

Supplementary material for “Alexithymia increases moral acceptability of accidental harms”

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Supplementary Text S1

All scenarios were adapted from Young & Saxe (2008). All the scenario descriptions below are organized in the following order: (i) background: information to set the scene (identical across all conditions); (ii) foreshadow: information foreshadowing the outcome (neutral or negative); (iii) belief: information stating the protagonist's belief about the situation (neutral or negative); (iv) outcome: information about the protagonist's action and its outcome (neutral or negative).

Iron

Anna and her little sister are in the bathroom doing makeovers by the sink. Anna had straightened her hair earlier in the day using a straightening iron. The iron is still on the sink.

Anna's mother had turned the button on the iron off 3 h ago, so it is no longer hot and is perfectly safe to touch.

Anna's mother had just used the iron herself 5 min ago, so it is still extremely hot and could cause severe burns.

Because the cord on the iron was unplugged, Anna believes that it is no longer hot and cannot burn her sister.

Because the cord on the iron is still in the socket, Anna believes that it is still hot and could easily burn her sister.

Anna lets her sister continue to play by the sink. Her sister's arm hits the iron, but it is okay because the iron is cold. They have fun continuing their makeovers.

Anna lets her sister continue to play by the sink. Her sister's arm hits the iron, and she gets badly burned. She cries hysterically all the way to the emergency room.

Letting her sister continue to play by the sink was:

Tree House

Federico finds an abandoned tree house in the woods. He takes a younger buddy there to show him his great discovery.

The tree house is new and has been built with thick heavy wood, so it makes a very safe and fun hangout spot for boys.

The tree house is old and built with now rotting wood, so it is incredibly dangerous to even set foot in.

Because of its newly built appearance, Federico believes that the tree house is sturdy and that it will be a safe place for them to play.

Because of its old dingy appearance, Federico believes that the tree house is weak and that it will be an unsafe place for them to play.

Federico invites his buddy to climb into the tree house. His buddy jumps around and has a great time up in the air.

Federico invites his buddy to climb into the tree house. His buddy breaks one of his legs after falling through broken floorboards.

Inviting his buddy to climb into the tree house was:

Ocean

Ilaria and her neighbor are kayaking in a part of the ocean with lots of jellyfish. Ilaria's neighbor asks her if she should go for a swim.

It is perfectly safe to swim in the ocean, because the jellyfish do not sting and are totally harmless.

It is not safe to swim in the ocean, because the jellyfish sting and their stings are really painful.

Because Ilaria read information that said the ocean's jellyfish are harmless, she believes that it is quite safe to swim in the ocean.

Because Ilaria read information that said the ocean's jellyfish are harmful, she believes that it is not safe to swim in the ocean.

Ilaria tells her neighbor to go for a swim. Her neighbor does, enjoys the swim, and is just fine.

Ilaria tells her neighbor to go for a swim. Her neighbor does, gets stung by jellyfish, and experiences a lot of pain due to the sting.

Telling her neighbor to swim was:

Laptop

Claudio is a new computer technician at a store. A customer comes to the store to get her laptop checked out. The laptop gets very hot after only 10 min of work.

The laptop is within the normal range in terms of heating up with use. It is totally safe to use on one's desk and lap.

The laptop is malfunctioning and heats up much more than normal. It is dangerous to use, especially on one's lap.

Claudio checks with his boss and comes back believing it is very normal for all laptops to heat up during use.

Claudio checks with his boss and comes back believing that many laptops will catch on fire if they overheat and cause burns.

Claudio returns the laptop to the customer. The customer goes home, and uses her laptop to get a lot of important work done.

Claudio returns the laptop to the customer. The customer goes home, and her laptop catches on fire. She suffers painful second-degree burns.

Returning the laptop to the customer was:

Supplementary Table S1

Alexithymia (TAS) scores, age, and gender predicting moral judgments for different types of harm and empathy IRI subscales.

Predictor variable	Categorical variable	Logit coefficient [95% CI]*	Wald's Chi-square	<i>p</i>-value
	neutral	0.008 [-0.014, 0.030]	0.794	0.373
	accidental	0.023 [0.002, 0.045]	6.179	0.013
	attempted	0.006 [-0.015, 0.027]	0.359	0.549
	intentional	0.013 [-0.007, 0.035]	1.999	0.157
	F	-0.001 [-0.016, 0.014]	0.004	0.949
	PT	-0.030 [-0.049, -0.017]	10.703	0.001
	EC	-0.031 [-0.050, -0.018]	11.427	0.001
TAS	PD	0.046 [0.027, 0.064]	23.548	< 0.001

Note: TAS = Toronto Alexithymia Scale; F = fantasy; PT = perspective taking; PD = personal distress; EC = empathic concern; CI = confidence interval. * 95% bias corrected and accelerated confidence intervals for logit coefficients were generated using 10,000 bootstrap samples. Positive or negative value of logit coefficient denote that increase in value of predictor variable is associated with increased odds for *higher* or *lower* value of criterion variable, respectively.

Supplementary Table S2

IRI subscale scores, age, and gender predicting moral judgments for different types of scenarios.

Predictor variable	Categorical variable	Logit coefficient [95% CI]*	Wald's Chi-square	<i>p</i>-value
F	neutral	-0.002 [-0.053, 0.056]	1.676	0.195
	accidental	-0.009 [-0.059, 0.041]	0.002	0.964
	attempted	-0.024 [-0.080, 0.035]	0.000	0.993
	intentional	-0.089 [-0.141, -0.045]	13.040	< 0.001
PT	neutral	-0.038 [-0.085, 0.013]	2.669	0.102
	accidental	-0.054 [-0.113, 0.006]	5.731	0.017
	attempted	-0.018 [-0.070, 0.031]	0.655	0.418
	intentional	-0.057 [-0.099, -0.012]	6.056	0.014
EC	neutral	-0.065 [-0.128, -0.002]	6.323	0.012
	accidental	-0.076 [-0.129, -0.020]	9.098	0.003
	attempted	-0.094 [-0.153, -0.037]	13.752	< 0.001
	intentional	-0.118 [-0.174, -0.074]	19.863	< 0.001
PD	neutral	-0.019 [-0.074, 0.033]	0.655	0.418
	accidental	0.017 [-0.024, 0.049]	0.549	0.459
	attempted	-0.035 [-0.084, 0.022]	2.348	0.125
	intentional	0.020 [-0.032, 0.071]	0.762	0.383

Note: F = fantasy; PT = perspective taking; EC = empathic concern; PD = personal distress; CI = confidence interval.

* 95% bias corrected and accelerated confidence intervals for logit coefficients were generated using 10,000 bootstrap samples. Positive or negative value of logit coefficient denote that increase in value of predictor variable is associated with increased odds for *higher* or *lower* value of criterion variable, respectively.

Supplementary Table S3

Spearman rank correlations (ρ) between alexithymia, IRI subscale scores, and different types of harms. Numbers in brackets denote partial

Spearman rank correlations (ρ_{pc}) between these variables after partialling out the effects of age and gender.

Items	TAS	F	PT	EC	PD	neu	acc	att	int
TAS	-	0.021 (0.018)	-0.159** (- 0.171**)	-0.168** (- 0.169**)	0.265*** (0.279***)	0.059 (0.064)	0.127* (0.127*)	0.033 (0.033)	0.074 (0.069)
F		-	0.102 (0.052)	0.314*** (0.257***)	0.235*** (0.171**)	0.019 (- 0.030)	-0.009 (- 0.002)	-0.085 (- 0.060)	-0.214*** (- 0.212***)
PT			-	0.291*** (0.282***)	-0.017 (- 0.048)	-0.074 (- 0.065)	-0.100 (- 0.099)	-0.053 (- 0.043)	-0.116* (- 0.122*)
EC				-	0.332*** (0.274***)	-0.117* (- 0.126*)	-0.134* (- 0.133*)	-0.236*** (- 0.221***)	-0.283*** (- 0.269***)
PD					-	-0.052 (- 0.054)	0.027 (0.035)	-0.066 (- 0.043)	0.034 (0.060)

Note: F = fantasy; PT = perspective taking; EC = empathic concern; PD = personal distress; neu = neutral; acc = accidental; att = attempted; int

= intentional. . * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

Supplementary Figure S1

Mediation analysis results. Negative logit coefficient from ordinal regression denotes reduced empathic concern, reduced perspective taking, and increased moral acceptability of accidental harm. Bias-corrected and accelerated 95% CIs from 20,000 bootstrap samples are reported for specific indirect effects after controlling for effects of age and gender. The increased tendency to find accidental harms more acceptable in trait alexithymia was due to reduced empathic concern. Continuous lines denote significant mediation path, while dashed lines denote insignificant mediation path.

