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| **Table 1** |  |  |  |  |  | |  |  |  |  | |  |  |  |
| *Meta-analytic associations between task-based affective ratings, trait questionnaires, and amygdala down-regulation* | | | | | | | | | | | | | | |
|  | Effects | | | | |  | | Heterogeneity | | | |  | Sample | |
|  | *r* | 95% CI | *p* | | |  | | τ | 95% CI | | *p* |  | *k* | *N* |
| Task-based affective ratings & Amygdala | 0.08 | [0.02, 0.15] | 0.010 | | |  | | 0.07 | [0.00, 0.18] | | 0.172 |  | 26 | 1377 |
| Task-based affective ratings & Questionnaire | 0.05 | [-0.00, 0.10] | 0.067 | | |  | | 0.00 | [0.00, 0.10] | | 0.835 |  | 28 | 1397 |
| Amygdala & Trait Questionnaires | 0.01 | [-0.05, 0.06] | 0.807 | | |  | | 0.06 | [0.00, 0.15] | | 0.203 |  | 33 | 1833 |
| *Note.* Results from pair-wise random effects meta-analyses on correlations. k = number of studies included in the individual meta-analysis. | | | | | | | | | | | | | | |

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| Table S1 |  |  |  |  |  |  |
| *Studies included in meta-analytic analyses* | | | | | | |
| Study  First author Publication year | ***N*** | **age  *M* (*SD*)** | **Female (%)** | **Questionnaire:  *M* (*SD*)** | **Stimulus Type** | **Task Ratings** |
| [Benzait et al. (2023)](https://www.zotero.org/google-docs/?4ohIbQ) | 17 | 31.4 (9.1) | 35% | ERQ: 4.5 (0.9) | pictures |  |
| [Berboth et al. (2021)](https://www.zotero.org/google-docs/?hijJWQ) | 25 | 22.8 (3.0) | 84% | ERQ: 2.6 (0.7) | pictures | x |
| [Brehl et al. (2021; partially unpublished)](https://www.zotero.org/google-docs/?81QFhE) | 242 | 22.9 (5.1) | 73% | FEEL-E: 22.7 (4.0) | pictures | x |
| Burghart et al. (unpublished) | 31 | 23.4 (4.1) | 100% | ERQ: 5.0 (0.8) | pictures | x |
| [Diers, Gärtner et al. (2023)](https://www.zotero.org/google-docs/?R27xpy)\*; Scheffel et al. (2019) | 39 | 24.6 (4.2) | 66% | ERQ: 4.7 (0.8) | pictures |  |
| [Dörfel et al. (2014; distancing)](https://www.zotero.org/google-docs/?MW7zCJ) | 16 | 23.7 (6.7) | 100% | ERQ: 4.6 (1.1) | pictures |  |
| [Dörfel et al. (2014; reinterpretation)](https://www.zotero.org/google-docs/?DuWq8x) | 19 | 22.4 (2.7) | 100% | ERQ: 4.4 (1.1) | pictures |  |
| Gaebler et al. (2014) | 23 | 30.0 (8.0) | 78% | ERQ: 4.8 (1.2) | pictures |  |
| Diers et al. (2021); Gärtner et al. (2019); Scheffel et al. (2019)\* | 37 | 25.2 (4.4) | 53% | ERQ: 4.6 (0.9) | pictures |  |
| [Gianaros et al. (2020; AHAB-II)](https://www.zotero.org/google-docs/?9FOemv) | 163 | 42.7 (7.1) | 48% | ERQ: 5.0 (0.9) | pictures | x |
| [Gianaros et al. (2020; PIP)](https://www.zotero.org/google-docs/?fldPKa) | 176 | 40.1 (6.3) | 51% | ERQ: 5.0 (0.9) | pictures | x |
| [Glosemeyer et al. (2020)](https://www.zotero.org/google-docs/?PMU2ic) | 15 | 24.0 (3.1) | 53% | ERQ: 4.1 (0.9) | cyberball | x |
| [Hofhansel et al. (2023)](https://www.zotero.org/google-docs/?vcnyCx) | 16 | 34.7 (10.2) | 0% | NA | game |  |
| [Jentsch et al. (2019)](https://www.zotero.org/google-docs/?0NjZUy) | 30 | 23.7 (3.4) | 47% | ERQ: 4.5 (1.3) | pictures | x |
| [Powers et al. (2022)](https://www.zotero.org/google-docs/?KwMJGC) | 40 | 25.5 (4.7) | 70% | ERQ: 4.8 (0.9) | pictures | x |
| Wessa et al. (unpublished) | 89 | 30.0 (14.0) | 55% | ERQ: 27.0 (6.0) | pictures | x |
| Kim et al. (unpublished) | 33 | 23.0 (2.1) | 52% | ERQ: 4.8 (1.1) | pictures | x |
| LaBar et al. (unpublished) | 53 | 55.0 (12.2) | 62% | ERQ: 4.6 (1.0) | Autobio-graphical  memory cues | x |
| [Marín-Morales et al. (2022)](https://www.zotero.org/google-docs/?I6mFXx) | 29 | 38.3 (8.2) | 0% | CERQ: 11.9 (11.9) | pictures | x |
| [Min et al. (2022)](https://www.zotero.org/google-docs/?vNKmgM) | 105 | 22.8 (2.7) | 49% | ERQ: 29.5 (6.0) | pictures | x |
| [Morawetz et al. (2016)](https://www.zotero.org/google-docs/?sgXLLI) | 23 | 22.9 (3.6) | 65% | ERQ: 2.9 (1.1) | videos | x |
| [Morawetz et al. (2016; pictures)](https://www.zotero.org/google-docs/?BGapjR) | 59 | 32.4 (11.2) | 33% | ERQ: 3.0 (1.0) | pictures | x |
| [Morawetz et al. (2016; videos)](https://www.zotero.org/google-docs/?stLNQc) | 59 | 32.4 (11.2) | 33% | ERQ: 3.00 (1.0) | videos | x |
| [Morawetz et al. (2019)](https://www.zotero.org/google-docs/?AhDHof) | 29 | 24.5 (5.2) | 81% | ERQ: 2.9 (1.1) | pictures | x |
| [Morawetz et al. (2020)](https://www.zotero.org/google-docs/?X31pIR) | 35 | 23.0 (3.4) | 82% | ERQ: 3.1 (1.0) | pictures | x |
| [Morawetz et al. (2021)](https://www.zotero.org/google-docs/?l3mB8p) | 37 | 22.0 (3.7) | 87% | ERQ: 2.8 (1.1) | pictures | x |
| [Mulej Bratec et al. (2015)](https://www.zotero.org/google-docs/?oTWH1T) | 20 | 24.8 (2.3) | 100% | ERQ: 5.1 (0.5) | pictures | x |
| Müller-Pinzler et al. (unpublished) | 15 | 24.0 (3.12) | 53% | ERQ: 4.0 (0.9) | pictures | x |
| Huneke et al. (unpublished) | 18 | 25.6 (5.6) | 67% | ERQ: 5.4 (0.7) | pictures | x |
| [Pierce et al. (2022)](https://www.zotero.org/google-docs/?l3D1BE) | 110 | 43.6 (18.1) | 57% | ERQ: 5.4 (1.2) | pictures | x |
| [Paschke et al. (2016)](https://www.zotero.org/google-docs/?3KOLdP) | 115 | 26.1 (3.8) | 51% | ERQ: 3.5 (1.1) | pictures | x |
| [Rehbein et al.  (2021; sample 1)](https://www.zotero.org/google-docs/?926O92) | 15 | 23.9 (4.6) | 100% | ERQ: 30.8 (3.8) | pictures | x |
| [Rehbein et al.  (2021; sample 2)](https://www.zotero.org/google-docs/?pCknJW) | 16 | 23.1 (3.2) | 100% | ERQ: 29.1 (5.3) | pictures | x |
| [Sandner et al. (2021)](https://www.zotero.org/google-docs/?KsKVig) | 38 | 25.0 (4.0) | 50% | CERQ: 15.3 (3.6) | pictures | x |
| Doren et al. (unpublished) | 139 | 39.5 (11.9) | 6% | ERQ: 27.0 (5.5) | pictures | x |
| [Guendelman et al. (2022)](https://www.zotero.org/google-docs/?m2ElrS) | 55 | 38.5 (10.0) | 83% | CERQ: 13.9 (3.7) | pictures | x |
| Sokolowski et al. (2022) | 83 | 21.7 (1.8) | 49% | CERQ: 14.6 (3.4) | pictures | x |
| [Steward et al. (2021)](https://www.zotero.org/google-docs/?Ca9ci8) | 92 | 20.0 (2.8) | 54% | ERQ: 30.5 (6.4) | pictures | x |
| [Lloyd et al. (2021)](https://www.zotero.org/google-docs/?qRCELc) | 59 | 69.5 (7.7) | 50% | CERQ-SF: 6.1 (2.0) | pictures | x |
| [Tupitsa et al. (2023)](https://www.zotero.org/google-docs/?y2kecc) | 19 | 27.0 (5.0) | 55% | CERQ-SF: 8.2 (1.4) | pictures | x |
| *Note.* The task ratings column indicates whether task-based affective ratings were present. Only ratings given during the task were considered (e.g., not after the task). Sample size varied slightly depending on the outcome in some studies. Therefore, the sample sizes for questionnaires are reported in this table for simplicity, as these were the lower bound of sample sizes for the three outcomes. For questionnaires authors provided the subscales most indicative of cognitive reappraisal. These were for the reappraisal scale for the ERQ (Emotion Regulation Questionnaire), the positive reappraisal scale for the CERQ (Cognitive Emotion Regulation Questionnaire), and the re-evaluation scale for the FEEL-E (Fragebogen zur Erhebung der Emotionsregulation bei Erwachsenen).  \*first-author used for study-identifiers in case the sample was linked to multiple equivalent publications | | | | | | |

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| **Table S2** |  |  |  |  |  |  |  |
| *Significant clusters for whole-brain correlations with task-based affective ratings* | | | | | | | |
|  |  |  | MNI coordinates | | |  |  |
| Network | Region | Volume [mm³] | X | Y | Z | Max. t-statistic | % covered  by region |
| Basal Ganglia | Nucleus Caudatus R | 8 | 22 | 20 | 10 | -3.79 | 100 |
| Brain Stem | Pons L | 104 | -22 | -10 | -8 | -4.88 | 85 |
| Dorsal Attention | Supramarginal Gyrus L | 8 | -64 | -24 | 34 | -3.77 | 100 |
| Dorsal Attention | Supramarginal Gyrus L | 40 | -66 | -26 | 28 | -4.03 | 100 |
| Dorsal Attention | Supramarginal Gyrus L | 48 | -58 | -22 | 22 | -4.13 | 83 |
| Dorsal Attention | Postcentral Gyrus L | 3328 | -44 | -34 | 58 | -7.33 | 31 |
| Somatomotor | Superior Parietal Lobule L | 8 | -22 | -48 | 74 | -3.76 | 100 |
| Somatomotor | Supramarginal Gyrus L | 72 | -62 | -20 | 40 | -4.59 | 56 |
| Somatomotor | Precental Gyrus L | 224 | -28 | -16 | 56 | -4.42 | 32 |
| Somatomotor | Precental Gyrus L | 320 | -30 | -14 | 70 | -4.61 | 73 |
| Somatomotor | Insula Lobe L | 64 | -38 | -4 | 16 | -4.19 | 100 |
| Somatomotor | Rolandic Operculum R | 136 | 56 | -16 | 18 | -4.53 | 94 |
| Somatomotor | Precental Gyrus L | 280 | -58 | 6 | 34 | -4.33 | 74 |
| Visual | Calcarine Gyrus L | 48 | -26 | -62 | 10 | -3.96 | 33 |
| *Note.* Labelling was performed using the automated CanlabCore atlas-based procedure combined with the SPM12 anatomy toolbox after exclusion of Brehl et al. (2021). | | | | | | | |