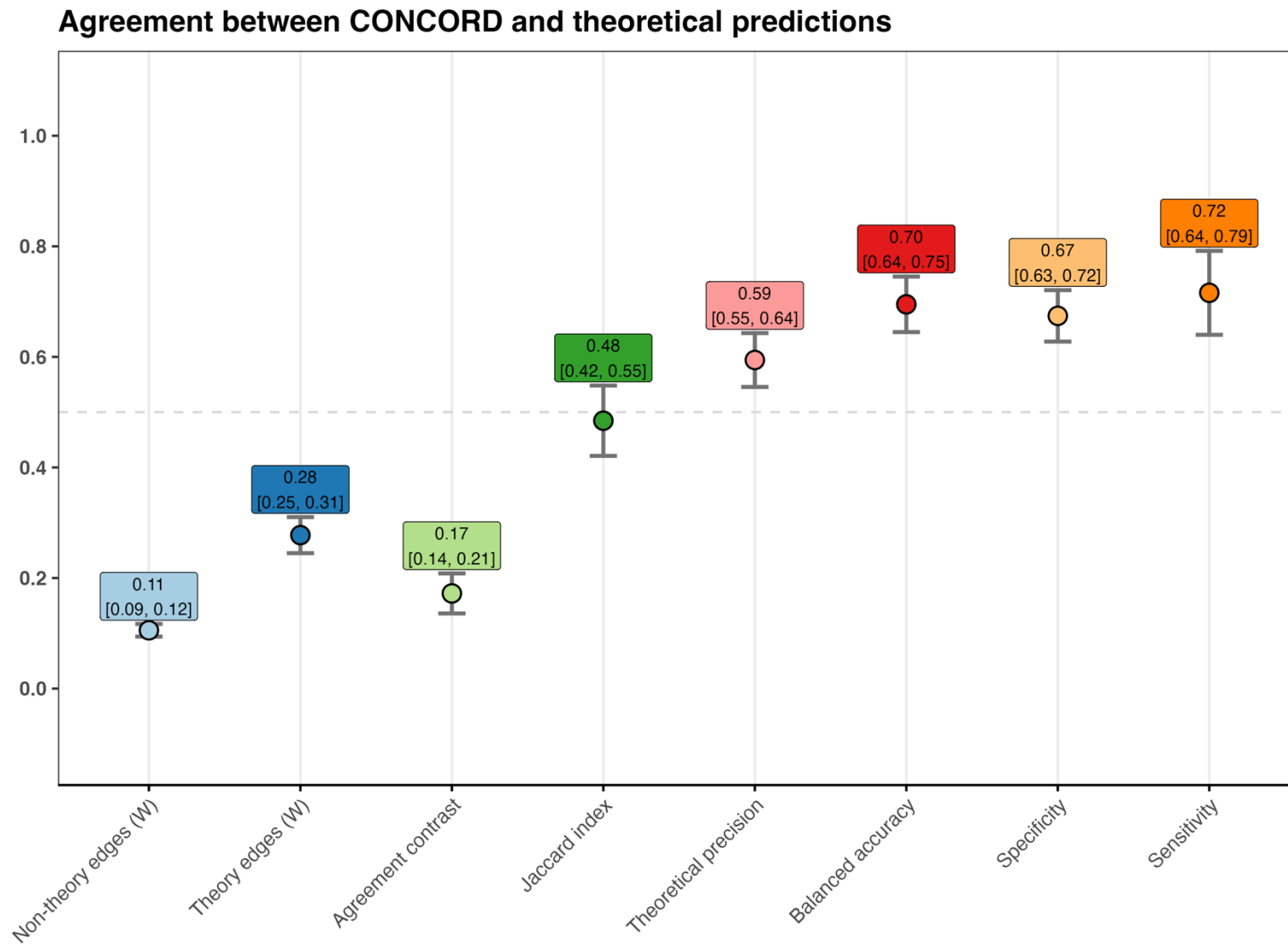


Figure S16. CONCORD Jaccard Index (J) metrics. Standard bars represent 95% confidence interval. Horizontal dotted line is at 0.00.

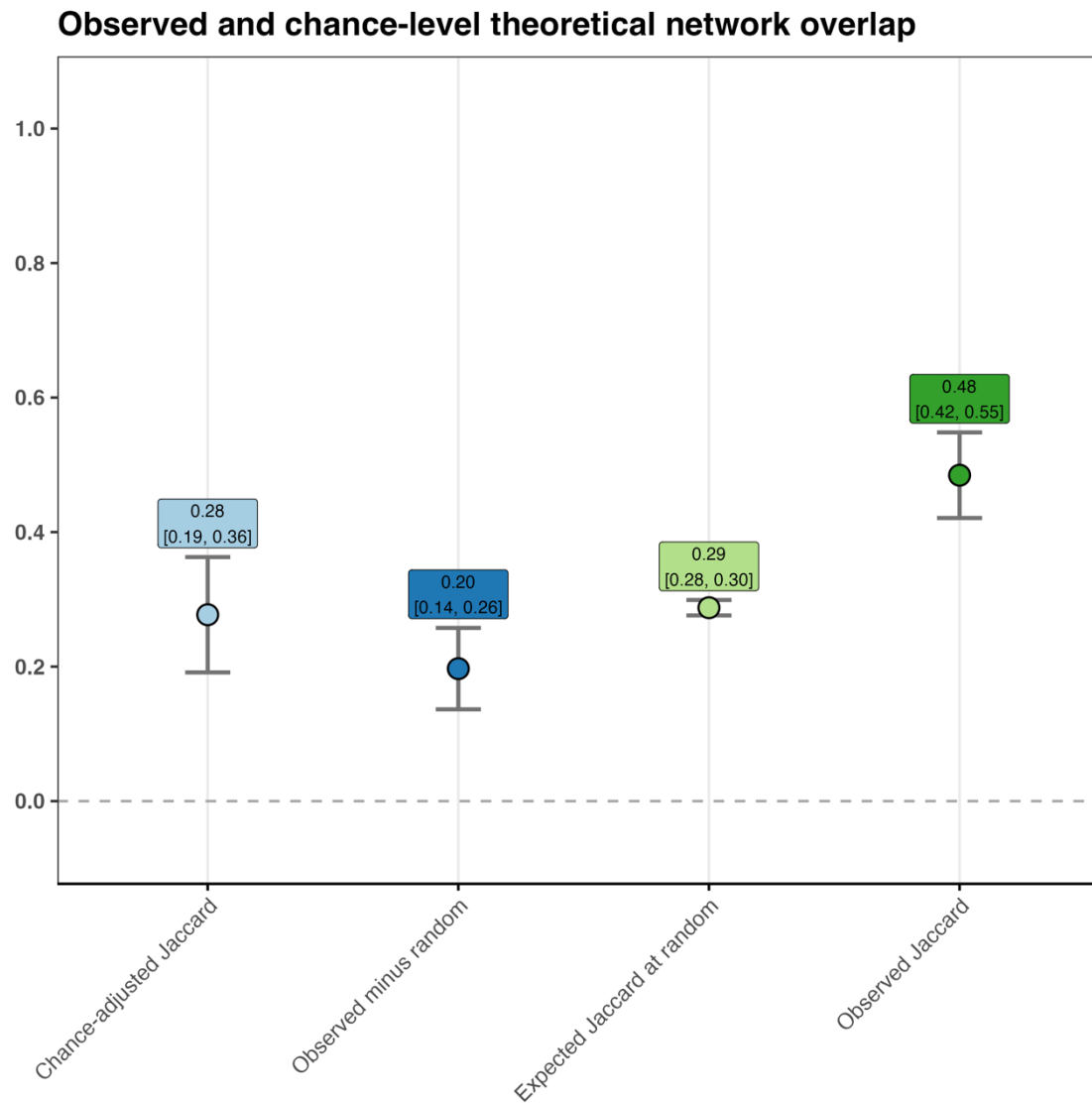


Figure S17. CONCORD and EMA/MSN weekly feedback (1-7 scale)

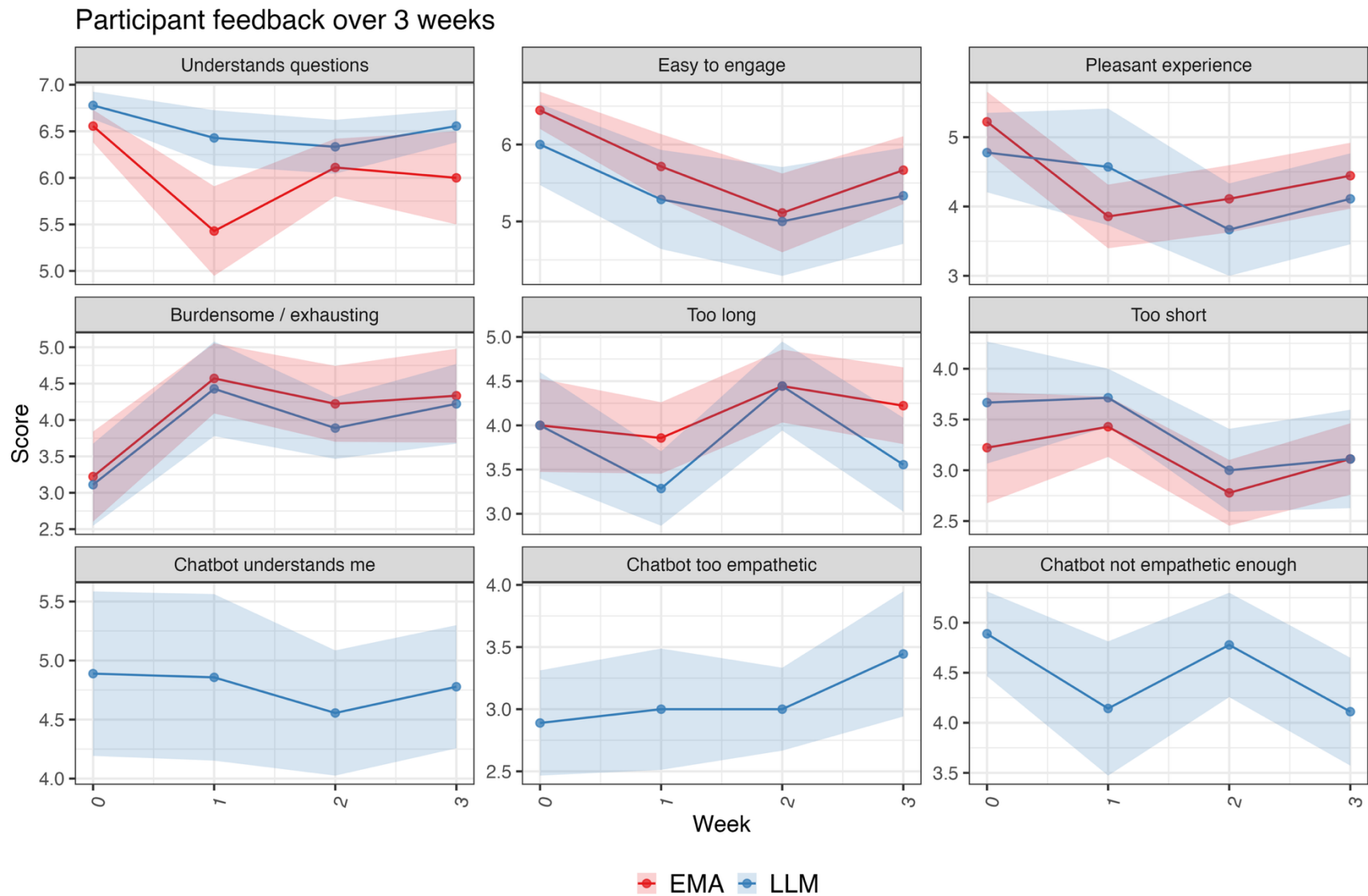


Figure S18. CONCORD and EMA/MSN weekly global experience (1-7 scale)

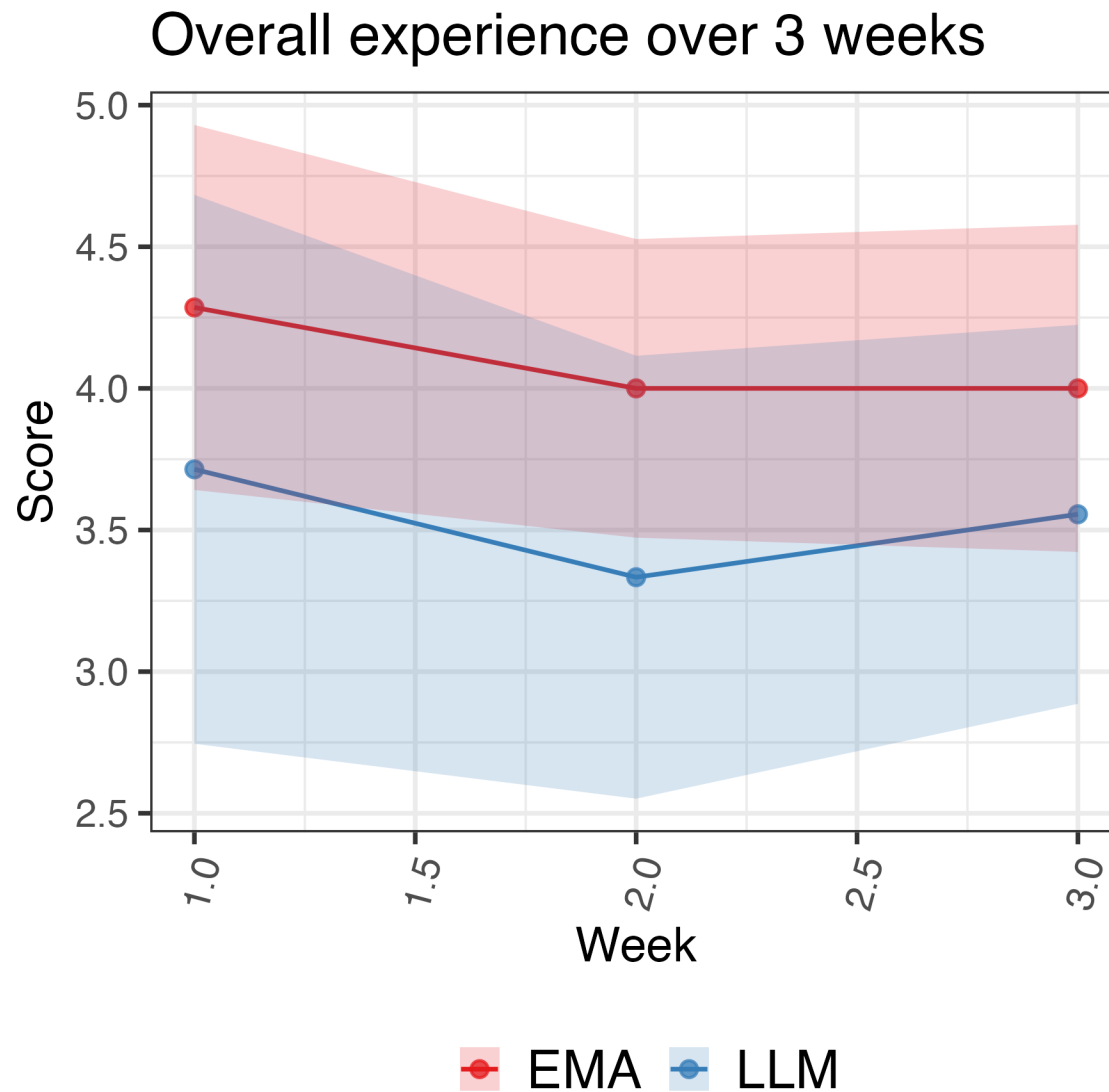


Figure S19. CONCORD and EMA/MSN weekly preference (1-7 scale)

