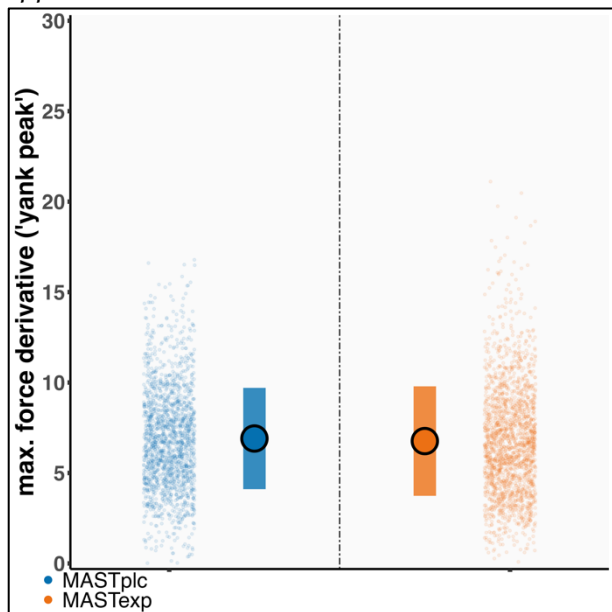


Supplementary Materials

Supplementary Figures

Supplementary Figure 1: No evidence for a stress-induced changes in rate of change in force applied



Supplementary Fig. 1 Legend. MAST_{EXP} and MAST_{PLC} participants did not significantly differ in the rate of change in force applied (yank peak, higher y-axis value = greater rate of change in force) following the decision to exert effort to avoid the threat-of-shock. Trial-level raw data (individual data points) and group-level summaries of individual-level averaged raw data (mean+error bars) are both shown. Error bars represent SD. n=80 participants.

Supplementary Tables

Supplementary Table 1: Experiment 1 Participant Characteristics

Variable	MAST _{PLC}	MAST _{EXP}	Test Statistic	p-value	Effect size	Effect size 95% CI
Sex	27 F/13 M	30 F/10 M	0.24 ^a	0.62	0.06 ^a	0.00 to 0.27
Oral contraceptive	5 Y/22 N	5 Y/25 N	0.00 ^a	>0.999	0.06 ^a	0.00 to <0.01
Luteal Phase ^c	12 Y/7 N	9 Y/12 N	0.93 ^a	0.33	0.15 ^a	0.00 to 0.46
Age	21.10 (2.64)	21.93 (2.70)	-1.38 ^b	0.17	-0.31 ^b	-0.78 to 0.11
BMI	21.63 (2.06)	22.26 (2.55)	-1.21 ^b	0.23	-0.27 ^b	-0.70 to 0.17
PSS (sum)	31.42 (3.64)	31.20 (3.16)	0.29 ^b	0.77	0.07 ^b	-0.38 to 0.54
BIS (mean)	2.07 (0.26)	2.14 (0.24)	-1.20 ^b	0.24	-0.27 ^b	-0.71 to 0.21
BAS Drive (mean)	2.29 (0.58)	2.27 (0.44)	0.22 ^b	0.83	0.05 ^b	-0.41 to 0.49
BAS Fun Seeking (mean)	1.98 (0.54)	2.12 (0.59)	-1.14 ^b	0.26	-0.26 ^b	-0.73 to 0.17
BAS Reward Resp. (mean)	1.60 (0.38)	1.59 (0.39)	0.12 ^b	0.91	0.03 ^b	-0.42 to 0.49
FPQ Minor Pain	20.73 (5.99)	21.20 (6.10)	-0.35 ^b	0.73	-0.08 ^b	-0.51 to 0.35
FPQ Severe Pain	38.73 (5.15)	39.58 (4.65)	-0.78 ^b	0.44	-0.17 ^b	-0.60 to 0.28
FPQ Medical Pain	28.15 (7.60)	29.27 (7.38)	-0.67 ^b	0.50	-0.15 ^b	-0.61 to 0.28
PCS Magnification	5.03 (2.69)	5.38 (2.54)	-0.60 ^b	0.55	-0.13 ^b	-0.57 to 0.35
PCS Rumination	8.45 (3.50)	8.40 (3.63)	0.06 ^b	0.95	0.01 ^b	-0.42 to 0.46
PCS Helplessness	8.75 (3.50)	8.97 (4.49)	-0.25 ^b	0.80	-0.06 ^b	-0.46 to 0.44
MEI Mental Energy	31.73 (8.02)	29.42 (7.81)	1.30 ^b	0.20	0.29 ^b	-0.15 to 0.76
MEI Social Motivation	35.42 (3.82)	33.60 (4.29)	2.01 ^b	0.05	0.45 ^b	0.00 to 0.88
MEI Physical Energy	26.05 (3.86)	24.55 (3.19)	1.89 ^b	0.06	0.42 ^b	-0.03 to 0.86
MGF	1.37 (0.23)	1.30 (0.18)	1.50 ^b	0.14	0.33 ^b	-0.10 to 0.76
Shock calibration	5.21 (2.52)	4.40 (1.99)	1.60 ^b	0.11	0.36 ^b	-0.11 to 0.82

Supplementary Table 1. ^a= χ^2 /Cramer's *V*, ^b=t-statistic/Cohen's *d*, ^c=all participants with a regular menstrual cycle were asked if their next period was expected within the next 10 days. BMI = Body Mass Index, PSS = Perceived Stress Scale (10-item version)¹, BIS = Behavioural Inhibition Scale², BAS = Behavioural Activation Scale², FPQ = Fear of Pain Questionnaire (version 3/30 items)³, PCS = Pain Catastrophising Scale (13-item version)⁴, MEI = Motivation and Energy Inventory (26-item version)⁵, MGF = maximal grip force.

Supplementary Table 2: Experiment 2 Participant Characteristics

Variable	MAST _{PLC}	MAST _{EXP}	Test Statistic	p-value	Effect size	Effect size 95% CI
Sex	32 F/10 M	31 F/11 M	0.00 ^a	>0.999	<0.01 ^a	0.00 to <0.01
Oral contraceptive	9 Y/23 N	11 Y/20 N	0.13 ^a	0.72	0.04 ^a	0.00 to 0.29
Luteal Phase ^c	10 Y/12 N	12 Y/13 N	0.00 ^a	>0.999	<0.01 ^a	0.00 to <0.01
Age	23.74 (3.09)	22.14 (3.19)	2.33 ^b	0.02	0.51 ^b	0.07 to 1.05
BMI	22.07 (2.33)	21.20 (2.41)	1.67 ^b	0.10	0.37 ^b	-0.08 to 0.83
SHAPS (sum)	34.48 (4.71)	34.60 (2.68)	-0.14 ^b	0.89	-0.03 ^b	-0.44 to 0.44
PSS (sum)	31.95 (3.41)	30.67 (2.71)	1.91 ^b	0.06	0.42 ^b	-0.02 to 0.87
BIS (mean)	2.10 (0.34)	2.09 (0.26)	0.12 ^b	0.91	0.03 ^b	-0.44 to 0.44
BAS Drive (Mean)	2.26 (0.46)	2.33 (0.50)	-0.62 ^b	0.54	-0.14 ^b	-0.60 to .31
BAS Fun Seeking (mean)	1.94 (0.49)	2.01 (0.44)	-0.64 ^b	0.52	-0.14 ^b	-0.56 to 0.28
BAS Reward Resp. (mean)	1.54 (0.36)	1.47 (0.31)	0.98 ^b	0.33	0.21 ^b	-0.22 to 0.64
MGF	1.25 (0.21)	1.25 (0.16)	-0.14	0.89	-0.03 ^b	-0.51 to 0.37

Supplementary Table 2. ^a= χ^2 /Cramer's *V*, ^b=t-statistic/Cohen's *d*, ^c=all people with a regular menstrual cycle were asked if their next period was expected within the next 10 days. BMI = Body Mass Index, SHAPS = Snaith-Hamilton Pleasure Scale⁶, PSS = Perceived Stress Scale¹, BIS = Behavioural Inhibition Scale², BAS = Behavioural Activation Scale², MGF = maximal grip force.

Supplementary Table 3: Complete output for key main text regression models

Experiment 1				
Main effect of threat-of-shock, effort cost, and time on choice (accept effort ~ effort_lm + threat_lm + block + (1 + effort_lm + threat_lm + block participant number))				
	B	Std. Error	z-value	p-value
(Intercept)	1.68	0.25	7.00	<0.001
effort_lm	-1.47	0.12	-11.82	<0.001
threat_lm	2.21	0.14	16.32	<0.001
block	-0.09	0.06	-1.62	0.11
Interaction between threat-of-shock, effort cost, and condition on choice (accept effort ~ condition*effort_lm*threat_lm + (1 + effort_lm + threat_lm + condition participant number))				
	B	Std. Error	z-value	p-value
(Intercept)	1.02	0.32	3.17	0.002
condition	0.93	0.50	1.86	0.06
effort_lm	-1.43	0.17	-8.52	<0.001
threat_lm	2.09	0.17	12.32	<0.001
condition:effort_lm	-0.12	0.24	-0.49	0.62
condition:threat_lm	0.17	0.24	0.72	0.47
effort_lm:threat_lm	-0.10	0.06	-1.66	0.10
condition:effort_lm:threat_lm	-0.21	0.10	-2.18	0.029
Experiment 2				
Main effect of reward, effort cost, and time on choice (accept effort ~ effort_lm + reward_lm + block + (1 + effort_lm + reward_lm + block participant number))				
	B	Std. Error	z-value	p-value
(Intercept)	5.91	0.47	12.50	<0.001
effort_lm	-2.18	0.18	-12.26	<0.001
reward_lm	3.66	0.26	13.56	<0.001
block	-0.05	0.08	-0.68	0.50
Interaction between reward, effort cost, and condition on choice (accept effort ~ condition*effort_lm*reward_lm + (1 + effort_lm + reward_lm + condition participant number))				
	B	Std. Error	z-value	p-value
(Intercept)	6.02	0.60	9.99	<0.001
condition	-0.39	0.91	-0.43	0.67
effort_lm	-2.45	0.31	-7.88	<0.001
reward_lm	3.68	0.38	9.65	<0.001
condition:effort_lm	-0.01	0.41	-0.03	0.98
condition:reward_lm	0.12	0.53	0.22	0.83
effort_lm:reward_lm	-0.43	0.16	-2.71	0.01
condition:effort_lm:reward_lm	0.07	0.20	0.33	0.74
Experiment 1 versus Experiment 2				
Interaction between experiment and condition on choice (accept effort ~ experiment*condition + effort_lm + (1 + effort_lm + condition + study pp_num))				
	B	Std. Error	z-value	p-value
(Intercept)	2.02	0.24	8.52	<0.001
experiment	-0.93	0.29	-3.25	0.001
condition	0.45	0.35	1.30	0.19
effort_lm	-0.94	0.06	-15.65	<0.001
experiment:condition	-1.12	0.43	-2.62	0.009

Supplementary References

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