Supplemental Materials for Rohan, Burt, Camuso, Perez, and Meyerhoff, *Applying Experimental Therapeutics to Examine Cognitive and Chronological Vulnerabilities as Mediators of Acute Outcomes in CBT-SAD and Light Therapy for Winter Depression*

Table SA1: Mean (SD) of Observed Difference Scores (Pre-, Mid-, and Post-Treatment Intervals) for Primary Constructs

	CBT Group (valid N = 70-84)						LT Group (valid N = 78-89)						Whole Sample (valid N = 149-173)					
	Pre-Mid		Mid-Post		Pre-Post		Pre-Mid		Mid-Post		Pre-Post		Pre-Mid		Mid-Post		Pre-Post	
Mediators																		
DAS	8.66	(21.86)	10.76	(19.66)	18.63	(23.89)	14.90	(26.88)	5.92	(17.17)	20.33	(27.46)	11.95	(24.76)	8.18	(18.48)	19.50	(25.72)
MEQ	-0.82	(5.75)	-1.05	(3.98)	-2.08	(5.36)	-2.21	(5.84)	-1.60	(4.60)	-3.98	(6.14)	-1.54	(5.82)	-1.34	(4.31)	-3.04	(5.83)
SBQ	8.53	(12.28)	10.83	(14.11)	18.06	(17.10)	6.33	(12.58)	3.02	(13.86)	9.02	(18.25)	7.39	(12.45)	6.73	(14.47)	13.51	(18.21)
Outcomes																		
BDI	9.37	(8.57)	6.17	(6.28)	15.20	(9.33)	11.70	(7.77)	5.15	(7.14)	16.83	(8.96)	10.60	(8.21)	5.63	(6.75)	16.04	(9.15)
SIGH-SAD	9.89	(8.33)	5.43	(7.89)	15.17	(7.49)	9.54	(8.40)	6.34	(7.30)	15.92	(7.55)	9.70	(8.34)	5.92	(7.57)	15.55	(7.51)

Notes. BDI = Beck Depression Inventory; CBT = Cognitive-Behavioral Therapy; DAS = Dysfunctional Attitudes Scale; LT = Light Therapy; MEQ = Morningness/Eveningness Questionnaire; SBQ = Seasonal Beliefs Questionnaire; SIGH-SAD = Structured Interview Guide for the Hamilton Rating Scale for Depression—Seasonal Affective Disorder Version. "Pre" = pre-treatment baseline; "Mid" = treatment week 3; "Post" = treatment week 6.

Table SA2: Zero-Order Correlations Among Observed Difference Scores Between Study Periods, Whole Sample

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1. DAS Pre-Mid	---														
2. DAS Mid-Post	-.29**	---													
3. DAS Pre-Post	.74***	.43***	---												
4. MEQ Pre-Mid	-.18*	-.01	-.18*	---											
5. MEQ Mid-Post	-.08	.06	-.03	-.37***	---										
6. MEQ Pre-Post	-.20*	.04	-.15	.74***	.34***	---									
7. SBQ Pre-Mid	.16*	-.03	.13	.00	.04	.03	---								
8. SBQ Mid-Post	-.02	.11	.06	-.06	-.11	-.17*	-.07	---							
9. SBQ Pre-Post	.09	.07	.15	-.05	-.06	-.08	.62***	.74***	---						
10. BDI Pre-Mid	.35***	-.09	.27**	-.26**	.19*	-.12	.26**	.00	.18*	---					
11. BDI Mid-Post	-.08	.23**	.09	.03	-.16*	-.07	-.13	.10	-.02	-.26**	---				
12. BDI Pre-Post	.26**	.09	.30***	-.21*	.05	-.16*	.13	.07	.15	.70***	.50***	---			
13. SIGH-SAD Pre-Mid	.18*	-.10	.10	.00	.11	.08	.28**	-.01	.18*	.38***	-.39***	.05	---		
14. SIGH-SAD Mid-Post	-.12	.15	-.01	-.02	-.07	-.08	-.16	.09	-.04	-.21*	.56***	.22**	-.56***	---	
15. SIGH-SAD Pre-Post	.07	.05	.10	.00	.05	.02	.17*	.09	.18*	.22**	.15	.33***	.55***	.39***	---

Notes. Pairwise *N* ranges from 138-173. "Pre" = pre-treatment baseline; "Mid" = treatment week 3; "Post" = treatment week 6. See Table SA1 for measure abbreviations.
* $p < .05$; ** $p < .01$; *** $p < .001$.

Table SA3: Zero-Order Correlations Among Observed Difference Scores Between Study Periods, By Treatment Group

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1. DAS Pre-Mid	---	-.28**	.80***	-.16	-.19	-.24*	.27*	.07	.24*	.26*	-.08	.16	.08	-.07	.01
2. DAS Mid-Post	-.30**	---	.36***	-.08	.17	.06	-.08	.00	-.06	.00	.17	.13	.04	.13	.19
3. DAS Pre-Post	.65***	.53***	---	-.20	-.08	-.20	.21	.07	.20	.25*	.02	.24*	.11	.01	.14
4. MEQ Pre-Mid	-.17	.02	-.13	---	-.29*	.75***	-.03	-.04	-.06	-.23*	.02	-.18	.12	-.06	.13
5. MEQ Mid-Post	.10	-.07	.03	-.51***	---	.41**	-.07	-.11	-.13	.12	-.12	.00	.13	-.07	.06
6. MEQ Pre-Post	-.10	-.03	-.07	.73***	.22	---	-.08	-.19	-.20	-.10	-.05	-.14	.19	-.10	.15
7. SBQ Pre-Mid	.04	.00	.04	.02	.16	.14	---	-.04	.65***	.42***	-.21	.20	.37***	-.25*	.20
8. SBQ Mid-Post	-.04	.16	.09	-.15	-.16	-.28*	-.15	---	.73***	.05	.00	.04	.04	.06	.12
9. SBQ Pre-Post	.00	.13	.12	-.11	-.01	-.03	.59***	.71***	---	.35**	-.14	.18	.28*	-.14	.22*
10. BDI Pre-Mid	.46***	-.14	.30**	-.27*	.29*	-.09	.12	.03	.11	---	-.27*	.65***	.40***	-.15	.32**
11. BDI Mid-Post	-.06	.29*	.18	.04	-.23*	-.11	-.05	.18	.11	-.25*	---	.56***	-.43***	.62***	.15
12. BDI Pre-Post	.38***	.07	.36***	-.22	.11	-.15	.08	.15	.18	.76**	.45***	---	.01	.36***	.39***
13. SIGH-SAD Pre-Mid	.37**	-.26*	.10	-.15	.09	-.10	.17	-.08	.05	.39***	-.35**	.12	---	-.55***	.59***
14. SIGH-SAD Mid-Post	-.22	.18	-.04	.06	-.07	-.01	-.04	.17	.11	-.31**	.50***	.06	-.58**	---	.36***
15. SIGH-SAD Pre-Post	.15	-.09	.05	-.15	.03	-.10	.14	.08	.18	.12	.15	.27*	.50***	.42***	---

Notes. Values for the Cognitive-Behavioral Therapy (CBT) group are shown above the diagonal, and for the Light Therapy (LT) group are shown below the diagonal. Pairwise *N* ranges from 74-88 for the CBT group and from 74-89 for the LT group. "Pre" = pre-treatment baseline; "Mid" = treatment week 3; "Post" = treatment week 6. See Table SA1 for measure abbreviations.
* $p < .05$; ** $p < .01$; *** $p < .001$.

Table SA4: Model Fit Statistics for Models Including Covariates[1]

Outcome (Mediator)	χ^2 value	df	p	RMSEA value	90% CI	CFI	TLI	SRMR
SIGH-SAD								
Model 1 (MEQ)	98.102	74	.0319	.046	[.014, .069]	.971	0.956	.043
Model 2 (SBQ)	129.877	74	.0001	.070	[.050, .090]	.911	0.862	.051
Model 3 (DAS)	102.065	74	.0170	.050	[.022, .072]	.958	0.935	.043
BDI-II								
Model 1 (MEQ)	26.800	23	.2646	.033	[.000, .077]	.994	0.984	.018
Model 2 (SBQ)	49.890	23	.0010	.087	[.054, .120]	.926	0.818	.041
Model 3 (DAS)	27.144	23	.2499	.034	[.000, .078]	.990	0.976	.022

Notes. CFI = comparative fit index; CI = confidence interval; RMSEA = root mean square error of approximation; SRMR = standardized root mean residual; TLI = Tucker-Lewis index. See Table SA1 for measure abbreviations.

[1]Covariates included gender, age, medication status, comorbidity status, ethnicity, and pre-treatment time interval.

Table SA5: Treatment-Mediator and Mediator-Outcome Path Estimates for Models Including Covariates

Outcome (Mediator)	Treatment-Mediator Path				Mediator-Outcome Path		
	b	*p*	β		b	*p*	β
SIGH-SAD							
Model 1 (MEQ)	*0.223*	*.027*	0.809		4.748	.479	0.338
Model 2 (SBQ)	*0.864*	*.003*	0.396		*0.268*	*.005*	0.159
Model 3 (DAS)	-0.207	.648	-0.083		0.188	.247	0.125
BDI-II							
Model 1 (MEQ)	*0.228*	*.022*	0.681		-7.119	.284	-1.860
Model 2 (SBQ)	*0.882*	*.002*	0.423		*0.228*	*.040*	1.059
Model 3 (DAS)	-0.014	.975	-0.004		*0.225*	*.034*	.876

Notes. All paths represent regressions of slope of mediator and/or slope of outcome on the given predictor variable (slope of mediator / treatment group assignment) in the context of an overall structural equation model. See Table SA1 for measure abbreviations.