Table S1. Bivariate correlations and descriptive statistics for subscales of the CERQ, Study 3.

	Self-Blame	Acceptance	Rumination	Positive Refocusing	Refocusing on Planning	Positive Reappraisal	Putting into Perspective	Catastrophising	Other-Blame
STAI-T	.54***	.07	.33***	-.29***	-.43	-.46	-.27	.45***	-.02
BAIT	.33***	.15*	.24**	-.11	-.22**	-.27***	-.20**	.31***	.12
BDI	.52***	.12	.31***	-.31***	-.39***	-.36***	-.26**	.38***	-.03
ACS	-.32***	-.03	-.22**	.28***	.35***	.33***	.24**	-.29***	-.05
MCSD	-.14	-.00	-.01	.21**	.34***	.35***	.20**	-.11	-.09
Probability Bias	.38***	.08	.22**	-.31***	-.36***	-.38***	-.18**	.33***	.03
M	10.80	12.66	12.19	9.42	11.44	11.77	12.40	8.53	7.79
SD	3.51	3.19	3.40	3.46	3.50	3.96	3.64	3.26	2.67

Note. * $p < .05$; ** $p < .01$; *** $p < .001$. $N = 201$. STAI-T, State-Trait Anxiety Inventory, trait subscale. BAIT, Beck Anxiety Inventory - Trait. BDI, Beck Depression Inventory. ACS, Attentional Control Scale. MCSD, Marlowe-Crowne Social Desirability scale. CERQ, Cognitive Emotion Regulation Questionnaire.

Table S2. Bivariate correlations and descriptive statistics for subscales of the DERS, Study 4.

	Self-Blame	Acceptance	Rumination	Positive Refocusing	Refocusing on Planning	Positive Reappraisal
STAI-T	.58***	.37***	.51***	.26***	.71***	.53***
BAIT	.56***	.29***	.52***	.16*	.59***	.44***
BDI	.52***	.33***	.50***	.30***	.61***	.52***
ACS	-.32***	-.50***	-.29***	-.13*	-.39***	-.28***
MCSD	-.16*	-.26***	-.26***	-.11	-.23***	-.19**
Probability Bias	.35***	.30***	.32***	.30***	.44***	.37***
M	15.17	15.99	13.45	16.47	20.50	12.79
SD	5.91	4.63	5.05	4.97	6.98	4.10

Note. $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$. $N = 233$. STAI-T, State-Trait Anxiety Inventory, trait subscale. BAIT, Beck Anxiety Inventory - Trait. BDI, Beck Depression Inventory. ACS, Attentional Control Scale. MCSD, Marlowe-Crowne Social Desirability scale. DERS, Difficulties in Emotion Regulation Scale.

Probability Bias

The internal consistency of our probability measures was high, despite the fact that participants were asked about events from a variety of categories. This suggests that probability bias is indeed a general bias in thinking about risk, which varies between individuals but is somewhat consistent within individuals. Probability bias was also surprisingly symmetrical: by which we mean that, where a variable correlated with probability bias, it showed correlations with the probability of positive events and negative events of equivalent strength, in opposite directions. These findings suggest probability bias is not an artefact of negative events being more available in memory (Johnson & Tversky, 1983), nor of any genuine tendency for anxious people to experience more negative events (Constans, 2001), since the events used in our measure were intentionally very diverse, and many of them were objectively very unlikely. Our probability bias measure also showed much better psychometric properties than standard measures of attentional bias (e.g. Chapman, Devue, & Grimshaw, 2017).

Probability bias also showed consistent relationships with all our negative affect measures: for the STAI-T, the correlations ranged from .52 to .58, and the meta-correlation was .55, 95% CI [.50, .60]; for the BAIT, the correlations ranged from .35 to .49, and the meta-correlation was .39, 95% CI [.33, .45]; and for the BDI, the correlations ranged from .40 to .55, and the meta-correlation was .48, 95% CI [.42, .53]. These correlations equate to d effect sizes of 1.32, 0.85 and 1.09. These are rather bigger than the effect size of $d = 0.45$ for anxiety's relationship with attentional bias, reported by Bar-Haim, Lamy, Pergamin, Bakermans-Kranenburg, and van IJzendoorn (2007).

Together with evidence that probability bias decreases with anxiety treatment (Foa, Franklin, Perry, & Herbert, 1996) and can be transmitted from parent to child (Capps, Sigman, Sena, Heocker, & Whalen, 1996), and together with probability bias's obvious relevance to worry (Constans, 2001; MacLeod, Williams, & Bekerian, 1991), these findings show that probability bias is an important cognitive feature of negative affect, worthy of as much research attention as attentional bias.

Cost Bias

We measured cost bias, the tendency to think negative events would affect one's life more than positive events, alongside probability bias in Studies 1 and 2. For each event in the probability bias scale, participants were also asked 'If this happened to you, how much would it affect your life?' There were seven response options: 'Would not affect my life at all'; 'Would have very little effect on my life'; 'Would not affect my life that much'; 'Would affect my life a bit'; 'Would affect my life a lot'; 'Would have a very big effect on my life'; and 'My life would never be the same again.' These were also coded 1-7 for analysis. Cost bias was defined as the participant's mean rated cost of negative events minus their mean rated cost of positive events.

The findings with cost bias were inconsistent: in Study 1, cost bias was predicted by the BAIT and marginally by depression, but not by attentional control; in Study 2, cost bias for the self was predicted by attentional control, but not by anxiety or depression. We do not think this inconsistency detracts from our consistent probability bias findings, but it is puzzling. There are several possible explanations, which are not mutually exclusive. Foa and Kozak (1986) originally suggested that cost bias might be more obvious in social anxiety than it is in other types of anxiety, but Foa, Huppert, and Cahill (2006) later conceded the evidence is inconsistent: although the relationship between trait anxiety and cost bias has not been thoroughly studied, the few existing studies have found a relationship between them (Mitte, 2007; Stöber, 1997). It is also possible our cost bias measure was not as sensitive as those of previous studies: specifically, it is possible that we measured cost too directly. We directly asked participants to rate how much each event would affect their lives, which could be understood as material impact. Mitte (2007) on the other hand asked participants how they would feel if the event occurred, i.e. a much more emotional rating, whereas Stöber (1997) measured ‘utility’ as the extent of the event’s negative consequences (e.g., how badly might the participant’s bicycle be damaged?), somewhat confounding cost with probability. Moving to patient studies, we again see that studies of cost bias have tended to measure specifically the emotional impact of events (Gilboa-Schechtman, Franklin, & Foa, 2000; McManus, Clark, & Hackmann, 2000; Smith & Bryant, 2000), although there are exceptions (Menzies & Clarke, 1995; Voncken, Bögels, & de Vries, 2003). Perhaps by simply asking our participants how much our events would affect their lives, we inadvertently encouraged them to think about the events’ more material impact, which is a more objective question than emotional impact and perhaps less susceptible to biased thinking. It is also possible that our materialistic cost measure encouraged participants to think more analytically about cost, which also tends to weaken bias (Mitte, 2007; Nesse & Klaas, 1994). Interestingly, Gilboa-Schechtman et al. (2000) found that their social anxiety patients tended to expect negative emotional responses to positive events: since we asked participants how much each event would affect their life without specifying the valence of this impact, negative responses to positive events would tend to minimise our cost bias scores, weakening our correlations. Whatever the reason, it is clear that cost bias is not simply an equivalent companion of probability bias: it appears to be a more nuanced phenomenon than the literature implies, and targeted research is needed to properly understand its nature and clinical significance.

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