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Does perceived restorativeness mediate the effects of perceived biodiversity and perceived naturalness on emotional well-being following group walks in nature?

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AppendixC Happiness 30April16

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Appendix C. MEDIATION RESULTS FOR HAPPINESS

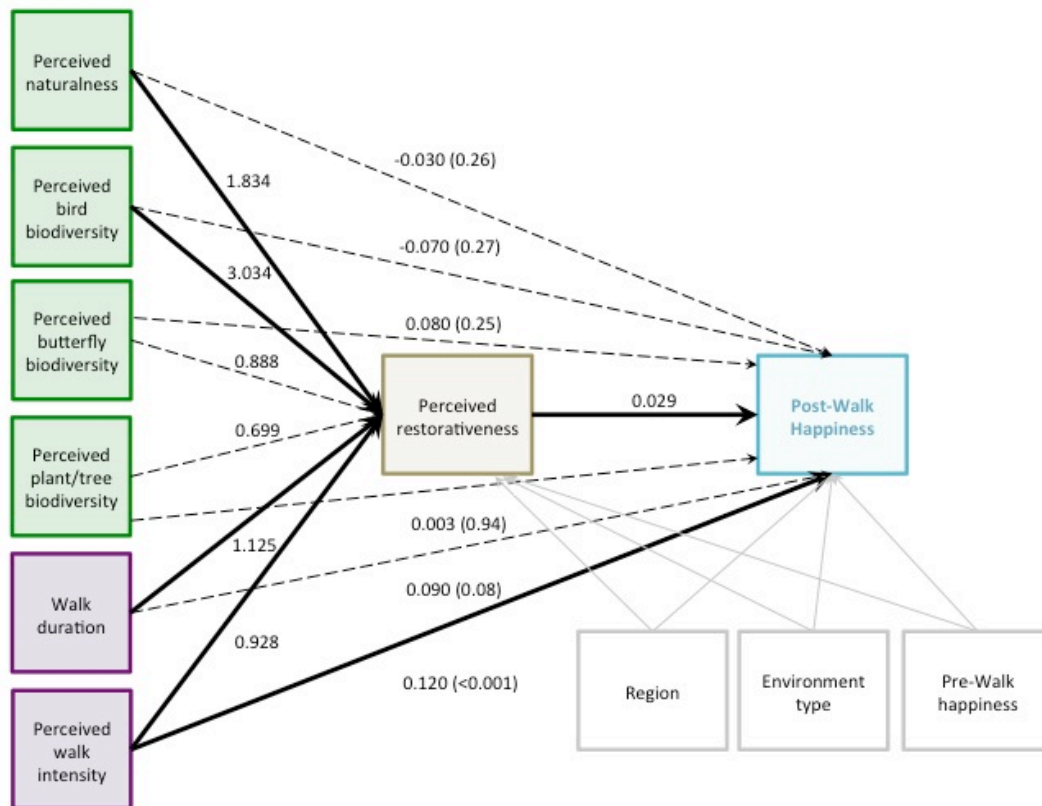


Figure C.1. Mediation model of perceived naturalness, perceived bird, butterfly and plant/tree biodiversity, walk duration and perceived walk intensity as predictors of post-walk happiness by perceived restorativeness. Unstandardized regression coefficients are reported for the *a*, *b* and *c'* paths. Statistically significant paths are highlighted in bold; nonsignificant paths in portrayed in dotted lines. Parentheses for *c'* path indicate p-values.

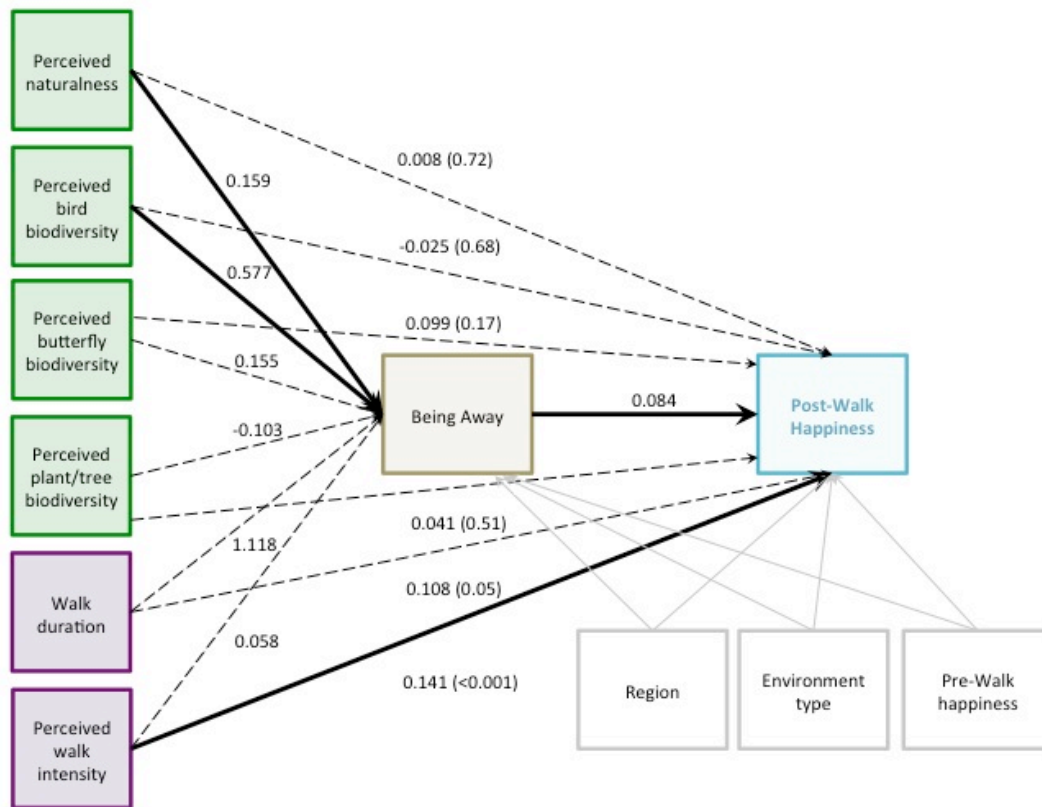


Figure C.2. Mediation model of perceived naturalness, perceived bird, butterfly and plant/tree biodiversity, walk duration and perceived walk intensity as predictors of post-walk happiness by being away. Unstandardized regression coefficients are reported for the *a*, *b* and *c'* paths. Statistically significant paths are highlighted in bold; nonsignificant paths in portrayed in dotted lines. Parentheses for *c'* path indicate p-values.

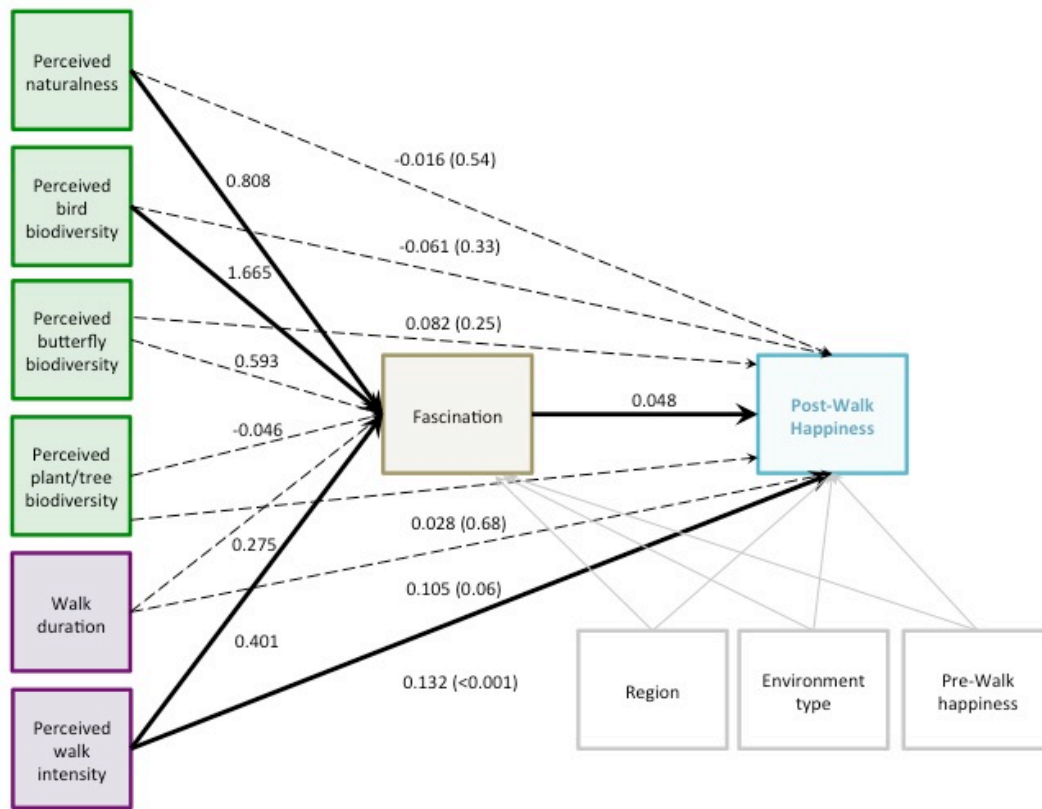


Figure C.3. Mediation model of perceived naturalness, perceived bird, butterfly and plant/tree biodiversity, walk duration and perceived walk intensity as predictors of post-walk happiness by fascination. Unstandardized regression coefficients are reported for the *a*, *b* and *c'* paths. Statistically significant paths are highlighted in bold; nonsignificant paths in portrayed in dotted lines. Parentheses for *c'* path indicate p-values.

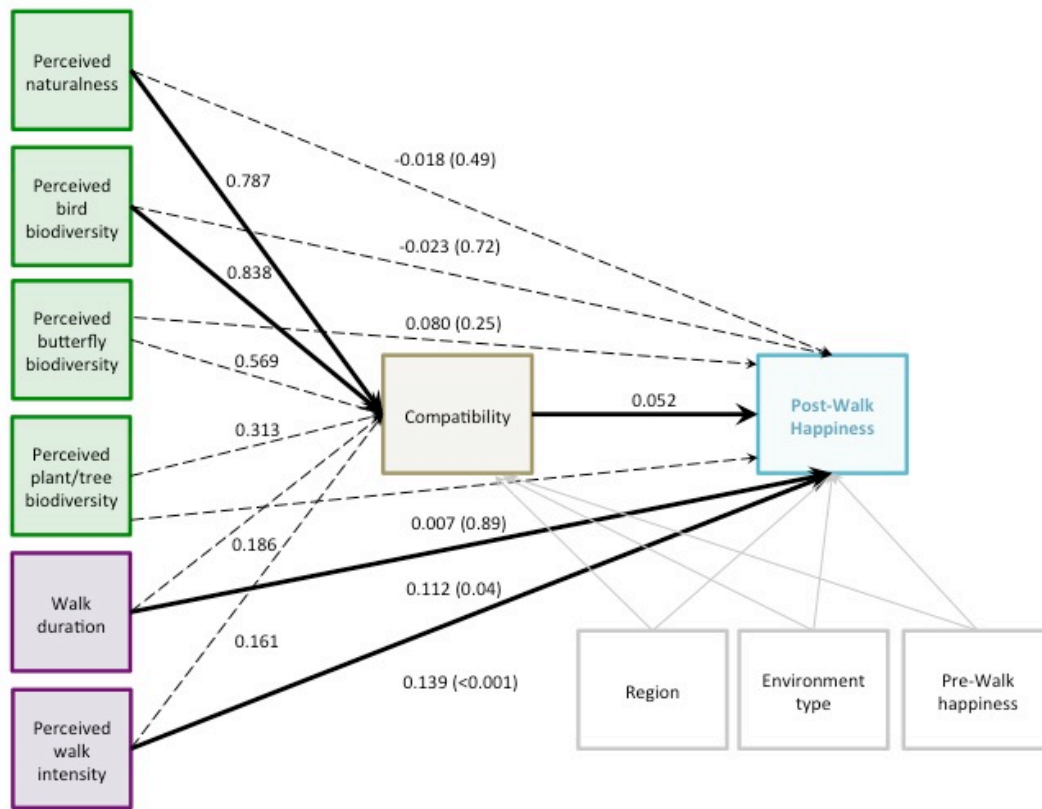


Figure C.4. Mediation model of perceived naturalness, perceived bird, butterfly and plant/tree biodiversity, walk duration and perceived walk intensity as predictors of post-walk happiness by compatibility. Unstandardized regression coefficients are reported for the a , b and c' paths. Statistically significant paths are highlighted in bold; nonsignificant paths in portrayed in dotted lines. Parentheses for c' path indicate p-values.

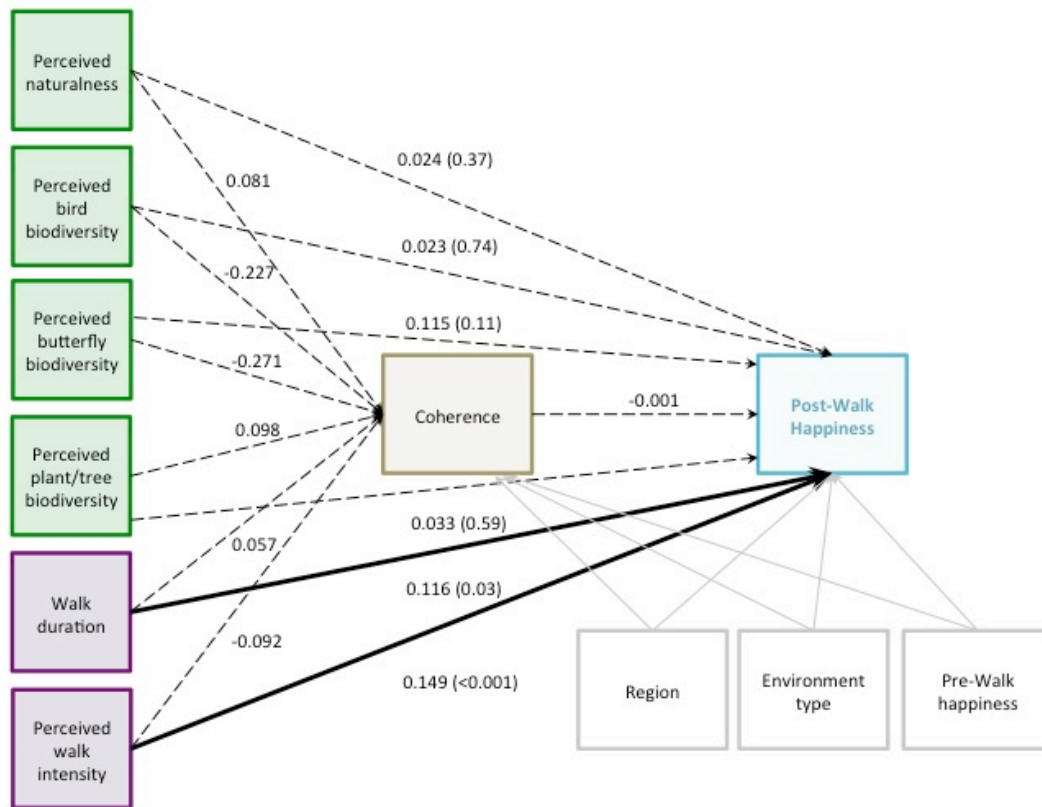


Figure C.5. Mediation model of perceived naturalness, perceived bird, butterfly and plant/tree biodiversity, walk duration and perceived walk intensity as predictors of post-walk happiness by coherence. Unstandardized regression coefficients are reported for the *a*, *b* and *c'* paths. Statistically significant paths are highlighted in bold; nonsignificant paths in portrayed in dotted lines. Parentheses for *c'* path indicate p-values.

Perceived Naturalness

Table C.1. Mediation results of perceived naturalness on happiness via overall PRS

Antecedent		Consequent							
		M (PRS)				Y (HAPPINESS)			
		Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>
<i>X</i> (NATURALNESS)	<i>a</i>	1.834	1.358	2.311	<i>c'</i>	-0.030	-0.081	0.020	0.26
<i>M</i> (PRS)		-	-	-	<i>b</i>	0.029	0.023	0.035	
Indirect effect					<i>ab</i>	0.053	0.036	0.071	<0.001

Table C.2. Mediation results of perceived naturalness on happiness via being away

Antecedent		Consequent							
		M (BEING AWAY)				Y (HAPPINESS)			
		Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>
<i>X</i> (NATURALNESS)	<i>a</i>	0.159	0.065	0.255	<i>c'</i>	0.008	-0.045	0.061	0.72
<i>M</i> (BEING AWAY)		-	-	-	<i>b</i>	0.084	0.051	0.116	
Indirect effect					<i>ab</i>	0.013	0.005	0.023	<0.001

Table C.3. Mediation results of perceived naturalness on happiness via fascination

Antecedent		Consequent							
		M (FASCINATION)				Y (HAPPINESS)			
		Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>
<i>X</i> (NATURALNESS)	<i>a</i>	0.808	0.561	1.054	<i>c'</i>	-0.016	-0.070	0.040	0.54
<i>M</i> (FASCINATION)		-	-	-	<i>b</i>	0.048	0.036	0.062	
Indirect effect					<i>ab</i>	0.039	0.024	0.055	<0.001

Table C.4. Mediation results of perceived naturalness on happiness via compatibility

Antecedent	Consequent								
	M (COMPATIBILITY)				Y (HAPPINESS)				
	Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>	
<i>X</i> (NATURALNESS)	<i>a</i>	0.787	0.555	1.018	<i>c'</i>	-0.018	-0.073	0.036	0.49
<i>M</i> (COMPATIBILITY)		-	-	-	<i>b</i>	0.052	0.039	0.066	
Indirect effect					<i>ab</i>	0.041	0.025	0.057	<0.001

Table C.5. Mediation results of perceived naturalness on happiness via coherence

Antecedent	Consequent								
	M (COHERENCE)				Y (HAPPINESS)				
	Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>	
<i>X</i> (NATURALNESS)	<i>a</i>	0.081	-0.039	0.202	<i>c'</i>	0.024	-0.030	0.074	0.37
<i>M</i> (COHERENCE)			-	-	<i>b</i>	-0.001	-0.028	0.026	
Indirect effect					<i>ab</i>	0.000	-0.003	0.003	0.99

Perceived bird biodiversity

Table C.6. Mediation results of perceived bird biodiversity on happiness via overall PRS

Antecedent		Consequent								
		M (PRS)				Y (HAPPINESS)				
		Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>	
<i>X</i> (BIRDS)	<i>a</i>	3.034	1.906	4.182	-	<i>c'</i>	-0.070	-0.186	0.060	0.27
<i>M</i> (PRS)		-	-	-	-	<i>b</i>	0.029	0.023	0.035	
Indirect effect						<i>ab</i>	0.089	0.053	0.132	<0.001

Table C.7. Mediation results of perceived bird biodiversity on happiness via being away

Antecedent		Consequent								
		M (BEING AWAY)				Y (HAPPINESS)				
		Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>	
<i>X</i> (BIRDS)	<i>a</i>	0.577	0.351	0.803	-	<i>c'</i>	-0.025	-0.150	0.104	0.68
<i>M</i> (BEING AWAY)		-	-	-	-	<i>b</i>	0.084	0.051	0.116	
Indirect effect						<i>ab</i>	0.048	0.026	0.077	<0.001

Table C.8. Mediation results of perceived bird biodiversity on happiness via fascination

Antecedent		Consequent								
		M (FASCINATION)				Y (HAPPINESS)				
		Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>	
<i>X</i> (BIRDS)	<i>a</i>	1.665	1.083	2.260	-	<i>c'</i>	-0.061	-0.187	0.070	0.33
<i>M</i> (FASCINATION)		-	-	-	-	<i>b</i>	0.048	0.036	0.062	
Indirect effect						<i>ab</i>	0.080	0.047	0.118	<0.001

Table C.9. Mediation results of perceived bird biodiversity on happiness via compatibility

Antecedent		Consequent								
		<i>M</i> (COMPATIBILITY)				<i>Y</i> (HAPPINESS)				
		Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>	
<i>X</i> (BIRDS)	<i>a</i>	0.838	0.290	1.396	<i>c'</i>	-0.023	-0.147	0.100	0.72	
<i>M</i> (COMPATIBILITY)		-	-	-	-	<i>b</i>	0.052	0.039	0.066	
Indirect effect						<i>ab</i>	0.044	0.014	0.078	<0.001

Table C.10. Mediation results of perceived bird biodiversity on happiness via coherence

Antecedent		Consequent								
		<i>M</i> (COHERENCE)				<i>Y</i> (HAPPINESS)				
		Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>	
<i>X</i> (BIRDS)	<i>a</i>	-0.227	-0.512	0.066	<i>c'</i>	0.023	-0.104	-0.149	0.74	
<i>M</i> (COHERENCE)		-	-	-	-	<i>b</i>	-0.001	-0.028	0.026	
Indirect effect						<i>ab</i>	0.000	-0.008	0.008	0.96

Perceived butterfly biodiversity

Table C.11. Mediation results of perceived butterfly biodiversity on happiness via overall PRS

Antecedent		Consequent							
		M (PRS)				Y (HAPPINESS)			
		Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>
X (BUTTERFLIES)	<i>a</i>	0.888	-0.398	2.198	<i>c'</i>	0.080	-0.059	0.217	0.25
M (PRS)		-	-	-	<i>b</i>	0.029	0.023	0.035	
Indirect effect					<i>ab</i>	0.026	-0.014	0.064	0.19

Table C.12. Mediation results of perceived butterfly biodiversity on happiness via being away

Antecedent		Consequent							
		M (BEING AWAY)				Y (POSITIVE AFFECT)			
		Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>
X (BUTTERFLIES)	<i>a</i>	0.155	-0.102	0.415	<i>c'</i>	0.099	-0.043	0.238	0.17
M (BEING AWAY)		-	-	-	<i>b</i>	0.084	0.051	0.116	
Indirect effect					<i>ab</i>	0.013	-0.009	0.036	0.24

Table C.13. Mediation results of perceived butterfly biodiversity on happiness via fascination

Antecedent		Consequent							
		M (FASCINATION)				Y (POSITIVE AFFECT)			
		Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>
X (BUTTERFLIES)	<i>a</i>	0.593	-0.070	1.267	<i>c'</i>	0.082	-0.054	0.216	0.25
M (FASCINATION)		-	-	-	<i>b</i>	0.048	0.036	0.062	
Indirect effect					<i>ab</i>	0.030	-0.001	0.064	0.06

Table C.14. Mediation results of perceived butterfly biodiversity on happiness via compatibility

Antecedent		Consequent							
		<i>M</i> (COMPATIBILITY)				<i>Y</i> (POSITIVE AFFECT)			
		Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>
<i>X</i> (BUTTERFLIES)	<i>a</i>	0.569	-0.057	1.203	<i>c'</i>	0.080	-0.061	0.226	0.25
<i>M</i> (COMPATIBILITY)		-	-	-	<i>b</i>	0.052	0.039	0.066	
Indirect effect					<i>ab</i>	0.029	-0.005	0.067	0.09

Table C.15. Mediation results of perceived butterfly biodiversity on happiness via coherence

Antecedent		Consequent							
		<i>M</i> (COHERENCE)				<i>Y</i> (POSITIVE AFFECT)			
		Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>
<i>X</i> (BUTTERFLIES)	<i>a</i>	-0.271	-0.596	0.061	<i>c'</i>	0.115	-0.030	0.255	0.11
<i>M</i> (COHERENCE)		-	-	-	<i>b</i>	-0.001	-0.028	0.026	
Indirect effect					<i>ab</i>	0.0002	-0.010	0.010	0.97

Perceived plant and tree biodiversity

Table C.16. Mediation results of perceived plant/tree biodiversity on happiness via overall PRS

Antecedent		Consequent							
		M (PRS)				Y (HAPPINESS)			
		Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>
<i>X</i> (PLANTS/TREES)	<i>a</i>	0.699	-0.453	1.860	<i>c'</i>	0.003	-0.123	0.124	0.94
<i>M</i> (PRS)		-	-	-	<i>b</i>	0.029	0.023	0.035	
Indirect effect					<i>ab</i>	0.019	-0.013	0.053	0.26

Table C.17. Mediation results of perceived plant/tree biodiversity on happiness via being away

Antecedent		Consequent							
		M (BEING AWAY)				Y (POSITIVE AFFECT)			
		Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>
<i>X</i> (PLANTS/TREES)	<i>a</i>	-0.103	-0.333	0.128	<i>c'</i>	0.041	-0.079	0.164	0.51
<i>M</i> (BEING AWAY)		-	-	-	<i>b</i>	0.084	0.051	0.116	
Indirect effect					<i>ab</i>	-0.009	-0.029	0.011	0.33

Table C.18. Mediation results of perceived plants and trees biodiversity on happiness via fascination

Antecedent		Consequent							
		M (FASCINATION)				Y (POSITIVE AFFECT)			
		Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>
<i>X</i> (PLANTS/TREES)	<i>a</i>	-0.046	-0.637	0.557	<i>c'</i>	0.028	-0.089	0.149	0.68
<i>M</i> (FASCINATION)		-	-	-	<i>b</i>	0.048	0.036	0.062	
Indirect effect					<i>ab</i>	-0.003	-0.033	0.025	0.87

Table C.19. Mediation results of perceived plants and trees biodiversity on happiness via compatibility

Antecedent		Consequent							
		M (COMPATIBILITY)				Y (POSITIVE AFFECT)			
		Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>
X (PLANTS/TREES)	<i>a</i>	0.313	-0.243	0.880	<i>c'</i>	0.007	-0.113	0.124	0.89
M (COMPATIBILITY)		-	-	-	<i>b</i>	0.052	0.039	0.066	
Indirect effect					<i>ab</i>	0.016	-0.012	0.045	0.27

Table C.20. Mediation results of perceived plants and trees biodiversity on happiness via coherence

Antecedent		Consequent							
		M (COHERENCE)				Y (POSITIVE AFFECT)			
		Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>
X (PLANTS/TREES)	<i>a</i>	0.098	-0.197	0.389	<i>c'</i>	0.033	-0.092	0.152	0.59
M (COHERENCE)		-	-	-	<i>b</i>	-0.001	-0.028	0.026	
Indirect effect					<i>ab</i>	-0.0001	-0.005	0.005	0.96

Walk duration

Table C.21. Mediation results of walk duration on happiness via overall PRS

Antecedent		Consequent								
		M (PRS)				Y (HAPPINESS)				
		Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>	
<i>X</i> (DURATION)	<i>a</i>	1.125	0.086	2.129		<i>c'</i>	0.090	-0.008	0.199	0.08
<i>M</i> (PRS)		-	-	-	-	<i>b</i>	0.029	0.023	0.035	
Indirect effect						<i>ab</i>	0.033	0.003	0.063	0.03

Table C.22. Mediation results of walk duration on happiness via being away

Antecedent		Consequent								
		M (BEING AWAY)				Y (HAPPINESS)				
		Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>	
<i>X</i> (DURATION)	<i>a</i>	0.118	-0.089	0.318		<i>c'</i>	0.108	0.001	0.219	0.05
<i>M</i> (BEING AWAY)		-	-	-	-	<i>b</i>	0.084	0.051	0.116	
Indirect effect						<i>ab</i>	0.010	-0.007	0.029	0.24

Table C.23. Mediation results of walk duration on happiness via fascination

Antecedent		Consequent								
		M (FASCINATION)				Y (HAPPINESS)				
		Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>	
<i>X</i> (DURATION)	<i>a</i>	0.275	-0.260	0.791		<i>c'</i>	0.105	-0.006	0.211	0.06
<i>M</i> (FASCINATION)		-	-	-	-	<i>b</i>	0.048	0.036	0.062	
Indirect effect						<i>ab</i>	0.013	-0.012	0.039	0.30

Table C.24. Mediation results of walk duration on happiness via compatibility

Antecedent		Consequent								
		<i>M</i> (COMPATIBILITY)				<i>Y</i> (HAPPINESS)				
		Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>	
<i>X</i> (DURATION)	<i>a</i>	0.186	-0.317	0.674	<i>c'</i>	0.112	0.005	0.216	0.04	
<i>M</i> (COMPATIBILITY)		-	-	-	-	<i>b</i>	0.052	0.039	0.066	
Indirect effect						<i>ab</i>	0.010	-0.016	0.036	0.43

Table C.25. Mediation results of walk duration on happiness via coherence

Antecedent		Consequent								
		<i>M</i> (COHERENCE)				<i>Y</i> (HAPPINESS)				
		Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>	
<i>X</i> (DURATION)	<i>a</i>	0.057	-0.197	0.319	<i>c'</i>	0.116	0.008	0.226	0.03	
<i>M</i> (COHERENCE)		-	-	-	-	<i>b</i>	-0.001	-0.028	0.026	
Indirect effect						<i>ab</i>	-0.000	-0.068	0.062	1.00

Perceived walk intensity

Table C.26. Mediation results of perceived walk intensity on happiness via overall PRS

Antecedent		Consequent								
		M (PRS)				Y (HAPPINESS)				
		Coeff.	CI lower	CI upper	<i>p</i>		Coeff.	CI lower	CI upper	<i>p</i>
X (INTENSITY)	<i>a</i>	0.928	0.552	1.323		<i>c'</i>	0.120	0.080	0.162	<0.001
M (PRS)		-	-	-	-	<i>b</i>	0.029	0.023	0.035	
Indirect effect						<i>ab</i>	0.027	0.015	0.040	<0.001

Table C.27. Mediation results of perceived walk intensity on happiness via being away

Antecedent		Consequent								
		M (BEING AWAY)				Y (HAPPINESS)				
		Coeff.	CI lower	CI upper	<i>p</i>		Coeff.	CI lower	CI upper	<i>p</i>
X (INTENSITY)	<i>a</i>	0.058	-0.017	0.137		<i>c'</i>	0.141	0.101	0.182	<0.001
M (BEING AWAY)		-	-	-	-	<i>b</i>	0.084	0.051	0.116	
Indirect effect						<i>ab</i>	0.005	-0.002	0.012	0.15

Table C.28. Mediation results of perceived walk intensity on happiness via fascination

Antecedent		Consequent								
		M (FASCINATION)				Y (HAPPINESS)				
		Coeff.	CI lower	CI upper	<i>p</i>		Coeff.	CI lower	CI upper	<i>p</i>
X (INTENSITY)	<i>a</i>	0.401	0.206	0.604		<i>c'</i>	0.132	0.091	0.173	<0.001
M (FASCINATION)		-	-	-	-	<i>b</i>	0.048	0.036	0.062	
Indirect effect						<i>ab</i>	0.019	0.010	0.030	<0.001

Table C.29. Mediation results of perceived walk intensity on happiness via compatibility

Antecedent		Consequent								
		<i>M</i> (COMPATIBILITY)				<i>Y</i> (HAPPINESS)				
		Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>	
<i>X</i> (INTENSITY)	<i>a</i>	0.161	-0.023	0.351		<i>c'</i>	0.139	0.100	0.180	<0.001
<i>M</i> (COMPATIBILITY)		-	-	-	-	<i>b</i>	0.052	0.039	0.066	
Indirect effect						<i>ab</i>	0.008	-0.001	0.018	0.09

Table C.30. Mediation results of perceived walk intensity on happiness via coherence

Antecedent		Consequent								
		<i>M</i> (COHERENCE)				<i>Y</i> (HAPPINESS)				
		Coeff.	CI lower	CI upper	<i>p</i>	Coeff.	CI lower	CI upper	<i>p</i>	
<i>X</i> (INTENSITY)	<i>a</i>	-0.092	-0.188	0.006		<i>c'</i>	0.149	-0.109	0.189	<0.001
<i>M</i> (COHERENCE)		-	-	-	-	<i>b</i>	-0.001	-0.028	0.026	
Indirect effect						<i>ab</i>	-0.000	-0.003	0.003	1.00