

Supplementary Information

Comparing the effects of climate change labelling on reactions of the Taiwanese public

Hung et al

Supplementary Table 1 Two-sided independent sample *t* test results of labelling effects for the subgroups – gender

Construct	Label	N	Mean(s.d.)	P values	Effect size (r)
Gender: male					
Communication – discuss with family members	Climate change	456	2.31(1.08)	.023	.08
	Climate crisis	440	2.15(1.01)		
Communication – discuss with friends	Climate change	462	2.5(.98)	.008	.09
	Climate crisis	444	2.32(1.02)		
Communications – information received	Climate change	449	2.88(1.01)	.002	.1
	Climate crisis	432	2.67(1.04)		
Belief – personal harm	Climate change	434	3.08(1.19)	.78	.01
	Climate crisis	414	3.06(1.17)		
Belief – harm future generations	Climate change	436	4.01(.91)	.636	.02
	Climate crisis	414	3.98(.99)		
Belief – worry	Climate change	456	3.97(1.04)	.426	.03
	Climate crisis	437	3.91(1.08)		
Belief – personal importance	Climate change	455	4.32(.85)	.739	.01
	Climate crisis	441	4.3(.89)		
Behavioural intention	Climate change	449	4.28(.87)	.168	.05
	Climate crisis	436	4.2(.92)		
Involvement – priority for governments	Climate change	442	2.91(.84)	.233	.04
	Climate crisis	416	2.84(.89)		
Belief – personal moral					

obligations						
	Climate change	455	4.2(1.02)	.878	.01	
	Climate crisis	433	4.21(.94)			
Belief – moral obligations for future generations						
	Climate change	457	4.41(.84)	.136	.05	
	Climate crisis	434	4.32(.89)			
Belief – collective efficacy						
	Climate change	445	4.29(.97)	.177	.05	
	Climate crisis	430	4.2(1.05)			
Involvements – climate issue important for voting decision						
	Climate change	429	3.38(1.42)	.47	.02	
	Climate crisis	412	3.31(1.46)			
Gender: female						
Communication – discuss with family members						
	Climate change	467	2.49(1.08)	.69	.01	
	Climate crisis	507	2.47(1.05)			
Communication – discuss with friends						
	Climate change	470	2.5(1.04)	.932	0	
	Climate crisis	510	2.49(.98)			
Communications – information received						
	Climate change	465	2.95(1.07)	.837	.01	
	Climate crisis	505	2.96(1.07)			
Belief – personal harm						
	Climate change	440	3.22(1.13)	.078	.06	
	Climate crisis	484	3.35(1.06)			
Belief – harm future generations						
	Climate change	449	4.04(.94)	.215	.04	
	Climate crisis	487	4.12(.84)			
Belief – worry						
	Climate change	463	4.13(.95)	.119	.05	
	Climate crisis	503	4.21(.78)			
Belief – personal importance						

	Climate change	462	4.4(.83)	.633	.02
	Climate crisis	504	4.42(.74)		
Behavioural intention					
	Climate change	455	4.31(.78)	.018	.08
	Climate crisis	499	4.42(.66)		
Involvement – priority for governments					
	Climate change	442	2.95(.81)	.438	.03
	Climate crisis	484	2.91(.81)		
Belief – personal moral obligations					
	Climate change	459	4.29(.93)	.106	.05
	Climate crisis	497	4.38(.79)		
Belief – moral obligations for future generations					
	Climate change	462	4.4(.85)	.074	.06
	Climate crisis	502	4.49(.69)		
Belief – collective efficacy					
	Climate change	444	4.28(.95)	.274	.04
	Climate crisis	493	4.34(.89)		
Involvements – climate issue important for voting decision					
	Climate change	441	3.3(1.41)	.314	.03
	Climate crisis	479	3.39(1.32)		

Supplementary Table 2 Two-sided independent sample *t* test results of labelling effects for the subgroups – age

Construct	Label	N	Mean(s.d.)	P values	Effect size (r)
Age: 20-49 years-old					
Communication – discuss with family members	Climate change	438	2.43(1.01)	.378	.03
	Climate crisis	424	2.37(1.05)		
Communication – discuss with friends	Climate change	439	2.52(.9)	.159	.05
	Climate crisis	424	2.43(.97)		
Communications – information received	Climate change	439	2.98(.96)	.467	.02
	Climate crisis	419	2.93(1)		
Belief – personal harm	Climate change	428	3.17(1.06)	.27	.04
	Climate crisis	416	3.25(1.03)		
Belief – harm future generations	Climate change	432	4.06(.86)	.452	.03
	Climate crisis	418	4.11(.88)		
Belief – worry	Climate change	437	4.02(.95)	.673	.01
	Climate crisis	421	4.04(.9)		
Belief – personal importance	Climate change	437	4.28(.86)	.939	0
	Climate crisis	423	4.28(.86)		
Behavioural intention	Climate change	435	4.23(.83)	.932	0
	Climate crisis	422	4.23(.82)		
Involvement – priority for governments	Climate change	435	2.85(.77)	.167	.05
	Climate crisis	419	2.78(.81)		
Belief – personal moral					

obligations						
	Climate change	439	4.29(.94)	.817	.01	
	Climate crisis	422	4.3(.83)			
Belief – moral obligations for future generations						
	Climate change	438	4.41(.79)	.434	.03	
	Climate crisis	422	4.37(.75)			
Belief – collective efficacy						
	Climate change	435	4.25(.93)	.911	0	
	Climate crisis	419	4.24(.98)			
Involvements – climate issue important for voting decision						
	Climate change	429	3.16(1.39)	.717	.01	
	Climate crisis	412	3.12(1.4)			
Age: 50 years-old and above						
Communication – discuss with family members						
	Climate change	482	2.38(1.15)	.185	.04	
	Climate crisis	519	2.28(1.1)			
Communication – discuss with friends						
	Climate change	490	2.47(1.09)	.242	.04	
	Climate crisis	526	2.39(1.02)			
Communications – information received						
	Climate change	472	2.85(1.11)	.1	.05	
	Climate crisis	514	2.74(1.11)			
Belief – personal harm						
	Climate change	443	3.13(1.26)	.481	.02	
	Climate crisis	480	3.18(1.19)			
Belief – harm future generations						
	Climate change	450	3.99(.98)	.784	.01	
	Climate crisis	481	4.01(.95)			
Belief – worry						
	Climate change	479	4.07(1.04)	.729	.01	
	Climate crisis	515	4.1(.97)			
Belief – personal importance						

	Climate change	477	4.43(.81)	.948	0
	Climate crisis	518	4.43(.78)		
Behavioural intention					
	Climate change	467	4.36(.82)	.493	.02
	Climate crisis	509	4.39(.78)		
Involvement – priority for governments					
	Climate change	446	3.01(.86)	.39	.03
	Climate crisis	478	2.96(.87)		
Belief – personal moral obligations					
	Climate change	472	4.2(1.02)	.112	.05
	Climate crisis	505	4.3(.91)		
Belief – moral obligations for future generations					
	Climate change	478	4.39(.89)	.372	.03
	Climate crisis	511	4.44(.83)		
Belief – collective efficacy					
	Climate change	451	4.31(.99)	.913	0
	Climate crisis	500	4.31(.95)		
Involvements – climate issue important for voting decision					
	Climate change	438	3.51(1.42)	.627	.02
	Climate crisis	477	3.55(1.35)		

Supplementary Table 3 Two-sided independent sample *t* test results of labelling effects for the subgroups – educational attainment

Construct	Label	N	Mean(s.d.)	P values	Effect size (r)
Educational attainment: high school or below					
Communication – discuss with family members	Climate change	399	2.2(1.1)	.076	.06
	Climate crisis	415	2.07(1.07)		
Communication – discuss with friends	Climate change	406	2.32(1.06)	.119	.05
	Climate crisis	421	2.2(1.03)		
Communications – information received	Climate change	390	2.63(1.13)	.324	.03
	Climate crisis	407	2.55(1.1)		
Belief – personal harm	Climate change	372	3.02(1.28)	.4	.03
	Climate crisis	378	3.09(1.21)		
Belief – harm future generations	Climate change	376	3.9(1.04)	.774	.01
	Climate crisis	376	3.92(.99)		
Belief – worry	Climate change	394	3.96(1.08)	.629	.02
	Climate crisis	408	3.99(1.02)		
Belief – personal importance	Climate change	393	4.38(.86)	.613	.02
	Climate crisis	413	4.35(.84)		
Behavioural intention	Climate change	384	4.25(.88)	.432	.03
	Climate crisis	403	4.3(.82)		
Involvement – priority for governments	Climate change	366	2.93(.87)	.924	0
	Climate crisis	376	2.92(.87)		

Belief – personal moral obligations						
	Climate change	391	4.18(1.05)	.847	.01	
	Climate crisis	399	4.2(.98)			
Belief – moral obligations for future generations						
	Climate change	395	4.35(.95)	.646	.02	
	Climate crisis	404	4.38(.86)			
Belief – collective efficacy						
	Climate change	374	4.23(1.06)	.932	0	
	Climate crisis	398	4.23(1.02)			
Involvements – climate issue important for voting decision						
	Climate change	357	3.43(1.43)	.697	.01	
	Climate crisis	375	3.47(1.39)			
Educational attainment: some college and above						
Communication – discuss with family members						
	Climate change	523	2.56(1.04)	.516	.02	
	Climate crisis	529	2.52(.97)			
Communication – discuss with friends						
	Climate change	525	2.63(.94)	.299	.03	
	Climate crisis	530	2.57(.95)			
Communications – information received						
	Climate change	523	3.13(.91)	.118	.05	
	Climate crisis	527	3.04(.99)			
Belief – personal harm						
	Climate change	501	3.25(1.06)	.482	.02	
	Climate crisis	517	3.3(1.04)			
Belief – harm future generations						
	Climate change	509	4.12(.82)	.57	.02	
	Climate crisis	522	4.15(.85)			
Belief – worry						
	Climate change	524	4.12(.93)	.722	.01	

Belief – personal importance	Climate crisis	529	4.14(.87)		
	Climate change	523	4.35(.82)	.475	.02
Behavioural intention	Climate crisis	529	4.38(.8)		
	Climate change	519	4.33(.79)	.99	0
Involvement – priority for governments	Climate crisis	529	4.33(.79)		
	Climate change	518	2.93(.79)	.088	.05
Belief – personal moral obligations	Climate crisis	521	2.85(.83)		
	Climate change	522	4.29(.92)	.098	.05
Belief – moral obligations for future generations	Climate crisis	529	4.38(.77)		
	Climate change	523	4.45(.75)	.816	.01
Belief – collective efficacy	Climate crisis	529	4.44(.75)		
	Climate change	514	4.32(.88)	.744	.01
Involvements – climate issue important for voting decision	Climate crisis	522	4.3(.93)		
	Climate change	512	3.27(1.4)	.914	0
	Climate crisis	515	3.26(1.39)		

Supplementary Table 4 Two-sided independent sample *t* test results of labelling effects for the subgroups – cultural worldviews

Construct	Label	N	Mean(s.d.)	P values	Effect size (r)
People with equalitarian worldviews					
Communication – discuss with family members	Climate change	387	2.48(1.13)	.628	.02
	Climate crisis	409	2.44(1.08)		
Communication – discuss with friends	Climate change	391	2.59(1)	.638	.02
	Climate crisis	411	2.56(1.03)		
Communications – information received	Climate change	388	2.99(1.03)	.381	.03
	Climate crisis	407	2.93(1.1)		
Belief – personal harm	Climate change	373	3.34(1.15)	.545	.02
	Climate crisis	398	3.39(1.09)		
Belief – harm future generations	Climate change	383	4.17(.88)	.433	.03
	Climate crisis	401	4.22(.89)		
Belief – worry	Climate change	388	4.26(.89)	.509	.02
	Climate crisis	408	4.21(.9)		
Belief – personal importance	Climate change	387	4.52(.71)	.358	.03
	Climate crisis	411	4.47(.74)		
Behavioural intention	Climate change	384	4.37(.77)	.469	.03
	Climate crisis	406	4.41(.74)		
Involvement – priority for governments	Climate change	379	3.12(.77)	.13	.05
	Climate crisis	396	3.03(.85)		

Belief – personal moral obligations	Climate change	388	4.33(.95)	.171	.05
	Climate crisis	403	4.41(.77)		
Belief – moral obligations for future generations	Climate change	391	4.49(.78)	.464	.03
	Climate crisis	406	4.52(.71)		
Belief – collective efficacy	Climate change	382	4.32(.95)	.059	.07
	Climate crisis	405	4.44(.87)		
Involvements – climate issue important for voting decision	Climate change	371	3.44(1.42)	.608	.02
	Climate crisis	391	3.49(1.35)		
People with hierarchical worldviews					
Communication – discuss with family members	Climate change	441	2.43(1.02)	.117	.05
	Climate crisis	443	2.33(.98)		
Communication – discuss with friends	Climate change	443	2.49(.99)	.464	.02
	Climate crisis	445	2.44(.93)		
Communications – information received	Climate change	438	2.97(.99)	.095	.06
	Climate crisis	438	2.86(.99)		
Belief – personal harm	Climate change	423	3.09(1.11)	.557	.02
	Climate crisis	420	3.14(1.04)		
Belief – harm future generations	Climate change	427	4.01(.85)	.517	.02
	Climate crisis	429	3.97(.84)		
Belief – worry	Climate change	440	3.98(.97)	.24	.04
	Climate crisis				

Belief – personal importance	Climate crisis	440	4.06(.86)		
	Climate change	439	4.32(.81)	.714	.01
Behavioural intention	Climate crisis	443	4.34(.78)		
	Climate change	437	4.32(.78)	.968	0
Involvement – priority for governments	Climate crisis	440	4.31(.79)		
	Climate change	435	2.84(.82)	.225	.04
Belief – personal moral obligations	Climate crisis	429	2.77(.82)		
	Climate change	439	4.28(.91)	.893	0
Belief – moral obligations for future generations	Climate crisis	441	4.27(.87)		
	Climate change	440	4.44(.79)	.392	.03
Belief – collective efficacy	Climate crisis	442	4.39(.77)		
	Climate change	427	4.33(.9)	.02	.08
Involvements – climate issue important for voting decision	Climate crisis	434	4.18(.99)		
	Climate change	428	3.32(1.41)	.824	.01
People with individualistic worldviews	Climate crisis	425	3.29(1.39)		
	Climate change	23	2.65(1.07)	.007	.36
Communication – discuss with family members	Climate crisis	33	1.88(.96)		
	Climate change	23	2.35(1.03)	.009	.34
Communication – discuss with friends	Climate crisis	34	1.68(.84)		
	Climate change	23	2.35(1.03)	.009	.34
Communications – information received	Climate crisis	34	1.68(.84)		
	Climate change	23	2.35(1.03)	.009	.34

		Climate change	22	2.59(1.22)	.098	.22
		Climate crisis	34	2.12(.88)		
Belief – personal harm		Climate change	22	2.41(1.33)	.724	.05
		Climate crisis	31	2.55(1.46)		
Belief – harm future generations		Climate change	19	3.21(1.36)	.798	.04
		Climate crisis	29	3.31(1.28)		
Belief – worry		Climate change	22	3.5(1.34)	.546	.08
		Climate crisis	33	3.27(1.38)		
Belief – personal importance		Climate change	21	3.9(1.18)	.772	.04
		Climate crisis	35	3.8(1.37)		
Behavioural intention		Climate change	22	4.05(1.09)	.562	.08
		Climate crisis	34	3.88(.98)		
Involvement – priority for governments		Climate change	21	2.29(.85)	.229	.17
		Climate crisis	30	2.63(1.1)		
Belief – personal moral obligations		Climate change	22	3.77(1.31)	.834	.03
		Climate crisis	33	3.85(1.3)		
Belief – moral obligations for future generations		Climate change	23	4(1.04)	.597	.07
		Climate crisis	34	3.82(1.34)		
Belief – collective efficacy		Climate change	21	4.33(.73)	.107	.22
		Climate crisis	34	3.85(1.21)		
Involvements – climate issue important for voting decision		Climate change	20	3.35(1.46)	.326	.14
		Climate crisis	32	2.91(1.63)		
People	with fatalism					

worldviews						
Communication – discuss with family members	Climate change	48	1.85(.92)	.937	.01	
	Climate crisis	37	1.84(.96)			
Communication – discuss with friends	Climate change	48	2.06(1.02)	.129	.17	
	Climate crisis	38	1.74(.92)			
Communications – information received	Climate change	47	2.13(1.08)	.132	.17	
	Climate crisis	37	2.49(1.07)			
Belief – personal harm	Climate change	41	2.68(1.25)	.428	.09	
	Climate crisis	35	2.91(1.27)			
Belief – harm future generations	Climate change	37	3.49(1.04)	.279	.13	
	Climate crisis	34	3.76(1.1)			
Belief – worry	Climate change	45	3.38(1.21)	.03	.24	
	Climate crisis	36	3.94(1.09)			
Belief – personal importance	Climate change	45	3.84(1.19)	.121	.17	
	Climate crisis	35	4.23(.94)			
Behavioural intention	Climate change	43	3.77(1.09)	.332	.11	
	Climate crisis	36	4(1.01)			
Involvement – priority for governments	Climate change	38	2.55(.86)	.293	.12	
	Climate crisis	36	2.75(.73)			
Belief – personal moral obligations	Climate change	45	3.76(1.15)	.275	.12	
	Climate crisis	38	4.03(1.08)			
Belief – moral obligations for						

future generations						
	Climate change	46	3.98(1.02)	.224	.13	
	Climate crisis	37	4.24(.93)			
Belief – collective efficacy						
	Climate change	42	3.74(1.19)	.133	.17	
	Climate crisis	38	4.13(1.12)			
Involvements – climate issue important for voting decision						
	Climate change	40	2.63(1.25)	.156	.17	
	Climate crisis	34	3.06(1.35)			