Supplemental Material

Table 1Cognitive Flexibility Summary Data

Study	Design	Sample	Cognitive Flexibility Measures	Summary of Key Findings
Adan et al. (2017)	Cross-sectional	Adult males with concurrent schizophrenia spectrum disorder $(N = 50)$; Spain Sample breakdown Lifetime SA history $(n = 24; M_{age} = 36.21, SD = 6.95)$ No Lifetime SA history $(n = 26; M_{age} = 35.92, SD = 8.63)$	TMT-B WCST	No significant group differences in TMT-B and WCST-PE emerged between those with vs. without lifetime SA history
Andover et al. (2011)	Cross-sectional	Mixture of incarcerated youth & adult males ($N = 173$); USA Sample breakdown Lifetime NSSI with or without lifetime SA history ($n = 45$; $M_{age} = 37.89$, $SD = 10.21$) Lifetime SA history only ($n = 52$; $M_{age} = 38.98$, $SD = 10.63$) No NSSI or SA history ($n = 76$; $M_{age} = 40.51$, $SD = 13.09$)	COWAT- animals COWAT- letters TMT-B	No significant group differences in TMT-B, COWAT letters, and COWAT-animals emerged
Aral et al. (2020)	Cross-sectional	Adolescent inpatient with MDD ($N = 60$; 93.30% female); Turkey Sample breakdown Recent SA (within 2 days; $n = 30$; $M_{\text{age}} = 15.80$, $SD = 1.20$) No SA ($n = 30$; $M_{\text{age}} = 15.50$, $SD = 1.20$)	Stroop WCST	SA depressed group more errors, longer completion time on Stroop vs. no SA group SA depressed group worse WCST-PE scores vs. no SA group WCST-PE associated, modestly, with greater risk of SA

Baik et al. (2019)	Cross-sectional	Adult (<i>N</i> = 106; 64.66% female); South Korea Sample breakdown MDD (<i>n</i> = 42; <i>M</i> _{age} = 37.62, <i>SD</i> = 14.36) HC (<i>n</i> = 64; <i>M</i> _{age} = 33.42, <i>SD</i> = 12.57)	Stroop- Modified VFT-letters (g,n,d,r,m, b,s,h)	PFC asymmetry during the VFT moderated the relation between depressive symptoms and SI severity. High PFC asymmetry (favoring left hemisphere activation) associated with stronger association between depressive symptoms and SI severity
Barrett et al. (2011)	Cross-sectional	Adults with schizophrenia spectrum disorder ($N = 174$; 42.53% female); Norway Sample breakdown Lifetime SA history ($n = 53$; $M_{age} = 32.30$, $SD = 10.20$) No SA history ($n = 121$; $M_{age} = 31.60$, $SD = 9.60$)	DKEFS- CWIT-3 DKEFS- CWIT-4 DKEFS-VF	No significant differences in CWIT-3, CWIT4, and VF scores for frequency of SA. Currently suicidal participants more errors on CWIT-4
Barsznica et al. (2021)	Longitudinal	Elderly inpatients ($N = 24$; 66.67% female); France Sample breakdown Suicidal behavior (recurring SI or recent SA; $n = 12$; $M_{age} = 76.25$, $SD = 6.70$) No suicidal behavior ($n = 12$; $M_{age} = 73.00$, $SD = 6.72$)	AVF FAB Stroop TMT-B VFT- phonemic VFT-semantic	No significant group differences in TMT-B, VFT, AVF, Stroop-interference, or FAB scores emerged
Bartfai et al. (1990)	Cross-sectional	Adult males ($N = 24$); Sweden Sample breakdown Recently hospitalized for SA (within 22 days; $n = 9$; $M_{age} = 33$, $SD = M_{age} = 0$, $SD = NA$) Chronic pain controls ($n = 7$; $M_{age} = 0$, $SD = NA$) HC ($n = 8$; $M_{age} = 28$, $SD = NA$)	COWAT- letters DFT ST UOT VFT-S-a (modified) WCST	SA group had worse COWAT & DFT scores than HC No other significant group differences in cognitive flexibility measures for those with vs. without recent SA, emerged

Becker et al. (1999)	Cross-sectional	Adult ($N = 62$; 64.51% female); Germany Sample breakdown SA past year ($n = 31$; $M_{age} = 38.40$, SD = 16.20) HC ($n = 31$; $M_{age} = 38.20$, $SD = 14.60$)	SST	SA history associated with slower RT on suicide words than other types of words SI severity positively associated with SA group slower RT for suicide words HC performed similarly across different types of words
Brenner et al. (2015)	Cross-sectional	Adult veterans ($N = 133$; 10.53% female); USA Sample breakdown Lifetime SA history + lifetime TBI ($n = 22$; $M_{age} = 49.50$, $SD = 10.30$) Lifetime SA history only ($n = 12$; $M_{age} = 51.70$, $SD = 12$) Lifetime TBI only ($n = 51$; $M_{age} = 53$, $SD = 8.50$) No SA history or TBI ($n = 48$; $M_{age} = 54.20$, $SD = 7.60$)	WCST	No significant group differences in WCST-PE emerged between groups
Brokke et al. (2020)	Cross-sectional	Adult, inpatient receiving crisis intervention ($N = 92$; 48% female; $M_{age} = 36.30$, $SD = 14.40$); Norway Sample breakdown SA history ($n = 61$) SI-only ($n = 31$)	BRIEF-A-S DKEFS- CWIT-3 DKEFS- CWIT-4	SA group had better CWIT-3 completion time than those with SI alone No significant group difference CWIT-4 completion time & BRIEF-A-S scores emerged Worse CWIT-4 scores were positively associated with SA group membership Worse CWIT-3 negatively associated with SA group membership BRIEF-A-S not significantly associated with group membership
Burton et al. (2011).	Cross-sectional	Adult from inpatient setting ($N = 77$; 50.65% female); USA Sample breakdown SA history ($n = 37$; $M_{age} = 35.40$, $SD = 10.80$) SI only ($n = 40$; $M_{age} = 39.50$, $SD = 10.10$)	COWAT- animals COWAT- letters SCWT TMT-B WCST	Those with SA history had better WCST-PE scores than those with SI alone SA group associated with less correct responses on Stroop-interference task No other significant group differences emerged

Cha et al. (2017)	Intervention Attention Bias Modificatio n (ABM)	Study 1 Adult with past month SI ($N = 55$; 50.91% female) Sample breakdown ABM training ($n = 28$; $M_{age} = 33.30$, $SD = 14.60$) No ABM training ($n = 27$; $M_{age} = 30.70$, $SD = 11.50$)	SST	ABM training did not influence suicide Stroop interference between groups
Cha et al. (2017)	Intervention Attention Bias Modificatio n (ABM)	Study 2 Adult inpatient with recent SI or SA $(N = 30; 50\% \text{ female}); \text{USA}$ Sample breakdown ABM training $(n = 15; M_{\text{age}} = 41.50, SD = 15.10)$ No ABM training $(n = 15; M_{\text{age}} = 45.90, SD = 14.60)$	SST	ABM training did not influence suicide Stroop RT between groups, however participants in the ABM group had significantly worse RT following their last training versus no ABM training group Changes in SI severity in ABM group was not associated with changes in SST performance
Cha et al. (2018)	Longitudinal	Adult ($N = 264$); USA & Scotland Sample breakdown Past year SI history ($n = 176$; $M_{age} = 31.44$, $SD = 12.14$); USA & Scotland No lifetime SI ($n = 88$; $M_{age} = 35.58$, $SD = 15.89$)	SST	RT (interference) to suicide/death-related words did not predict SI at baseline, one month follow-up, or 6-month follow-up RT did not appear to be affected by the negative mood induction
Chesin et al. (2016)	Intervention Mindfulnes s-based cognitive therapy & safety planning (MBCT-S) Quasi- experimental	Adult outpatient with MDD and current active SI or past 6-month SA ($N = 10$; 80% female; $M_{age} = 41.70$, $SD = 16.30$); USA	Stroop	Participants' Stroop RT (interference) modestly improved post treatment
Chesin et al. (2021)	Intervention MBCT	Adult veterans with past year SA and/or hospitalized for SI with intent to act ($N = 135$; 12.59%	Modified SST Stroop	No significant group difference on Stroop RT emerged

		female; $M_{age} = 46.50$, $SD = 13.80$); USA Sample breakdown MBCT-S + eTAU $(n = 70)$ eTAU $(n = 65)$		MBCT-S group improved combat-stress word RT from baseline to 6-month post-treatment follow-up, whereas TAU group did not show improvements No significant improvement in suicide-related word RT were found across timepoints Participants in eTAU group had worse negative word RT at 6-month post-treatment follow-up. MBCT-S group did not show changes
Chung & Jeglic (2016)	Cross-sectional	Undergraduate ($N = 736$; 69.27% female); USA Sample breakdown SA & SI history ($n = 635$; $M_{age} = 20.17$, $SD = 4.09$) No SB ($n = 101$; $M_{age} = 19.89$, $SD = 3.51$)	SST	Participants with past SA or SI history had worse RT to the word "suicide" but not other death-related or negative words. This effect did not hold when controlling for depression symptoms Females had slower RT to the word 'suicide,' which in turn predicted SI and SB history
Chung & Jeglic (2017)	Longitudinal	Undergraduate ($N = 177$; 78.17% female; $M_{age} = 21.39$, $SD = 4.75$); USA ¹ Sample breakdown SA history ($n = 13$) Lifetime suicide planning ($n = 36$) *Same sample as Chung & Jeglic (2016)	SST	Higher baseline SITB symptom severity/frequency predicted worse SST performance 18 months later Response latency to the word "suicide" accounted for a significant amount of variance in total SST scores. Whereas other valence and death-related words did not SST performance did not predict lifetime SA history when controlling for depressive symptoms
Drabble et al. (2014)	Cross-sectional	Mixture of youth & adults from self-harm forums/self-networking sites ($N = 340$; 82.06% female; $M_{age} = 26.94$, $SD = 10.14$); online Sample breakdown Lifetime SII history ($n = 117$) ² No SII ($n = 223$)	ACS- flexibility ACS-shift	ACS-shift scores were negatively associated with lifetime SII rates only among those with low BPD feature severity ACS-flexibility scores were not linked to lifetime SII rates

 ¹ Mean age (SD) reported for initial sample of 197 participants only.
 ² Lifetime SII significantly lower mean age than control. Mean ages for specific groups were not reported in study.

Fikke et al. (2011)	Cross-sectional	High school adolescents ($N = 97$; 75.26% female); Norway Sample breakdown Past year low-severity NSSI ($n = 29$; $M_{age} = 14.70$, $SD = 0.50$) Past year high-severity NSSI ($n = 33$; $M_{age} = 14.80$, $SD = 0.40$) HC ($n = 35$; $M_{age} = 14.70$, $SD = 0.40$)	ID/ED	No significant group differences in ID/ED errors emerged between high vs low severity NSSI groups
Gilbert et al. (2011) ³	Cross-sectional	Adult inpatient/outpatient with BD ($N = 67$; 44.78% female); USA Sample breakdown SA history ($n = 28$; $M_{age} = 43.70$, $SD = 10.70$) No SA history ($n = 39$; $M_{age} = 41.10$, $SD = 12$)	LFT SCWT TMT-B VFT-category VFT-letters	No significant group differences in SCWT, TMT-B, VFT-letters and category, LFT emerged
Gorlyn et al. (2015)	Cross-sectional	Adult with MDD and past SA, current SI, or both ($N = 57$; 52.63% female); USA Sample breakdown Bupropion tx ($n = 27$; $M_{age} = 38.90$, $SD = 11.50$) Paroxetine tx ($n = 30$; $M_{age} = 36.30$, $SD = 12.50$)	COWAT- animals COWAT- letters Stroop TMT-B	Both bupropion and paroxetine treatment groups demonstrated greater COWAT-letters, TMT-B, and lower SI from pre- to post-treatment No improvements in Stroop interference score were found post-treatment Both groups had worse COWAT-animals scores post-treatment
Grant et al. (2014)	Cross-sectional	Adults with subsyndromal gambling disorder ($N = 174$; 31.03% female); location unclear Sample breakdown Endorsed any past month SITB ($n = 32$; $M_{age} = 22.60$, $SD = 3.86$) No SITB ($n = 142$; $M_{age} = 21.50$, $SD = 3.54$)	ID/ED	Recent SITB group made more errors on the ID/ED compared to those without SITB

³ We did not report findings related to WCST because it is unclear which subtest score the authors used.

Gujral et al. (2021)	Case control longitudinal	Adults aged 50+ years ($N = 278$); USA Sample breakdown Late-onset SA + depressed (onset aged ≥ 55 years + current SI; $n = 44$; $M_{\text{age}} = 65.16$, $SD = 7.01$) Early-onset SA + depressed (onset < 55 years + current SI; $n = 48$; $M_{\text{age}} = 58.90$, $SD = 5.59$) Current SI-only ($n = 63$; $M_{\text{age}} = 61.17$, $SD = 7.46$) Non-suicidal-depressed (no SA or SI history; $n = 67$; $M_{\text{age}} = 64.24$, $SD = 7.23$) Non-depression control (no SA or SI history; $n = 56$; $M_{\text{age}} = 64.18$, $SD = 9.01$)	DKEFS-TMT-4	Group membership explained 7% of variance in TMT scores Early & late-onset SA groups worse TMT scores than non-suicidal depressed & HC groups
Hasse-Sousa et al. (2020)	Cross-sectional	Adult euthymic BD ($N = 96$; 68.75% female); Brazil Sample breakdown SA history ($n = 47$; $M_{age} = 47.94$, $SD = 13.49$) No SA history ($n = 49$; $M_{age} = 48.88$, $SD = 13.74$)	SCWT	SA history not associated with SCWT SCWT did not predict SA history when controlling for age, sex, or approximate IQ scores
Hausman et al. (2020)	Longitudinal	Adult veterans with PTSD & AUD ($N = 87$; 9.2% female); USA Sample breakdown Lifetime SA history ($n = 58$; $M_{age} = 41.90$, $SD = 12.20$) No lifetime SA history ($n = 29$; $M_{age} = 39.40$, $SD = 11$) Returned for 6-week follow-up ($n = 46$)	DKEFS- CWIT-3 WCST	Lifetime SA history group had worse WCST-PE scores than no SA history, at baseline Lifetime SA history had worse DKEFS-CWIT-3 scaled scores than those without a lifetime SA history at baseline WCST-PE scores did not significantly predict SITB at 6-week follow-up

Homaifar et al. (2012)	Cross-sectional	Adult veterans with TBI ($N = 47$; 6.38% female); USA Sample breakdown Lifetime SA history ($n = 18$; 16.67% female; $M_{age} = 49.60$, $SD = 8.40$) No SA history ($n = 29$; 0% female; $M_{age} = 52.20$, $SD = 10.60$)	WCST	Those with SA history had worse WCST-PE scores than those without SA history
Homaifar et al. (2016)	Cross-sectional	Adult veterans ($N = 94$; 12.8% female; $M_{age} = 35.52$, $SD = 8.48$); USA	WCST	WCST-PE scores were not significantly associated with SI severity
Interian et al. (2020)	Cross-sectional	Adult with high suicide risk ($N = 141$; 12.06% female); USA Sample breakdown Past week SA ($n = 35$; $M_{age} = 43.09$, $SD = 13.72$) Past year but not past week SA ($n = 52$; $M_{age} = 45.94$, $SD = 13.28$) No past year SA ($n = 54$; $M_{age} = 49.48$, $SD = 13.94$)	EST Stroop	No significant group difference on RT (interference) of Stroop emerged Past week SA quicker RT on suicide condition (vs neutral condition) of EST vs no past year SA
Jahn et al. (2015)	Cross-sectional	Adult inpatient ($N = 110$; 58.18% female; 81% with current SI; 19% hospitalized for recent SA; $M_{age} = 36.45$, $SD = 13.74$); USA	TMT-(B-A)	TMT-(B-A) completion time scores were not associated with SI Perceived burdensomeness & depressive symptoms did not mediate the relation between TMT-(B-A) scores & suicide risk (SI + past 6 month SA aggregate score)
Jollant et al. (2017)	Cross-sectional	Adult ($N = 58$; 60.34% female); Canada Sample breakdown SA history MDD ($n = 15$; $M_{age} = 37.40$, $SD = 11.40$) No SA history MDD ($n = 10$; $M_{age} = 44.40$, $SD = 9.60$)	SCT VFT-animals VFT-letter p	VFT-letter p & animals, and Stroop interference scores were negatively correlated with mental pain Mental pain fully mediated the relation between Stroop interference scores and SI severity

Jordan et al. (2020)	Cross-sectional	Older adults with MDD ($N = 40$; 65% female); USA Sample breakdown Current passive SI ($n = 18$; $M_{age} = 64.28$, $SD = 7.13$) No passive SI ($n = 22$; $M_{age} = 64.82$, $SD = 6.42$)	DKEFS- CWIT-3 DKEFS-TMT- 4 DKEFS-VF	Passive SI group had worse TMT-4 & CWIT-3 scores than no passive SI group, even when controlling for motor speed No significant group differences in DKEFS-VF
Kasckow et al. (2016)	Intervention (venlafaxine XR mono- therapy) Longitudinal	Older adults (60+ years of age) with MDD & are receiving venlafaxine XR monotherapy ($N = 468$; 64.96% female; $M_{age} = 69.03$, $SD = 7.20$); USA & Canada	DKEFS- CWIT-3 DKEFS- CWIT-4 DKEFS-TMT- (B/A)	Those with high/persistent SI performed worse on CWIT-4 than those with rapidly decreasing SI No significant group differences emerged in TMT-(B/A scores) completion time and CWIT-3 scores between those with high/persistent SI vs. rapidly decreasing SI
Keilp et al. (2001)	Cross-sectional	Adults; $(N = 72; 47.22\% \text{ female})$; location unclear Sample breakdown Depressed without lifetime history $SA (n = 21; M_{age} = 41, SD = 10.90)$ Depressed low lethality SA (lifetime history of; $n = 14; M_{age} = 34.50, SD = 9.80)$ Depressed high lethality SA (lifetime history of; $n = 15; M_{age} = 42.50, SD = 11.40)$ HC $(n = 22; M_{age} = 41.20, SD = 16.80)$	VFT-animals VFT-letters TMT-B WCST	High lethality group worse VFT (letter & category fluency) scores than low lethality & HC No significant group differences emerged in WCST-PE & TMT-B scores
Keilp et al. (2008)	Cross-sectional	Adult ($N = 244$; 55.74% female); USA Sample breakdown High-lethality SA history MDD ($n = 42$; $M_{age} = 39.20$, $SD = 11.20$)	Stroop	Worse percentage Stroop interference (percent change in median response time between interference trial vs color naming trial) was correlated with higher SA lethality and frequency

		Low-lethality SA history MDD ($n = 53$; $M_{age} = 34.30$, $SD = 10.90$) No SA history MDD ($n = 83$; $M_{age} = 41.20$, $SD = 12.50$) HC ($n = 66$; $M_{age} = 36.20$, $SD = 14.20$)		High-lethality SA slower RT on color/word condition compared to other groups
Keilp et al. (2013)	Cross-sectional	Adult ($N = 208$; 55.77% female); location unclear Sample breakdown MDD + BDI SA history ($n = 72$; M_{age} = 35.70, $SD = 11.60$) MDD + BDI no SA history ($n = 80$; $M_{age} = 40.10$, $SD = 11.90$) HC ($n = 56$; $M_{age} = 31.50$, $SD = 11.10$)	Stroop OAT TMT-B VFT-category VFT-letter	Participants with high lethality SA had worse TMT-B & OAT scores than participants with low lethality SA. Depressed participants with SA history had worse Stroop interference scores than participants without SA history. This difference did not hold when controlling for BPD and depressive symptoms Negative association between Stroop and both SI history and SA frequency Depressed groups performed worse on VFT-letter and -category than HC but not between those with vs. without SA history
Keilp et al. (2014a)	Cross-sectional	Adult (N = 295; 56.66% female); location unclear Sample breakdown High-lethality SA BD/MDD (n = 31; $M_{\rm age}$ = 35.10, SD = 11.30) Low-lethality SA BD/MDD (n = 64; $M_{\rm age}$ = 35.60, SD = 10.70) No SA BD/MDD (n = 114; $M_{\rm age}$ = 38.90, SD = 11.70) HC (n = 86; $M_{\rm age}$ = 32.50, SD = 11.80)	OAT Stroop WCST	High-lethality SA worse WCST-PE on OAT scores compared to other groups, but were similar to HC No significant group differences on Stroop RT (interference) between high and low-lethality SA depressed groups, but combined performed worse than DC and HC Participants who completed OAT tended to have a greater frequency of lifetime SA
Keilp et al. (2014b)	Cross-Sectional	Adult with MDD/BD ($N = 161$; 88.88% female); USA Sample breakdown SA history ($n = 80$; $M_{age} = 42$, $SD = 9.10$)	SCWT VFT-category VFT-letter WCST	Participants with SA history had greater interference on Stroop No other significant group differences emerged in WCST-PE, VFT-letter, and VFT-category, including when accounting for lethality and violence of SA

No SA history (n = 81; $M_{age} = 44.60$, SD = 7.70)

Keilp et al. (2021)	Longitudinal	Adult MDD inpatient with current severe SI ($N = 78$; 60.26% female); USA Sample breakdown IV Ketamine tx ($n = 39$; $M_{age} = 37.20$, $SD = 12.90$) IV Midazolam tx ($n = 39$; $M_{age} = 39.60$, $SD = 13$)	COWAT- animals COWAT- letters Stroop	SI severity and Stroop interference scores improved to a greater extent post treatment among participants treated with ketamine (vs. midazolam) No significant differences in COWAT scores were found pre- to post-treatment
Kocatürk et al. (2015)	Cross-sectional	Adult with schizophrenia ($N = 70$; 34.29% female); Turkey Sample breakdown SA history ($n = 27$; $M_{age} = 38.11$, $SD = 9.39$) No SA history ($n = 43$; $M_{age} = 39.28$, $SD = 11.03$)	Stroop	No significant group differences were found in Stroop scores
Le et al. (2021)	Longitudinal	Male adult inpatient (substance use treatment facility); location unclear (n = 99; M _{age} = 36.60, SD = 11.20)	TMT-modified	Worse state TMT average completion time positively correlated with state self-injurious thoughts to a greater degree than state hope and state social connectedness No interaction effects were found between state hope or state social connectedness with TMT average completion time in predicting SITs
LeGris et al. (2012)	Cross-Sectional	Adult female (N = 83); Canada Sample breakdown BPD (n = 42; M_{age} = 32.20, SD = 10.50) HC (n = 41; M_{age} = 31.20, SD = 9)	VST	Longer RT on VST incongruent trial associated with greater suicide risk RT interference was shown to predict risk of suicide in both BPD group and HC RT interference scores explained a similar amount of variance on suicide risk as depressive symptoms

Liaugaudaite et al. (2020)	Cross-sectional	Adult with anxiety and/or mood disorders from outpatient clinic $(N = 186; 76.34\% \text{ female});$ Lithuania Sample breakdown Current SI $(n = 85; M_{age} = 37.50, SD = 13.60)$ No current SI $(n = 101; M_{age} = 40.10, SD = 11)$	ID/ED TMT-B	No significant group differences emerged in TMT-B or ID/ED scores
MacPherson et al. (2021)	Longitudinal	Young adults (N = 92; 42.39% female); USA Sample breakdown Childhood-onset bipolar disorder w. distinct mood episodes (BD-I; $n = 34$; $M_{\text{age}} = 20.52$, $SD = 2.34$) Childhood-onset bipolar disorder-not otherwise specified (BD-NOS; $n = 15$; $M_{\text{age}} = 20.53$, $SD = 2.71$) HC ($n = 44$; $M_{\text{age}} = 21.10$, $SD = 2.16$)	CANTAB- ID/ED (stages 2, 5, & 7)	Worse ID/ED stage 2 (1st rule shift) latency scores predicted greater percentage of time with SI among those with BD-I but not BD-NOS during follow-up (assessed in 6-month intervals) More ID/ED errors (when rules reversed) predicted greater percentage of time with SI during follow-up; no interaction with onset-bipolar disorder subtype status
Malhi et al. (2019)	Cross-Sectional	Adult ($N = 145$; 49.66% female); location unclear Sample breakdown Mood disorder ($n = 79$; $M_{age} = 37.38$, SD = 13.78) HC ($n = 66$; $M_{age} = 37.06$, $SD = 13.48$)	EST	Dorsal default mode network cluster while participating in the happy face-word condition (incongruency) was negatively correlated with SB in the past month. Increased basal ganglia network while participating in the sad face-word condition (incongruency) was positively associated with SI in the past month
Martínez- Arán et al. (2004)	Cross-Sectional	Adult (N = 138; 57.97% female); Spain Sample breakdown BD depressed (n = 30; $M_{\rm age}$ = 43.40, SD = 10.70) BD hypomanic/manic (n = 34; $M_{\rm age}$ = 42.40 , SD = 11.90) BD euthymic (n = 44; $M_{\rm age}$ = 39.60, SD = 9.50) HC (n = 30; $M_{\rm age}$ = 38.90, SD = 12.40)	COWAT- animals COWAT-FAS SCWT TMT-B WCST	SCWT, WCST-PE, TMT-B, COWAT-FAS, and COWAT-animals not significantly associated with SA history

Marzuk et al. C (2005)	Cross-sectional	Adult inpatient, depression ($N = 53$; 60% female); USA Sample breakdown Current SI ($n = 25$; $M_{age} = 36$, $SD = 11.90$) No current SI ($n = 28$; $M_{age} = 42.30$, $SD = 11.20$)	COWAT- words FPT SCWT TMT-(B-A) WCST	SI history group had worse WCST-PE & TMT-(B-A) completion time scores than those without SI No other significant group differences emerged for COWAT words generated, FPT, words generated, and SCWT scores
McGirr et al. C (2012)	Cross-sectional	Adult, $60+$ years of age & depression $(N=93; 53.8\% \text{ female}); USA$ Sample breakdown High-lethality SA (most severe SA in past year; $n=14$; $M_{\rm age}=68.86$, $SD=7.53$) Low-lethality SA (most severe SA in past year; $n=20$; $M_{\rm age}=66.80$, $SD=8.15$) Depressed & no SA history ($n=29$; $M_{\rm age}=70.30$, $SD=9.03$) HC ($n=30$; $M_{\rm age}=69.77$, $SD=6.76$)	WCST	High-lethality SA group had worse WCST-PE scores than those with low-lethality SA, non-suicidal depressed controls, & HC
McHugh et Lal. (2021)	ongitudinal	Adolescents & young adults receiving tx from outpatient centre ($N = 635$; 59% female); Australia Sample breakdown SII ($n = 104$; $M_{age} = 17.90$, $SD = NA$) No SII ($n = 531$; $M_{age} = 19.90$, $SD = NA$)	CANTAB- ID/ED COWAT- letters TMT-B VFT-animals	SII group did not significantly differ in COWAT scores, VFT scores, & ID/ED error scores at baseline SII group performed worse on TMT-B than healthy population norms but better than no-SII group at baseline
McManimen L & Wong (2020)	ongitudinal	Early adolescents ($N = 78$; 64.1% female; $M_{age} = 13.12$, $SD = 1.48$); location unclear	DKEFS- CWIT-3 DKEFS- CWIT-4 WCST	CWIT-4 and NSI significantly predicted SI, and interacted to increase likelihood of SI 1 year later CWIT-4 scores associated with greater odds of SI 1 year later, only among adolescents who endorsed negative peer interactions

WCST-PE did not predict SI 1	year later, regardless of
negative peer interaction p	presence

Medeiros et al. (2014)	Cross-sectional	Adults with MDD ($N = 62$; 80.65% female); Portugal Sample breakdown SA in past year ($n = 32$; $M_{age} = 38.16$, $SD = 9.47$) No lifetime SA history ($n = 30$; $M_{age} = 41.27$, $SD = 11.28$)	Stroop WCST	Past year SA group had worse Stroop interference index scores than those with no SA history No significant group differences in WCST-PE
Minzenburg et al. (2015)	Cross-sectional	Adult outpatients with schizophrenia and SI history ($N = 17$; 35.29% female); Canada Sample breakdown SB history ($n = 8$; $M_{age} = 25.20$, $SD = 6$) No SB history ($n = 9$; $M_{age} = 23.40$, $SD = 3.30$)	Stroop	SB group had slower RT on incongruent condition of Stroop but no significant group differences in interference index scores
Miranda et al. (2012)	Prospective longitudinal	Undergraduate ($N = 45$; 78% female); USA Sample breakdown Baseline lifetime SA history ($n = 13$; $M_{\text{age}} = 18.31$, $SD = 0.63$) Baseline no lifetime SA history ($n = 32$; $M_{\text{age}} = 19.31$, $SD = 0.78$)	WCST	Lifetime SA history group did not significantly differ in WCST-PE scores than those without SA history at baseline Worse WCST-PE scores predicted higher levels of SI at 6-month follow-up among those with lifetime SA history but not those without SA history
Miranda et al. (2013)	Prospective longitudinal	Undergraduate ($N = 56$; 80.36% female; $M_{age} = 18.40$, $SD = 0.10$); USA *overlap with Miranda et al. (2012) sample	WCST	Baseline SI was not significantly correlated with WCST-PE scores Worse WCST-PE scores predicted higher levels of SI at 2-3 years follow up; however, the association did not hold when controlling for brooding at follow-up Indirect mediation effect, WCST-PE positively associated with brooding. Higher brooding

associated with greater hopelessness, which in turn was associated with greater SI 2-3 years later

Moniz et al. (2017)	Cross-sectional	Adults from outpatient clinic, ($N = 60$; 73.3% female); Portugal Sample breakdown Depressed + lifetime SA history ($n = 20$; $M_{age} = 42.20$, $SD = 15,12$) Depressed + no lifetime SA history ($n = 20$; $M_{age} = 44.30$, $SD = 14.78$) HC ($n = 20$; $M_{age} = 43.30$, $SD = 14.88$)	TMT-B VFT-animals VFT-letters VST WCST	No significant group differences emerged between depressed groups with vs. without lifetime SA history; however, both depressed groups had worse VST errors, VST completion time, WCST-PE and TMT-B scores than HC
Nangle et al. (2006)	Cross-sectional	Adults with schizophrenia spectrum disorder from outpatient clinic ($N = 78$; 27% female); Ireland Sample breakdown Lifetime SA history ($n = 28$; 32.14% female; $M_{age} = 42$, $SD = 10$) No lifetime SA history ($n = 50$; 22% female; $M_{age} = 48.10$, $SD = 8.10$)	COWAT- letters TMT-B	Lifetime SA history group had better TMT-B completion time & COWAT scores than those without lifetime SA history, when controlling for positive psychotic symptoms
Nilsson et al. (2021)	Cross-sectional	Adult females ($N = 88$); Sweden Sample breakdown History of SII receiving psychiatric tx ($n = 30$; $M_{age} = 24.60$, $SD = 5.60$) No-SII outpatient control ($n = 29$; $M_{age} = 29.30$, $SD = 7.70$) HC ($n = 29$; $M_{age} = 23.10$, $SD = 3.10$)	DKEFS- CWIT-3 DKEFS- CWIT-4 DKEFS-TMT- 4	SII group had poorer TMT-4 scores than no-SII clinical controls & HC SII group had worse CWIT-3 and -4 scores than HC but not psychiatric controls SII history accounted for significant amount of variance in TMT-4 scores above & beyond depression but not BPD symptoms.
Niu et al. (2021)	Longitudinal	Undergraduate ($N = 121$; 61.98% female; $M_{age} = 19$, $SD = 4.10$); China Sample breakdown Current SI ($n = 35$) No current SI ($n = 86$)	SST	RT on suicide Stroop trials was not associated with current SI or SI severity at baseline or a month later

Olié et al. (2015)	Cross-sectional	Adults with euthymic bipolar disorder from outpatient clinic ($N = 343$; 56.9% female); France Sample breakdown Severe lifetime SA history ($n = 41$; 43.9% aged ≥ 48) Non-severe lifetime SA history ($n = 88$; 23.9% aged ≥ 48) No lifetime SA history ($n = 214$; 35.5% aged ≥ 48)	SCWT TMT-B VFT-category VFT-letters	No significant group differences in TMT-B completion time, Stroop, & VFT scores The frequency of SA not correlated with any of the measures
Onat et al. (2019)	Cross-sectional	Adolescent ($N = 92$; 82.61% female); Turkey Sample breakdown Past year SA MDD ($n = 32$; $M_{age} = 15.86$, $SD = 1.02$) No SA MDD ($n = 30$; $M_{age} = 15.91$, SD = 1.24) HC ($n = 30$; $M_{age} = 15.99$, $SD = 1.37$)	Stroop WCST	No significant group differences on Stroop or WCST-PE
Orbach et al. (1987)	Cross-sectional	Children ($N = 75$; 54.67% female); USA Sample breakdown SITB history from inpatient setting ($n = 27$; $M_{age} = 8.30$, $SD = NA$) Chronically ill controls ($n = 25$; $M_{age} = 8.50$, $SD = NA$) HC ($n = 23$; $M_{age} = 8.10$, $SD = NA$)	Alternative- solutions (none vs. 1+ solutions generated)	Fewer suicidal children generated alternatives than chronically ill controls, & HC Alternative solutions generated (none vs. 1+) was negatively correlated with positive attitudes towards death
Oxley et al. (2015)	Longitudinal	Adults hospitalized from deliberate self-poisoning ($N = 36$; 80.6% female); Australia Sample breakdown CNS depressant method ($n = 21$; $M_{age} = 36$, $SD = 10.70$) CNS non-depressant method ($n = 15$; $M_{age} = 33.13$, $SD = 14.16$)	TMT-B TMT-(B-A)	Those that used CNS depressants to deliberately self- poison had worse TMT-(B & B-A) completion time scores than those that used CNS non- depressant method. CNS depressant group improved TMT-(B; B-A) completion time from discharge to 7-days, and 28- days follow-up (no significant improvement was found comparing follow-up periods)

				The CNS non-depressant group did not improve TMT-(B; B-A) completion time.
Ozcan et al. (2020)	Intervention (rTMS) Prospective longitudinal	Adults with tx resistant MDD receiving rTMS tx ($N = 30$; 63.3% female; $M_{age} = NA$, $SD = NA$); Turkey	ID/ED	SI & SA severity were lower post-tx from pre-tx. ID/ED scores did not significantly change pre- to post-tx Pre-tx ID/ED errors were negatively associated with change in SI (but not change in other measures of SI severity or intent Pre-tx ID/ED categories completed were positively associated with change in SI (but not change in other measures of SI severity or intent
Pan et al. (2020)	Longitudinal	Adolescent/Adult with MDD and current SI ($N = 42$; 83.33% female); China Sample breakdown Escitalopram oxalate tablets with active rTMS ($n = 21$; $M_{age} = 18.14$, $SD = 3.94$) Escitalopram oxalate tablets with sham rTMS ($n = 21$; $M_{age} = 21.43$, $SD = 6.79$)	SCWT WCST	No significant group differences on SCWT or WCST-PE Performance on SCWT and WCST-PE did not change significantly at baseline vs 1 week follow-up
Peters et al. (2010)	Intervention (RCT; CBT-p vs. waitlist control) Longitudinal	Adult with at least 1 persistent & distressing positive psychosis symptom ($N = 47$ included in analysis; 37.8% female); UK Sample breakdown Received CBT-p group immediately ($n = 36$; $M_{age} = 34$, $SD = 9.80$) Delayed CBT-p group (i.e., starting tx after 9 months on waitlist; $n = 31$; $M_{age} = 39.60$, $SD = 10.20$)	BT HSCT	No significant within group changes emerged with BT scores across timepoints Participants in the delayed, but not immediate, CBT-p group demonstrated significant improvements in HSCT scores from baseline to (a) end of tx & (b) 3-month post-tx; however, HSCT scores did not significantly improve while they were on waitlist Participants in the immediate CBT-p group did not significantly improve on HSCT across time points Compared to waitlist controls, the combined tx group (delayed + immediate) had significantly lower odds of SI at end of tx

Polanco- Romane et al. (2015)	Cross-sectional	Undergraduate ($N = 352$; 74.29% female; $M_{age} = 19.08$, $SD = 2.22$); USA Sample breakdown Lifetime SA history ($n = 17$) Lifetime NSSI history only ($n = 62$) Lifetime SA + lifetime NSSI ($n = 52$) No lifetime SII ($n = 165$)	WCST	No significant group differences in WCST-PE emerged
Ponsoni et al. (2018)	Cross-sectional	Adult outpatients with MDD/BD ($N = 132$; 65.91% female); location unclear Sample breakdown SA history ($n = 26$; $M_{age} = 40$, $SD = 12.27$) No SA history ($n = 26$; $M_{age} = 42/19$, $SD = 12.61$) HC ($n = 80$; $M_{age} = 30.79$, $SD = 11.76$)	HSCT SCWT	No significant group differences in HSCT or SCWT emerged
Raust et al. (2007)	Cross-Sectional	Adult ($N = 69$; 52.17% female); France Sample breakdown SB/SA history euthymic inpatient ($n = 30$; $M_{age} = 39.80$, $SD = 13.60$) HC ($n = 39$; $M_{age} = 44.60$, $SD = 12.40$)	HSCT SCWT	SA group had worse RT on HSCT-B and HSCT B-A compared to HC No significant group differences in SCWT interference scores
Richard- Devantoy et al. (2012)	Cross-sectional	French-native adults aged 65+ years $(N = 60; 61.7\% \text{ female});$ location unclear Sample breakdown SA history within 10 days of hospital admittance & depressed $(n = 20; M_{\text{age}} = 77.10, SD = 7.20)$ No SA history but depressed $(n = 20; M_{\text{age}} = 75.90, SD = 6.70)$	HSCT RSC SCWT TMT-B VFT-letters VFT- phonemic	SA group history had worse TMT-B and VFT scores than HC, but did not significantly differ from depressed control without SA history SA history had worse HSCT, RSC, & SCWT error scores than depressed and health controls SCWT interference scores were positive correlated with SA frequency

Richard- Devantoy et al. (2013)	Cross-sectional	Adults with SA history in full or partial remission (sample 2; $n = 119$; 76.5% female; $M_{age} = 40.10$, $SD = 12.20$); France	HSCT SCWT TMT-(B/A)	TMT-(B/A) completion time scores were positively correlated with HSCT errors & age TMT-(B/A) did not significantly correlate with SCWT performance or HSCT completion time
Richard- Devantoy et al. (2015)	Cross-Sectional	Older adult ($N = 102$; France Older adult ($N = 102$; 51.96% female); USA Sample breakdown MDD high-lethality SA inpatient with current SI ($n = 17$; $M_{age} = 69.93$, $SD = 6.50$) MDD low-lethality SA inpatient with current SI ($n = 14$; $M_{age} = 64.40$, $SD = 3.50$) MDD with current SI inpatient ($n = 16$; $M_{age} = 67.40$, $SD = 7.40$) MDD control inpatient ($n = 38$; $M_{age} = 67.80$, $SD = 6.10$) HC ($n = 17$; $M_{age} = 71.40$, $SD = 10.20$)	DKEFS- CWIT-3 DKEFS- CWIT-4	No significant group differences were found for CWIT-4 completion time SA depressed group worse CWIT-3 completion time compared to depressed control & HC, controlling for age and level of education
Richard- Devantoy et al. (2016a)	Cross-Sectional	Adult ($N = 74$; 61.04% female); Canada Sample breakdown MDD with SA history ($n = 25$; $M_{age} = 40.30$, $SD = 9.70$) MDD with no SA history ($n = 22$; $M_{age} = 41.30$, $SD = 11.40$) HC ($n = 27$; $M_{age} = 33.80$, $SD = 7.10$)	HSCT SCT TMT-B VFT-animals VFT-p	SA group performed worse on TMT-B, VFT- animals, VFT-p, and HSCT than HC but not psychiatric controls HC faster RT on HSCT and TMT-B, but no significant difference between SA group and psychiatric controls
Richard- Devantoy et al. (2016b)	Cross-sectional	Adult inpatient with mood disorder history ($N = 79$; 62.03% female); Canada Sample breakdown SA history ($n = 33$; $M_{age} = 41.60$, $SD = 10.80$)	SST	No significant group differences in RT on suicide- related words, and remained insignificant when controlling for age, depression severity, anxiety severity, and gender

		No SA history ($n = 46$; $M_{age} = 42.80$, $SD = 11.90$)		Among a subsample, no association between original Stroop interference suicide-related Stroop interference
Sánchez- Sansegundo et al. (2020)	Cross-sectional	Adult male violent offenders with schizophrenia spectrum disorder $(N = 61)$; Spain Sample breakdown Lifetime SA history $(n = 26; M_{age} = 42.77, SD = 7.57)$ No lifetime SA history $(n = 35; M_{age} = 45.89, SD = 8.24)$	COWAT- letters SCWT TMT-B VFT-animals WCST	No significant group differences in WCST-PE, TMT-B, SCWT, COWAT and VFT-animals emerged
Smith et al. (2019)	Intervention (DBT- modified version; Miller et al., 1997) Longitudinal	Adolescents with past year SII ($N = 93$; 87.10% female; $M_{age} = 15.05$, $SD = 1.40$); Canada & USA	BRIEF-SR-S	Overall sample had clinically significant improvement in BRIEF-SR-S scores from pre- to post-tx Grant-funded participants had higher improvement in BRIEF-SR-S scores than insurance funded participants
Stewart et al. (2017)	Cross-sectional	Adolescent inpatient ($N = 99$; 71.72% female); location unclear Sample breakdown Past week SI-only ($n = 60$; $M_{age} = 15.52$, $SD = 1.32$) Single lifetime SA + past week SI ($n = 12$; $M_{age} = 15.58$, $SD = 1.44$) Multiple lifetime SA + past week SI ($n = 26$; $M_{age} = 15.58$, $SD = 1.36$)	SST	SA history group had worse suicide-words and positive-words RT interference scores compared to participants with SI-only. This difference was driven by participants with multiple SA Single SA history did not differ significantly in suicide-words RT interferences scores from SI-only group or multiple SA history group RT interferences scores on suicide-words positively associated with lifetime SA history compared to SI-only, but this effect was not found when comparing SI-only to past month SA
Tavakoli et al. (2021)	Cross-sectional	Adolescent ($N = 34$; 64.71% female); Canada Sample breakdown Inpatient with recent/current suicidal behavior ($n = 17$; $M_{age} = 15.65$, SD = 0.99)	SST	High risk SA participants greater interference (RT) on suicide condition of SST compared to other conditions. No differences on SST conditions for HC

Thompson & Ong. (2018)	Cross-sectional	Undergraduate with suicide risk (<i>N</i> = 52; 52.26% female); China Sample breakdown Low suicide risk (<i>n</i> = 30; <i>M</i> _{age} =	EST Stroop	High suicide risk group (vs. low risk) had worse RT and made more errors in the Stroop interference trial High suicide risk group (vs. low risk) had faster RT in
		21.55, $SD = NA$) High suicide risk ($n = 22$; $M_{age} = 21.94$, $SD = NA$)		negative and positive EST trials, yet slower response in the word, 'suicide,' trial High risk suicidal group had less activity in leftward
				frontal areas during EST
Togay et al. (2015)	Longitudinal	Adolescent/Adult inpatient with schizophrenia ($N = 172; 40.12\%$	Stroop TMT-B	No significant group differences in TMT-B, Stroop, or WCST-PE before admission
		female; aged 15-45 years); Turkey	WCST	No significant group differences in TMT-B, Stroop, or WCST-PE after admission
		Sample breakdown SA before admission $(n = 29)$		
		No SA before admission $(n = 143)$		
Verma et al. (2016)	Cross-sectional	Adults with schizophrenia or schizoaffective disorder (<i>N</i> = 175; 20% female); India Sample breakdown	TMT-B	Lifetime SA history group had longer TMT-B completion times & greater severity of positive symptoms for schizophrenia compared to no SA history group
		Lifetime SA history ($n = 39$) No SA history ($n = 136$)		Among those with lifetime SA history, there were no significant differences in TMT-B completion time scores when comparing severity of suicide intent
Williams & Broadbent. (1986)	Cross-sectional	Adult ($N = 75$); UK Sample breakdown Inpatient with SA overdose ($n = 25$; $M_{age} = NA$, $SD = NA$) Inpatient no SA ($n = 25$; $M_{age} = 31$,	SST	Participants with SA history demonstrated greater interference on suicide/overdose-related words trials compared to negative-words trial, compared to psychiatric and community controls
		SD = 11.80) Undergraduate control ($n = 25$; $M_{age} = NA$, $SD = NA$)		

Williams et al. (2015)	Cross-sectional	Adults meeting criteria for DSM-IV BPD ($N = 58$) with lifetime history of most severe SII; UK Sample breakdown Low-lethality SII ($n = 40$; 90% female; $M_{age} = 29.63$, $SD = 9.84$) High-lethality SII ($n = 18$; 88.9% female; $M_{age} = 31.33$, $SD = 10.88$)	DKEFS- CWIT-3	No significant differences in DKEFS-CWIT-3 scores between high-lethality SII and low-lethality SII groups DKEFS-CWIT-3 scores negatively correlated with both impulsivity and depression
Yin et al. (2021)	Cross-sectional	Adult ($N = 201$; 55.72% female); China Sample breakdown SA history depressed ($n = 52$; $M_{age} = 25.56$, $SD = 8.50$) No SA history depressed ($n = 59$; $M_{age} = 30.14$, $SD = 11.44$) HC ($n = 90$; $M_{age} = 35.19$, $SD = 9.44$)	SST	Depressed SA & no-SA groups performed worse on SST on all valenced, suicide, and neutral words No significant differences in SST between depressed groups SA history was not correlated with suicide-related words bias

Note. AMD = attention bias modification; AUD = alcohol use disorder; BPD = borderline personality disorder; CBT-p = cognitive behavior therapy for psychosis; CNS = central nervous system; MDD = major depressive disorder; HC = healthy control; PTSD = post-traumatic stress disorder; PFC = prefrontal cortex; RT = response time; rTMS = repetitive transcranial magnetic stimulation; SA = suicide attempt; SB = suicidal behavior; SI = suicidal ideation; SITB = self-injurious thoughts & behaviors; tx = treatment.

Measures. ACS = Attentional Control Scale (Derryberry & Reed, 2002); BRIEF-A-S = Behavior Rating Inventory of Executive Functioning-Adults version-Shift subscale (Roth et al., 2005); BRIEF-SR-S = Behavior Rating Inventory of Executive Functioning-Self-Report-Shift subscale (Guy et al., 2004); BT = Brixton Test (Burgess & Shallace, 1996a); DKEFS = Delis Kaplan Executive Functioning Scale [-CWIT-4 = Color-Word Interference Test (condition 4); -VF = Verbal Fluency Test] (Delis et al., 2005); COWAT = Controlled Oral Word-Association Test (Benton & Hamsher, 1989); DFT = Design Fluency Test (Lezak, 1983); EST = Emotional Stroop Test (Williams et al., 1996); HSCT = Hayling Sentence Complete Test (Burgess & Shallice, 1996b); ID/ED = Cambridge Automated Neuropsychological Test Battery-interdimensional/extradimensional set-shift tasks (Cambridge Cognition, 2006); FPT = Five Point Test (Regard et al., 1982); Object Alternation Test (Freedman et al., 1998); RSC = Rule Shift Card Test (Godefroy et al., 2008); ST = Stroop Test (Lezak, 1983); SCT = Stroop Color Test (Godefroy et al., 2008); SCWT = Stroop Colour Word Test (Golden, 1978); Stroop (Stroop, 1935); SST = Suicide Stroop Test (Becker et al., 1999); TMT = Trail Making Test (parts A & B; Bowie &

Harvey, 2006); VFT = verbal fluency test (Godefroy et al., 2008), WCST-PE = Wisconsin Card Sorting Test perservative errors (Heaton et al., 1993); UOT = Uses of Objects Test (Lezak, 1983).

Table 2

Cognitive Reappraisal Summary Data

Study	Design	Sample Characteristics	Cognitive Reappraisal Measure/ subscale(s)	Summary of Key Findings
Amazue et al. (2019)	Cross-sectional	Nursing students ($N = 473$; 86.68% female; $M_{age} = 24.50$, $SD = 3$); Nigeria	ERQ-R	ERQ-R negatively correlated with SI severity Low ERQ-R scores were associated with stronger positive association between mental pain & SI severity (vs. high ERQ-R)
Andrews et al. (2013)	Longitudinal	Adolescent students (<i>N</i> = 1973; 71.6% female); Australia	ERQ-R	Lower baseline ERQ-R predicted higher likelihood of continuing NSSI at 1-year follow-up
		Sample breakdown Lifetime NSSI at baseline (n = 236; M_{age} = NA, SD = NA)		
		Continued NSSI at 1-year follow- up from baseline ($n = 80$; $M_{age} = 14.24$, $SD = 0.89$)		
		Stopped NSSI by 1-year follow-up ($n = 81$; M_{age} = 14.25, $SD = 0.89$)		

Bentley et al. (2017)	Single case experimental Intervention (cognitive reappraisal and/or mindful emotion awareness training) Ecological momentary assessment	Adult with 5+ SII acts in past year ($N = 10$; 90% female; $M_{age} = 21.30$, $SD = 3.68$); USA	ERQ-R	Of the 7 individuals receiving the cognitive reappraisal module (initially or additionally), 6 reported clinically meaning reduction is SII urges & acts, & 5 reported significant improvements in ERQ-R scores at 4-week follow-up compared to pre-tx ^a .
Brausch et al. (2022)	Cross-sectional	Adolescent students ($N =$ 696; 54.8% female; $M_{age} = 15.50$, $SD = 0.99$); USA	ERQ-CA-R	ERQ-CA-R was not associated with past-year SI, past year NSSI, or past month SI severity.
Cheung et al. (2019)	Cross-sectional	Undergraduate ($N = 422$; 58.7% female; $M_{age} =$ 20.70, $SD = 2.63$); Hong Kong	FDCS-R	FDSC-R negatively correlated with SI and positively correlated to resilience FDSC-R partially mediated a negative relation between resilience & SI. Resilience was associated with higher FDC-R, which in turn was negatively associated with SI severity (to a greater extent than problem-solving + taking action).
Davis et al. (2014)	Cross-sectional Quasi- experimental	Study 1 Adults from the community $(N = 111; 43.6\%)$ female); USA Sample breakdown SII lifetime history $(n = 25; M_{age} = 39.50, SD = 9.30)$ Depressed controls $(n = 49; M_{age} = 43.50, SD = 10.20)$ HC $(n = 37; M_{age} = 42.20, SD = 10.90)$	N/A (cognitive reappraisal instruction; Ochsner et al., 2012)	No baseline group differences in negative affect from watching sad film stimuli emerged. After cognitive reappraisal instruction, depressed control & healthy control groups reported lower negative affect than baseline when watching sad film, yet participants with lifetime SII history did not.

Davis et al. (2014)	Cross-sectional Quasi- experimental	Study 2 Adult women $(N = 48)$; USA Sample breakdown SII lifetime history $(n = 21;$ $M_{age} = 27.50, SD = 4.40)$ Depressed controls $(n = 27;$ $M_{age} = 28.30, SD = 4.10)$	N/A (cognitive reappraisal instruction; Ochsner et al., 2012)	No baseline group differences emerged in negative affect, amygdala activation, or full brain activation in response to images validated to evoke negative affect. Depressed control group showed significantly lower amygdala activation to negative images post reappraisal, yet participants with lifetime SII history did not Lifetime SII group reported lower perceived success in regulating negative affect from reappraisal instructions
Duprey et al. (2021)	Cross-sectional	Adolescent girls with depressive symptoms & low-income background ($N = 175$; 32.29 % with current SI; $M_{age} = 14$, $SD = 0.85$); USA	ERQ-CA-R	Positive association between stressful life events & SI among those with low ERQ-R but no significant association with high ERQ-R
Ferrer & Kirchner (2020)	Cross-sectional	Adolescents with adjustment disorder from an outpatient clinic (<i>N</i> = 108; 67.59% female; aged 13-17 years); Spain	CRI-Y-PR (Spanish version)	CRI-PR scores positively correlated to SI among boys but not girls
Forkmann et al. (2014)	Cross-sectional	Adults from inpatient setting ($N = 232$; 69.4% female; $M_{age} = 37.50$, $SD = 13.40$); Germany Sample breakdown Past week SI history ($n = 102$) Past week suicidal desire ($n = 20$)	ERQ-R	Past week SI history group reported lower ERQ-R scores than those without SI history ERQ-R did not significantly differ between those with and without past week suicidal desire ERQ-R scores did not account for significant amount of variance in past week SI or past week suicidal desire
Fox et al. (2018)	Cross-sectional	Undergraduate (<i>N</i> = 70; 94.29% female; 50% SII	ERQ-R	ERQ-R scores did not moderate the relation between respiratory sinus-arrythmia withdrawal or reactivity & SII history

in past year; $M_{age} = 19.25$, SD = 0.92); USA

Franz et al. (2021)	Ecological momentary assessment	Adults with SA in past year $(N = 46; 78.26\%)$ female; $M_{age} = 23.40$, $SD = 4.36$; North America & Europe	ERQ-R	ERQ-R did not have main effect on daily SI Those with low & mid ERQ-R scores had stronger positive association between stressful events & SI than high ERQ-R scores
Ghorbani et al. (2017)	Cross-sectional	Adults with alcohol dependence from outpatient clinic ($n = 205$; 24.88% female); Iran Sample breakdown Alcohol dependent with lifetime SA history ($n = 86$; $M_{age} = 31.53$, $SD = 11.23$) Alcohol dependent with no lifetime SA history ($n = 119$; $M_{age} = 32.95$, $SD = 9.51$) Undergraduate controls ($n = 100$; 40% female; $M_{age} = 30.32$, $SD = 9.98$); Iran	ERQ-R	Alcohol dependence group had lower ERQ-R scores & higher SI than undergraduate controls Among those with alcohol dependence, those with SA history had lower ERQ-R scores than those without SA history Among those with alcohol dependence, ERQ-R scores explained 2% of variance in suicide risk (SA + SI)
Gong et al. (2020)	Cross-sectional	Undergraduates ($N = 2,457$; 63.53% female; $M_{age} =$ 18.54, $SD = 0.98$); China Sample breakdown Lifetime SI history ($n =$ 996) Lifetime SA history ($n =$ 277)	ERQ-R	Those with lifetime SI and/or SA history had lower ERQ-R than those with no suicidality history (<i>p</i> < 0.001). ERQ-R mediated relation between schizotypal traits and depression, but not between schizotypal traits and suicidality. Schizotypal traits negatively associated with ERQ-R, which in turn negatively associated with depression. Depression, in turn, positively associated with lifetime suicidality

Gu et al. (2021)	Cross-sectional	Male inmates 1+ year incarceration ($N = 1042$; 14.78% past year NSSI; $M_{age} = 38.45$, $SD = 10.67$); China	ERQ-R	ERQ-R scores negatively associated with NSSI frequency ERQ-R moderated the relation between psychopathy and NSSI frequency. Psychopathy was positively associated with NSSI in participants with low ERQ-R scores but no significant association with those with high ERQ-R scores.
Hallard et al. (2021)	Longitudinal	Female adult inpatients with SI in the past two months (N = 24; M_{age} = 35.30, SD = 14.30); UK	TCQ-R	TCQ-R negatively predicted SI and was found to be an independent predictor of SI
Hauber et al. (2019)	Prospective longitudinal Intervention (MBT)	Adolescent inpatients receiving MBT ($N = 140 92.9\%$ female; $M_{age} = 17.91$, $SD = 1.66$); Netherlands Sample breakdown Past year SII ($n = 93$) Maintained SII post-tx ($n = 62$) SII onset after baseline ($n = 10$) SII cessation post-tx ($n = 30$)	CERQ-PR	Those who maintained their SII over the course of the study had lower CERQ-PR scores at baseline compared with those who were no longer engaging in SII post-tx
In et al. (2021)	Cross-sectional Quasi- experimental	Adults from community with 5+ NSSI in past year, reappraisal condition ($N = 21$; $M_{age} = 23.10$, $SD = 2.55$); South Korea	N/A (Cognitive reappraisal instruction; Hofmann et al., 2009)	Reappraisal strategy reduced self-reported negative affect and anxiety, yet did not significantly reduce urges to self-harm
Johnson et al. (2010)	Cross-sectional	Undergraduates with a lifetime SA history ($N = 78$; 83.33% female; M_{age}	ERQ-R	ERQ-R scores were not associated with lifetime history of suicidality $(SA + SI)$.

		= 19.62, <i>SD</i> = 4.48); UK		ERQ-R scores did not moderate the relation between stressful life events & lifetime history of suicidality.
Kalichman et al. (2000)	Cross-sectional	Adults with HIV/AIDS ($N = 113$; 24.78% female; $M_{age} = 53.40$, $SD = 0.50$); USA Sample breakdown SI in last week ($n = 29$)	WCQ-PR	Recent SI group had higher WCQ-PR scores than those without recent SI, but these group differences did not hold when controlling for depression
Kaniuka et al. (2021)	Cross-sectional	Adults ($N = 2,175$; 60.46% female; 64.69% heterosexual; 18.9% history of sexual violence victimization; $M_{\text{age}} = 31.17$, $SD = 13.34$); online & USA	ERQ-R	Sexual minority group no significant difference in ERQ-R from heterosexual group ERQ-R negatively associated with history of STBs for both groups; however, association was stronger for sexual minorities
Khan & Kausar (2020)	Cross-sectional	Adolescents & young adults $(N = 164; M_{age} = 20.47, SD = 1.80)$; Pakistan Sample breakdown Lifetime NSSI history w/ at least 1 NSSI in past year $(n = 82)$ No lifetime-NSSI history $(n = 82)$	ERQ-R	Lifetime NSSI group lower ERQ-R than no-lifetime NSSI group ERQ-R negatively associated with lifetime NSSI, but this effect did not hold when controlling for demographics, self-criticism, expressive suppression, & family dynamics Family cohesion positive associated with ERQ-R, which in turn was negatively associated with lifetime NSSI
Kiosses et al. (2018)	Intervention (CRISP)	Adult 50+ years of age, hospitalized for active SI or recent SA (<i>N</i> = 16); USA	NA	Nine participants reported SI remission at the end of tx; three experienced exacerbated symptoms & re-hospitalized, and four participants did not complete assessment.
Kudinova et al. (2016)	Cross-sectional Quasi- experimental	Undergraduate ($N = 33$; 69.7% female); USA Sample breakdown Lifetime SI history ($n = 10$; $M_{age} = 18.70$, $SD = 1.06$)	N/A (cognitive reappraisal instruction; Ochsner et al., 2004)	Lifetime SI history group showed larger LPP amplitude (suggesting greater processing of emotional stimuli) across trials (cognitive reappraisal instruction to reduce emotions, increase emotions, and passive-viewing) in response to dysphoric images compared with students without SI history

		Lifetime No SI history (n = 23 ; $M_{age} = 20.22$, $SD = 2.31$)		No significant difference in LPP amplitude between trials among those without lifetime SI history
Long et al. (2011)	Intervention (adapted DBT skills group)	Adult women with SII history from inpatient unit ($N = 44$); UK Sample breakdown Personality disorder ($n = 31$) Schizophrenia/affective disorder ($n = 10$) Bipolar or depressive disorder ($n = 3$) Tx completers (12+ sessions; $n = 29$; $M_{age} = 31.70$, $SD = 8.97$) Tx non-completers (<12 sessions; $n = 15$; $M_{age} = 28.40$, $SD = 6.97$)	CRI-PR	Tx completers had fewer SAs & NSSI & increase in CRI-PR scores at 3-month follow-up compared with pre-tx No significant changes in SII for txt non-completers.
Madjar et al. (2019)	Cross-sectional	High-school students ($N = 594$; 45.6% female; $M_{age} = 14.96$, $SD = 1.33$); Israel Sample breakdown Lifetime Repetitive NSSI history with 1 NSSI in past year 6+ times ($n = 42$) Lifetime Occasional NSSI history with 1 NSSI in past year 1-5 times ($n = 50$)	CERQ-PR	Girls had higher CERQ-PR scores than boys Those with no NSSI history had higher CERQ-PR scores than those with repetitive NSSI; yet this difference did not hold when controlling for gender, age, & depression.
McLafferty et al. (2020)	Cross-sectional	Undergraduates ($N = 739$; 62.52% female; $M_{age} = 20.69$, $SD = 5.31$); Ireland	ERQ-R	Sexual minority group lower ERQ-R than heterosexual group ERQ-R negatively associated with SITB lifetime history but did not mediate relations between

parenting (i.e., over-indulgence, over-control, overprotective) & SITB

Miller et al. (2018)	Cross-sectional Quasi- experimental	Adolescents, community (N = 49; 59.18% female); USA Sample breakdown Lifetime SI history (n = 14; M_{age} = 16.70, SD = 1.73) No lifetime SI history (n = 32; M_{age} = 17.06, SD = 1.47)	NA (cognitive reappraisal instructions; Ochsner et al., 2004)	Lifetime SI history group had lower activation in brain areas associated with active emotion regulation (e.g., cognitive reappraisal) but higher activation in areas associated with emotional control when instructed to passively view dysphoric (vs. neutral) images, whereas no-SI history group had higher activation in areas associated with active emotion regulation. When instructed to use cognitive reappraisal while viewing dysphoric images, SI history group had greater activation in brain areas associated with active emotion regulation compared to those without SI history
Mohammadzadeh et al. (2019)	Cross-sectional	Mixture of adolescent & adult males in detox tx for heroin dependence $(N = 310; M_{age} = 34.58, SD = 9.60)$; Iran	CERQ (short- form) -PR	Childhood trauma was negatively correlated with CERQ-PR scores CERQ-PR scores were negatively correlated with SI
Mukherjee et al. (2014).	Cross-sectional	Female undergraduates (<i>N</i> = 200; aged 18-21 years); India	CERQ-PR	CERQ-PR negatively correlated with current SI frequency
Navarro-Haro et al. (2015)	Cross-sectional	Adult outpatient females with BPD, co-occurring eating disorder, and NSSI in past 6 months $(N = 68; M_{age} = 27.48, SD = 8.92)$; Spain *overlap sample with Navarro-Haro et al. (2018)	ERQ-R	ERQ-R scores were negatively correlated with past 6-month SII frequency Higher emotional suppression scores were associated with a weaker relation between ERQ-R and past 6-month SII frequency
Navarro-Haro et al. (2018)	Intervention (DBT vs. CBT)	Adult females with BPD & co-occurring eating disorder ($N = 118$; M_{age}	ERQ-R	No significant improvement in ERQ-R scores preto post-tx for either DBT or CBT.

		= 27.37, SD = 8.75); Spain Sample breakdown DBT group (n = 71) CBT group (n = 47) Past 6 month SA Past 6 month NSSI *overlap sample with Navarro-Haro et al. (2015)		DBT group showed significant improvements in frequency of SA, SII, hospitalizations, & impulsive dysfunctional behaviors from pre- to post-tx CBT group showed improvements in frequency of hospitalizations & impulsive dysfunctional behaviors but not frequency of SA or SII
Nielsen et al. (2016)	Cross-sectional	Adult from the community $(N = 1332; 75.2\%)$ female; $M_{age} = 19.57$, $SD = 6.22$); Europe & North America Sample breakdown Lifetime SII history $(n = 1,173)$ No lifetime SII history $(n = 159)$ *overlap sample with Nielsen et al. $(2017a)$	FDCS-R	Lifetime SII history group had lower FDCS-R scores than those without SII history FDCS-R scores were positively correlated with time elapsed since last SII episode FDCS-R scores negatively correlated with lifetime SII frequency.
Nielsen et al. (2017a)	Cross-sectional	Adult from the community $(N = 313; 80.51\%)$ female; $M_{age} = 19.78$, $SD = 3.48$; UK Sample breakdown Only lifetime SII history $(n = 166)$ Lifetime SII + lifetime SA $(n = 38)$ No lifetime SII $(n = 109)$ *overlap sample with Nielsen et al. $(2016; 2017b)$	FDCS-R	Lifetime SII history group had lower FDCS-R scores compared to those with only SII history & those without SII history Those with only lifetime SII history had lower FDCS-R scores than those without lifetime SII history

Nielsen et al. (2017b)	Cross-sectional	Adult from online community with SII in the last 3 months (N = 1157; 79.9% female; Mage = 18.21, SD = 3.24); Europe & North America Sample breakdown Past 3-month SII history in response to stressor (n = 650) Past 3-month SII ideation (n = 50) No SII acts/ideation (n = 457) *overlap sample with Nielsen et al. (2017a)	FDCS-R	Both SII history group and SI-only group, had lower FDCS-R scores than those without SII acts/ideation than no SITB group in response to a significant recent stressor
Ong et al. (2019)	Cross-sectional	Undergraduate ($N = 117$ 57.5% female; $M_{age} =$ 23.14, $SD = 5.51$); Hong Kong Sample breakdown High suicide risk ($n = 47$; 7+ score on SBQ-R) Low suicide risk ($n = 70$; <7 score on SBQ-R)	ERQ-R	ERQ-R scores negatively correlated with suicide risk
Ortiz et al. (2019)	Cross-sectional	Adult, online ($N = 215$; 32.1% female; $M_{age} =$ 33.27, $SD = 10.75$); USA	ERQ-R	ERQ-R scores were not associated with SI severity
Richmond et al. (2017)	Cross-sectional	Undergraduate (N = 1577; 74.27% female); Australia Sample breakdown	ERQ-R	Recent SII group had lower ERQ-R scores compared to students without SII frequency was negatively correlated with ERQ-R scores ERQ-R scores mediated the relations between SII frequency and: (1) depression, (2) anxiety, (3)

		NSSI within past 4-weeks (n = 99; M_{age} = 20.63, SD = 1.99) No NSSI within past 4-weeks (n = 1478; M_{age} = 21.01, SD = 2.04)		stress; ERQ-R scores were negatively correlated with each. Depression, anxiety, and stress were positively correlated with SII frequency.
Shani et al. (2016)	Cross-sectional	Infertile women undergoing in-vitro fertilization (N = 106); Israel Sample breakdown High suicide risk (n = 10; 7+ score on SBQ-R; $M_{\rm age}$ = 34.70, SD = 6.10) Non-suicide risk (n = 96; $M_{\rm age}$ = 33.40, SD = 5.70)	CIQ-PR	Participants who were at high suicide risk had lower CIQ-PR scores than those with low risk
Tatnell et al. (2014)	Longitudinal	High school adolescents (N = 1973; 71.67% female; $M_{\rm age} = 13.89$, $SD = 0.97$); Australia Sample breakdown Lifetime NSSI at baseline ($n = 164$) Lifetime NSSI at follow-up ($n = 234$) Maintained NSSI from baseline at 1-year follow-up ($n = 80$) NSSI onset during baseline to 1-year follow-up ($n = 75$) Cessation of NSSI at 1-year follow-up ($n = 81$)	ERQ-R	At baseline & follow-up, groups differed on ERQ-R scores such that (1) those without lifetime NSSI history reported greater scores than all 3 NSSI groups, (2) those who maintained SII had lower scores than all other groups, & (3) those who ceased NSSI had lower scores than those without SII history but higher scores than those who maintained NSSI. ERQ-R partially mediated the relationship between attachment anxiety & NSSI; such that, attachment anxiety was associated with lower ERQ-R scores, which in turn was associated with higher likelihood of NSSI.
Titus et al. (2020)	Cross-sectional	Undergraduate ($N = 403$; 74.44% female; $M_{age} =$ 19.67, $SD = 1.45$); USA	TCQ-R	TCQ-R scores was not significantly correlated with SI

Tucker et al. (2017)	Cross-sectional	Undergraduate with lifetime SI history ($N = 135$; 77.78% female; $M_{age} = 19.76$, $SD = 2.26$); USA Sample breakdown Past 2 week SI history ($n = 76$) Only SI history ($n = 90$) SI & SI planning history ($n = 17$) SA history ($n = 28$)	STCQ-R	No significant group differences in STCQ-R scores emerged. STCQ-R scores were not linked to SI.
Vasudeva et al. (2017)	Cross-sectional	Adult with recent SA (N = 56; 57.14% female; aged 18-60 years); India	ERQ-R	No gender differences emerged in ERQ-R scores. Repeated lifetime SA group lower scores on ERQ-R than first SA group Repeated lifetime SA was negatively correlated with ERQ-R scores
Voon et al. (2014a)	Longitudinal	Adolescent high-school student; Australia Baseline ($N = 2,637$; 67.99% female; 9.63 % NSSI lifetime history; $M_{\text{age}} = 13.90$, $SD = 0.99$) 1-year follow-up ($N = 2,328$; 12.16% NSSI lifetime history; $M_{\text{age}} = 14.90$, $SD = 0.96$) 2-year follow-up ($N = 1,984$; 15.93% NSSI lifetime history; $M_{\text{age}} = 15.80$, $SD = 0.96$)	ERQ-R	Higher baseline ERQ-R scores predicted lower likelihood of NSSI onset from baseline to 1-year follow-up ERQ-R scores at 1-year follow-up did not predict NSSI onset from the 1-year follow-up to the 2-years follow-up. ERQ-R scores showed a decreasing trend over time
Voon et al. (2014b)	Longitudinal	*same sample as Voon et al. (2014a)	ERQ-R	ERQ-R scores were negatively correlated with NSSI frequency & severity at baseline Baseline ERQ-R scores were positively correlated with increases in NSSI frequency over time

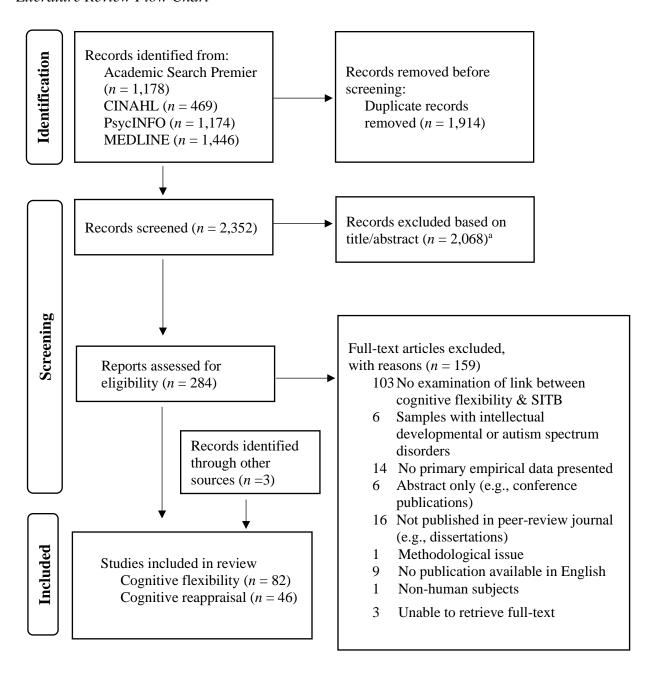
				Increase in ERQ-R scores overtime was negatively associated with medical severity of NSSI over time In analyses with complete cases, ERQ-R was no longer linked to any types of changes in NSSI
Voon et al. (2014c)	Cross-sectional	High school students ($N = 2,507; 68\%$ female; 10.13% lifetime NSSI history; $M_{age} = 13.93,$ $SD = NA)$; Australia *overlap with Voon et al. (2014a, b) sample	ERQ-R	ERQ-R scores were negatively but weakly associated with NSSI severity The positive association between stressful life events & NSSI was stronger for those with low ERQ-R scores than those with high ERQ-R scores
Wei et al. (2020)	Cross-sectional	Adult men who have sex with men ($N = 578$; 14% SI and/or SA in past 3 months; 74.39% aged \geq 30 years); China	ERQ-R	Higher ERQ-R associated with lower odds of recent suicidality (i.e., SI, suicide planning, and/or SA over past 3 months)

^a Within differences of ERQ-R scores from baseline to follow-up were obtained from supplemental table S1 of the original article. *Note*. BPD = borderline personality disorder; CBT = cognitive behavior therapy; CRISP = cognitive reappraisal intervention for suicide prevention; DBT = dialectical behavior therapy; LPP = latent positive potential; N/A = not applicable; MBT = mentalization based treatment; RSA = respiratory sinus arrhythmia; SA = suicide attempt; SI = suicidal ideation; TAU = treatment as usual; tx = treatment

Measures. -PR = positive reappraisal subscale; -R = reappraisal subscale; CERQ = Cognitive Emotion Regulation questionnaire (Garnefski & Kraaij, 2001); CIQ = Coping with Infertility Questionnaire (Benyamini et al., 2008); CRI = Coping Response Inventory (Moos, 1997); ERQ = Emotion Regulation Questionnaire (Gross & John, 2003); FDCS = Functional Dimensions of Coping scale (Ferguson & Cox, 1997); SBQ-R = Suicide Behaviours Questionnaire-Revised (Osman et al., 2001); STCQ = Suicidal Thought Control Questionnaire (Tucker et al., 2017); TCQ = Thought Control Questionnaire (Wells & Davies, 1994); WCQ = Ways of Coping Questionnaire (Lazarus & Folkman, 1984)

Figure 1

Literature Review Flow Chart



^aRecords were excluded if there was no mention in the title/abstract of (1) self-injurious behaviours and thoughts or (2) neurocognitive functioning.

References

- Aral, A., Say, G. N., Gerdan, G., Usta, M. B., & Ergüner Aral, A. (2020). The role of sociodemographic, clinical and neuropsychological variables in suicide attempts in depressed adolescents. *Archives of Neuropsychiatry*, *57*(4), 312–317.
- Baik, S. Y., Kim, J. Y., Choi, J., Baek, J. Y., Park, Y., Kim, Y., Jung, M., & Lee, S. H. (2019).

 Prefrontal asymmetry during cognitive tasks and its relationship with suicide ideation in major depressive disorder: An fNIRS study. *Diagnostics*, *9*(4), 193-207.
- Bentley, K. H., Nock, M. K., Sauer-Zavala, S., Groman, B. S., & Barlow, D. H. (2017). A functional analysis of two transdiagnostic, emotion-focused interventions on nonsuicidal self-injury. *Journal of Consulting and Clinical Psychology*, 85(6), 632–646.
 - Benton, A. L., & Hamsher, K. S. (1989). Multilingual aphasia examination. AJA Associated.
 - Benyamini, Y., Gefen-Bardarian, Y., Gozlan, M., Tabiv, G., Shiloh, S., Kokia, E. (2008). Coping specificity: The case of women coping within fertility treatments. *Psychology and Health* 23(2), 221–241.
 - Bowie, C., & Harvey, P. D. (2006). Administration and interpretation of the trail making test.

 Nature Protocols, 1, I 2277-2281.
 - Burgess, P. W., & Shallice, T. (1996b). Response suppression, initiation and strategy use following frontal lobe lesions. *Neuropsychologia*, *34*(4), 263-272.
 - Chesin, M. S., Benjamin-Phillips, C. A., Keilp, J., Fertuck, E. A., Brodsky, B. S., & Stanley, B. (2016). Improvements in executive attention, rumination, cognitive reactivity, and mindfulness among high-suicide risk patients participating in adjunct mindfulness-based cognitive therapy: Preliminary findings. *Journal of Alternative and Complementary Medicine*, 22(8), 642–649.

- Chesin, M. S., Keilp, J. G., Kline, A., Stanley, B., Myers, C., Latorre, M., St. Hill, L. M., Miller,
 R. B., King, A. R., Boschulte, D. R., Rodriguez, K. M., Callahan, M., Sedita, M., & Interian,
 A. (2021). Attentional control may be modifiable with mindfulness-based cognitive therapy
 to prevent suicide. *Behaviour Research and Therapy*, 147, 103988.
- Delis, D. C., Kaplan, E., Kramer, J. H. (2005). *The Delis-Kaplan Executive Function System (D-KEFS) Norwegian Manual*. Pearson Assessment
- Derryberry, D., & Reed, M. A. (2002). Anxiety-related attentional biases and their regulation by attentional control. *Journal of Abnormal Psychology*, 111, 225–236.
- Freedman, M., Black, S., Ebert, P., & Binns, M. (1998). Orbitofrontal function, object alternation and perseveration. *Cerebral Cortex*, 8(1), 18–27.
- Ghorbani, F., Khosravani, V., Sharifi Bastan, F., & Jamaati Ardakani, R. (2017). The alexithymia, emotion regulation, emotion regulation difficulties, positive and negative affects, and suicidal risk in alcohol-dependent outpatients. *Psychiatry Research*, 252, 223–230.
- Golden, C. J. (1978). Stroop color and word test. *Stoelting Company*.
- Gong, J., He, Y., Wang, S., & Liu, J. (2020). Emotion regulation and depressive symptoms mediate the association between schizotypal personality traits and suicidality in Chinese college students. *Archives of Suicide Research*, 1–12.
- Gorlyn, M., Keilp, J., Burke, A., Oquendo, M., Mann, J. J., & Grunebaum, M. (2015).

 Treatment-related improvement in neuropsychological functioning in suicidal depressed patients: Paroxetine vs. bupropion. *Psychiatry Research*, 225(3), 407–412.

- Grant, J. E., Derbyshire, K., Leppink, E., & Chamberlain, S. R. (2014). Suicidality in non-treatment seeking young adults with subsyndromal gambling disorder. *Psychiatric Quarterly*, 85(4), 513–522.
- Hasse-Sousa, M., Martins, D. S., Petry-Perin, C., Arrial-Cordeiro, R. T., Rabelo-da-Ponte, F. D., Rosa, A. R., Bücker, J., Gama, C. S., & Czepielewski, L. S. (2020). Performance in inhibitory control during euthymia is not related to past suicide attempts in individuals with bipolar disorder. *European Journal of Psychiatry*, 34(3), 153–159.
- Interian, A., Myers, C. E., Chesin, M. S., Kline, A., Hill, L. S., King, A. R., Miller, R., Latorre,
 M., Gara, M. A., Stanley, B. H., & Keilp, J. G. (2020). Towards the objective assessment of suicidal states: Some neurocognitive deficits may be temporally related to suicide attempt.
 Psychiatry Research, 287, 112624.
- Jollant, F., Near, J., Turecki, G., & Richard-Devantoy, S. (2017). Spectroscopy markers of suicidal risk and mental pain in depressed patients. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 73, 64–71.
- Keilp, J. G., Gorlyn, M., Oquendo, M. A., Burke, A. K., & Mann, J. J. (2008). Attention deficit in depressed suicide attempters. *Psychiatry Research*, *159*(1-2), 7-17.
- Keilp, J. G., Madden, S. P., Marver, J. E., Frawley, A., Burke, A. K., Herzallah, M. M., Gluck, M., Mann, J. J., & Grunebaum, M. F. (2021). Effects of ketamine versus midazolam on neurocognition at 24 hours in depressed patients with suicidal ideation. *Journal of Clinical Psychiatry*, 82(6), 21m13921.
- Lazarus, R. S., & Folkman, S. (1984). Stress: Appraisal, and Coping. Springer.

- LeGris, J., Links, P. S., van Reekum, R., Tannock, R., & Toplak, M. (2012). Executive function and suicidal risk in women with borderline personality disorder. *Psychiatry Research*, 196(1), 101–108.
- Lezak, M. D. (1983). Neuropsychological assessment (2nd ed.). Oxford University Press.
- MacPherson, H. A., Kudinova, A. Y., Schettini, E., Jenkins, G. A., Gilbert, A. C., Thomas, S. A.,
 Kim, K. L., Radoeva, P. D., Fenerci, R. L. B., Yen, S., Hower, H., Hunt, J., Keller, M. B., &
 Dickstein, D. P. (2022). Relationship between cognitive flexibility and subsequent course of
 mood symptoms and suicidal ideation in young adults with childhood-onset bipolar disorder.
 European Child and Adolescent Psychiatry, 31(2), 299–312.
- Malhi, G. S., Das, P., Outhred, T., Gessler, D., John Mann, J., & Bryant, R. (2019). Cognitive and emotional impairments underpinning suicidal activity in patients with mood disorders:

 An fMRI study. *Acta Psychiatrica Scandinavica*, 139(5), 454–463.
- McGirr, A., Dombrovski, A. Y., Butters, M. A., Clark, L., & Szanto, K. (2012). Deterministic learning and attempted suicide among older depressed individuals: Cognitive assessment using the wisconsin card sorting task. *Journal of Psychiatric Research*, 46(2), 226–232.
- Minzenberg, M. J., Lesh, T., Niendam, T., Yoon, J. H., Cheng, Y., Rhoades, R. N., & Carter, C. S. (2015). Frontal motor cortex activity during reactive control is associated with past suicidal behavior in recent-onset schizophrenia. *Crisis*, 36(5), 363–370.
- Navarro-Haro, M. V., Wessman, I., Botella, C., & García-Palacios, A. (2015). The role of emotion regulation strategies and dissociation in non-suicidal self-injury for women with borderline personality disorder and comorbid eating disorder. *Comprehensive Psychiatry*, 63, 123–130.

- Nielsen, E., Sayal, K., & Townsend, E. (2016). Exploring the relationship between experiential avoidance, coping functions and the recency and frequency of self-harm. *PLoS ONE*, 11(7), e0159854.
- Nielsen, E., Sayal, K., & Townsend, E. (2017a). Dealing with difficult days: Functional coping dynamics in self-harm ideation and enactment. *Journal of Affective Disorders*, 208, 330–337.
- Ong, E., & Thompson, C. (2019). The Importance of coping and emotion regulation in the occurrence of suicidal behavior. *Psychological Reports*, *122*(4), 1192–1210.
- Osman, A., Bagge, C. L., Gutierrez, P. M., Konick, L. C., Kopper, B. A., & Barrios, F. X. (2001). The suicidal behaviours questionnaire–revised (SBQ-R): Validation with clinical and non-clinical samples. *Assessment*, 8, 443–454.
- Ponsoni, A., Branco, L. D., Cotrena, C., Shansis, F. M., Grassi-Oliveira, R., & Fonseca, R. P. (2018). Self-reported inhibition predicts history of suicide attempts in bipolar disorder and major depression. *Comprehensive Psychiatry*, 82, 89–94.
- Raust, A., Slama, F., Mathieu, F., Roy, I., Chenu, A., Koncke, D., Fouques, D., Jollant, F., Jouvent, E., Courtet, P., Leboyer, M., & Bellivier, F. (2007). Prefrontal cortex dysfunction in patients with suicidal behavior. *Psychological Medicine*, *37*(3), 411–419.
- Regard, M., Strauss, E., & Knapp, P. (1982). Children's production of verbal and nonverbal fluency tasks. *Perceptual and Motor Skills*, *55*(3, Pt 1), 839-844.
- Richard-Devantoy, S., Olié, E., Guillaume, S., Bechara, A., Courtet, P., & Jollant, F. (2013).

 Distinct alterations in value-based decision-making and cognitive control in suicide attempters: Toward a dual neurocognitive model. *Journal of Affective Disorders*, 151(3), 1120–1124.

- Thompson, C., & Ong, E. L. C. (2018). The association between suicidal behavior, attentional control, and frontal asymmetry. *Frontiers in Psychiatry*, *9*, 79.
- Verma, D., Srivastava, M. K., Singh, S. K., Bhatia, T., & Deshpande, S. N. (2016). Lifetime suicide intent, executive function and insight in schizophrenia and schizoaffective disorders. *Schizophrenia Research*, 178(1–3), 12–16.
- Voon, D., Hasking, P., & Martin, G. (2014b). Change in emotion regulation strategy use and its impact on adolescent nonsuicidal self-injury: A three-year longitudinal analysis using latent growth modeling. *Journal of Abnormal Psychology*, *123*(3), 487–498.
- Wei, D., Hou, F., Cao, W., Hao, C., Gu, J., Peng, L., & Li, J. (2020). Effects of emotion regulation and perpetrator-victim roles in intimate partner violence on mental health problems among men who have sex with men in China. *Epidemiology and Psychiatric Sciences*, 29, e159.
- Williams, G. E., Daros, A. R., Graves, B., McMain, S. F., Links, P. S., & Ruocco, A. C. (2015). Executive functions and social cognition in highly lethal self-injuring patients with borderline personality disorder. *Personality Disorders: Theory, Research, and Treatment*, 6(2), 107–116.
- Williams, J. M., Mathews, A., & MacLeod, C. (1996). The emotional stroop task and psychopathology. *Psychological Bulletin*, 120, 3–24.