Figure W1





Ramseyer, F. & Tschacher, W. (2011). Nonverbal Synchrony in Psychotherapy: Coordinated Body Movement Reflects Relationship Quality and Outcome. *Journal of Consulting and Clinical Psychology*.

	Hypothesis 1						
Fixed Effects	Model 1	Model 2	Model 3	Model 4	Model 5		
Intercept	0.1123*** (0.0015)	0.1117*** (0.0017)	0.1116*** (0.0021)	0.1105*** (0.0024)	0.1091*** (0.0028)		
<i>Synchrony</i> : (Genuine; Pseudo = 0)	0.0079*** (0.0015)	0.0079*** (0.0015)	0.0079*** (0.0015)	0.0079*** (0.0015)	0.0079*** (0.0015)		
<i>Phase</i> : (T1; T3 = 0)		0.0014 (0.0017)			0.0015 (0.0017)		
Sex: (Female; Male = 0)			0.0014 (0.0027)		0.0012 (0.0027)		
<i>Diagnostic Group</i> : (Affective; Other; Anxiety = 0)				0.0031 (0.0033) Affective 0.0025 (0.0032) Other	0.0031 (0.0033) Affective 0.0027 (0.0032) Other		
Variance Components							
Residual Variance	0.00012***	0.00012***	0.00012***	0.00012***	2.0474***		
Patient Variance	0.00008***	0.00008	0.00008***	0.00008	0.0995		
AIC	-1206.9	-1205.6	-1205.2	-1204.0	-1217.0		

Parameter Estimates (and Standard Errors) for Mixed Effects Models Examining the Difference Between Synchrony and Pseudosynchrony and the Effects of Patient Variables (Phase, Gender, Diagnostic Group).

*** p < .001.

	Hypothesis 2					
Fixed Effects	unconditional means model	Model 6	Model 7	Model 8	Model 9	Model 10
Intercept	0.6457*** (0.1659)	0.6568*** (0.1487)	0.3773† (0.2010)	0.6345** (0.2113)	0.4283† (0.2547)	0.0813 (0.3201)
Relationship Quality PAT ^a		0.5956* (0.2997)	0.7229* (0.3009)	0.5986* (0.3004)	0.5608† (0.2995)	0.6881* (0.3001)
Self-Efficacy PAT ^a		0.3190† (0.1800)	0.3672* (0.1782)	0.3155† (0.1816)	0.3441† (0.1822)	0.3983* (0.1819)
Relationship Quality TH ^a		-0.0054 (0.2619)	-0.0046 (0.2570)	-0.0117 (0.2654)	0.02246 (0.2644)	0.0379 (0.2625)
<i>Phase</i> : (T1; T3 = 0)			0.6187* (0.3060)			0.6611* (0.3033)
<i>Sex</i> : (Female; Male = 0)				0.0455 (0.3057)		-0.0180 (0.3033)
<i>Diagnostic Group</i> : (Affective; Other; Anxiety = 0)					0.4461 (0.3794) Affective 0.2674 (0.3586) Other	0.5172 (0.3773) Affective 0.3681 (0.3559) Other
Variance Components						
Residual Variance	2.0825***	2.2341***	2.1444***	2.2333***	2.1547***	2.0474***
Patient Variance	0.4838	0.0401	0.0438	0.0404	0.0899	0.0995
AIC	397.9	392.6	390.6	394.6	395.2	394.5

Parameter Estimates (and Standard Errors) for Mixed Effects Models Examining the Associations Between Synchrony, Patient Variables (Phase, Gender, Diagnostic Group) and Process Variables (BPSR-P/T).

^a Process measures were centered at their grand mean, allowing easier interpretation of intercepts.

 $\dagger p < .10; * p < .05; ** p < .01; *** p < .001.$

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Parameter Estimates (and Standard Errors) for Mixed Effects Models Examining the Associations Between pacing/leading, Patient Variables (Phase, Gender, Diagnostic Group) and Process Variables (BPSR-P/T).

	Hypothesis 2 / pacing – leading					
Fixed Effects	pacing 1	leading 1	pacing 2	leading 2		
Intercept	0.7824*** (0.1777)	0.6225*** (0.1477)	0.5072 (0.3810)	-0.1932 (0.3098)		
<i>Relationship</i> <i>Quality PAT</i> ^a	0.3075 (0.3467)	0.7101* (0.2990)	0.4055 (0.3532)	0.8191** (0.2919)		
Self-Efficacy PAT a	0.4375* (0.2098)	0.1504 (0.1794)	0.5015* (0.2149)	0.2353 (0.1766)		
Relationship Quality TH ª	0.05475 (0.3031)	-0.0382 (0.2612)	0.0656 (0.3085)	0.0406 (0.2557)		
<i>Phase</i> : (T1; T3 = 0)			0.4534 (0.3471)	0.8149** (0.300)		
<i>Sex</i> : (Female; Male = 0)			-0.0681 (0.3639)	-0.0148 (0.2921)		
<i>Diagnostic Group</i> : (Affective; Other; Anxiety = 0)			0.2779 (0.4517) Affective 0.0719 (0.4280) Other	0.7095† (0.3638) Affective 0.6844* (0.3422) Other		
Variance Components						
Residual Variance	2.6457***	2.2686***	2.5854***	2.0450***		
Patient Variance	0.0890	0	0.3764	0		
AIC	421.5	390.3	427.5	387.5		

^a Process measures were centered at their grand mean, allowing easier interpretation of intercepts.

 $\dagger p < .10; * p < .05; ** p < .01; *** p < .001.$

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Parameter Estimates (and Standard Errors) for Mixed Effects Models Examining the Associations Between Synchrony, Patient Variables (Phase, Gender, Diagnostic Group), and Outcome Variables (Retrospective/Pre-to-Post).

	Hypothesis 3					
Fixed Effects	Model 11	Model 12	Model 13	Model 14	Model 15	
Intercept	0.6698*** (0.1531)	0.6096** (0.2048)	0.6207** (0.2186)	0.5379* (0.2610)	0.4032 (0.3413)	
<i>Retrospecitve</i> <i>Outcome</i>	0.0605 (0.2118)	0.0734 (0.2125)	0.0689 (0.2122)	0.0626 (0.2155)	0.0698 (0.2159)	
Pre-to-Post Outcome	0.8058* (0.3065)	0.7882* (0.3094)	0.7995* (0.3076)	0.7957* (0.3117)	0.7696* (0.3146)	
<i>Phase</i> : (T1; T3 = 0)		0.1321 (0.2988)			0.1689 (0.3004)	
<i>Sex</i> : (Female; Male = 0)			0.0964 (0.3069)		0.0903 (0.3101)	
Diagnostic Group: (Affective; Other; Anxiety = 0)				0.1741 (0.3942) Affective 0.2222 (0.3630) Other	0.1804 (0.3988) Affective 0.2489 (0.3682) Other	
Variance Components						
Residual Variance	2.1748***	2.1597***	2.1654***	2.1467***	2.1177***	
Patient Variance	0.1168	0.1281	0.1241	0.1368	0.1580	
AIC	380.3	382.1	382.2	383.9	387.5	

* p < .05; ** p < .01; *** p < .001.

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Appendix for Mixed-Model analysis

The variables 'session report factors' and 'outcome measures' were centered at their grand mean, providing more readily interpretable intercepts for models of hypothesis 2 and 3. The notation of equations used here follow the single level representation used in PROC MIXED. Random effects entered into all models were 'intercept' and 'patient'.

To illustrate, the basic equations used for hypotheses were as follows:

Hypothesis 1:

2-Level-Model (Overall Mixed Model):

$$\begin{aligned} & \text{SYNCHRONY}_{ij} = \beta_0 + \beta_1 \times \text{SEX}_{ij} + \beta_2 \times \text{DIAGNOSIS}_{ij} + \beta_3 \times \text{PHASE}_{ij} + \\ & \beta_4 \times \text{TYPE OF SYNCHRONY}_{ii} + u_i + \varepsilon_{ii} \end{aligned}$$

SYNCHRONY_{ij} represents the value of the dependent variable for session *i* in patient *j*; β_0 through β_4 represent the fixed intercept and the fixed effects of the covariates (e.g., SEX, ..., PHASE); u_j is the random effect associated with the intercept for patient *j*; and ε_{ij} represents the residual.

Hypothesis 2:

2-Level-Model (Overall Mixed Model):

$$SYNCHRONY_{ij} = \beta_0 + \beta_1 \times SEX_{ij} + \beta_2 \times DIAGNOSIS_{ij} + \beta_3 \times PHASE_{ij} + \beta_4 \times PROCESS_MEASURES_{ii} + u_i + \varepsilon_{ii}$$

Hypothesis 3:

2-Level-Model (Overall Mixed Model):

$$SYNCHRONY_{ij} = \beta_0 + \beta_1 \times SEX_{ij} + \beta_2 \times DIAGNOSIS_{ij} + \beta_3 \times PHASE_{ij} + \beta_4 \times OUTCOME_MEASURES_{ii} + u_i + \varepsilon_{ii}$$