

Statistical appendix: Bivariate regression model findings to identify pathways for more rigorous testing using SEM

Direct effects: Cognitions → Emotions AND Mediation analysis Step 1 criteria for pathway: Cognitions → Emotions → Diabetes self-care											
Baseline Independent variables*	Bivariate regression model dependent variable	B	SE	Beta	Sig	95% Confidence Intervals for B		Bootstrapped standard errors			
						Lower	Upper	SE	Sig	Lower	Upper
	<b>Depression</b>										
Identity		.01	.07	.01	.93	-.14	.15	.07	.92	-.14	.14
Timeline acute/chronic		-.30	.28	-.06	.28	-.86	.25	.37	.42	-1.11	.39
Timeline cyclical		.27	.22	.07	.22	-.17	.71	.27	.32	-.28	.76
<i>Consequences</i>		.53	.27	.12	.05	.00	1.06	.30	.08	-.05	1.14
Personal control		.38	.31	.06	.23	-.24	.99	.39	.36	-.34	1.14
<i>Treatment control</i>		-.82	.33	-.13	.01	-1.47	-.16	.36	.03	-1.52	-.09
Illness coherence		-.22	.23	-.05	.35	-.68	.24	.32	.50	-.88	.35
Medication necessity		.41	.26	.08	.12	-.10	.93	.25	.11	-.08	.91
<i>Medication concerns</i>		.77	.23	.19	.00	.31	1.23	.28	.00	.26	1.35
	<b>Anxiety</b>										
Identity		-.02	.08	-.01	.80	-.17	.13	.09	.82	-.20	.15
Timeline acute/chronic		-.16	.29	-.03	.57	-.74	.41	.33	.63	-.84	.47
Timeline cyclical		.36	.24	.08	.13	-.11	.83	.25	.16	-.12	.84
Consequences		.39	.28	.08	.16	-.16	.95	.29	.16	-.18	.99
Personal control		-.02	.32	.00	.95	-.65	.61	.35	.95	-.70	.72
Treatment control		-.55	.35	-.08	.12	-1.23	.13	.34	.12	-1.19	.14
Illness coherence		-.32	.24	-.07	.18	-.79	.15	.29	.28	-.88	.29
<i>Medication necessity</i>		.62	.28	.11	.03	.07	1.16	.28	.03	.02	1.11
<i>Medication concerns</i>		.53	.25	.12	.03	.04	1.03	.30	.09	-.09	1.15

Direct effects: Emotions → Cognitions AND Mediation analysis Step 1 criteria for pathway: Emotions → Cognitions → Diabetes self-care											
Baseline Independent variables*	Bivariate regression model dependent variable	B	SE	Beta	Sig	95% Confidence Intervals for B		Bootstrapped standard errors			
						Lower	Upper	SE	Sig	Lower	Upper
	<b>Identity</b>										
Depression		.08	.06	.10	.17	-.04	.20	.06	.17	-.04	.21
Anxiety		.09	.06	.13	.09	-.01	.20	.07	.16	-.03	.23
	<b>Timeline acute/chronic</b>										
Depression		.00	.01	.01	.83	-.02	.03	.01	.84	-.03	.03
Anxiety		.01	.01	.07	.27	-.01	.03	.01	.33	-.01	.03
	<b>Timeline cyclical</b>										
<i>Depression</i>		.04	.02	.17	.01	.01	.08	.02	.01	.01	.08
<i>Anxiety</i>		.05	.01	.24	.00	.03	.08	.01	.00	.03	.08
	<b>Consequences</b>										
Depression		-.01	.02	-.03	.65	-.04	.02	.02	.67	-.04	.02
Anxiety		.01	.01	.04	.55	-.02	.03	.02	.60	-.02	.04
	<b>Personal control</b>										
Depression		-.01	.01	-.05	.44	-.03	.02	.01	.53	-.04	.02
Anxiety		.00	.01	-.01	.92	-.02	.02	.01	.92	-.02	.02
	<b>Treatment control</b>										
Depression		-.01	.01	-.04	.55	-.03	.01	.01	.50	-.03	.01
Anxiety		-.01	.01	-.06	.38	-.03	.01	.01	.35	-.03	.01
	<b>Illness coherence</b>										
<i>Depression</i>		-.03	.02	-.13	.04	-.07	.00	.02	.02	-.07	.00
<i>Anxiety</i>		-.03	.01	-.12	.05	-.06	.00	.01	.03	-.05	.00

						Bootstrapped standard errors					
						95% Confidence Intervals for B				95% Confidence Intervals for B	
						Lower	Upper	SE	Sig	Lower	Upper
						B	SE	Beta	Sig		
<b>Medication necessity</b>											
Depression		.01	.01	.06	.34	-.01	.04	.01	.34	-.01	.04
Anxiety		.02	.01	.12	.06	.00	.04	.01	.07	.00	.04
<b>Medication concerns</b>											
Depression		.02	.02	.09	.15	-.01	.05	.02	.18	-.01	.05
Anxiety		.04	.01	.20	.00	.02	.07	.01	.00	.02	.07
<b>Direct effects: Emotions → Diabetes self-care</b>											
<b>AND</b>											
<b>Mediation analysis Step 2 for pathway: Cognitions → Emotions → Diabetes self-care</b>											
						Bootstrapped standard errors					
Baseline Independent variables*	Bivariate regression model dependent variable					95% Confidence Intervals for B				95% Confidence Intervals for B	
						Lower	Upper	SE	Sig	Lower	Upper
Baseline depression		.00	.02	-.01	.88	-.04	.04	.02	.88	-.05	.04
Baseline anxiety		.01	.02	.04	.52	-.02	.05	.02	.52	-.02	.04

Cognitions → Diabetes self-care AND Mediation analysis Step 2 for pathway: Emotions → Cognitions → Diabetes self-care											
								Bootstrapped standard errors			
Baseline Independent variables*	Bivariate regression model dependent variable					95% Confidence Intervals for B				95% Confidence Intervals for B	
		B	SE	Beta	Sig	Lower	Upper	SE	Sig	Lower	Upper
	Global diabetes self-care										
Identity		.01	.03	.03	.60	-.04	.06	.03	.62	-.04	.08
<i>Timeline acute/chronic</i>		-.21	.11	-.12	.06	-.42	.01	.11	.08	-.43	.02
Timeline cyclical		.10	.08	.08	.21	-.06	.26	.08	.19	-.05	.26
Consequences		.05	.10	.03	.59	-.14	.24	.09	.60	-.14	.24
<i>Personal control</i>		-.28	.12	-.15	.02	-.50	-.05	.11	.01	-.48	-.05
Treatment control		.12	.13	.06	.36	-.14	.38	.12	.32	-.14	.34
Illness coherence		-.06	.09	-.05	.48	-.23	.11	.08	.48	-.22	.10
Medication necessity		-.11	.11	-.06	.35	-.34	.12	.10	.28	-.32	.09
Medication concerns		.08	.08	.06	.33	-.08	.24	.08	.29	-.07	.23

\*Each independent variable was modelled in a separate bivariate regression model alongside baseline scores on the outcome variable. Thus regression coefficients estimate relationship to change over time. Those highlighted were identified for more robust testing using SEM.