**Supplementary Information for Nature Human Behavior:**

Manuscript Title: A meta-analysis on the affect regulation function of real-time self-injurious thoughts and behaviors

Authors: Kevin S. Kuehn, M.S.[1*], Jonas Dora, Ph.D.[1], Melanie S. Harned, Ph.D.[2,3], Katherine T. Foster, Ph.D.[1], Frank Song, B.A.[1], Michele R. Smith, M.S.[1], Kevin M. King, Ph.D.[1]

1. Department of Psychology, University of Washington, Seattle, WA, USA
2. Department of Psychiatry and Behavioral Sciences, University of Washington, Seattle, WA, USA
3. Veterans Affairs Puget Sound Health Care System, Seattle, WA, USA

*Email correspondence should be sent to kevinskuehn@gmail.com
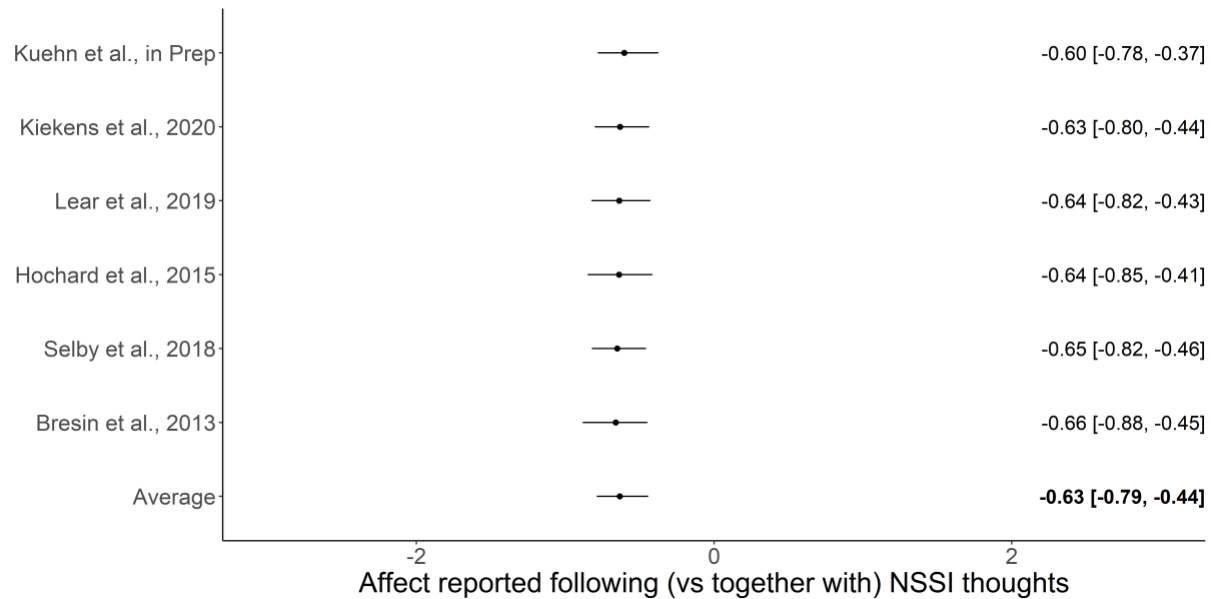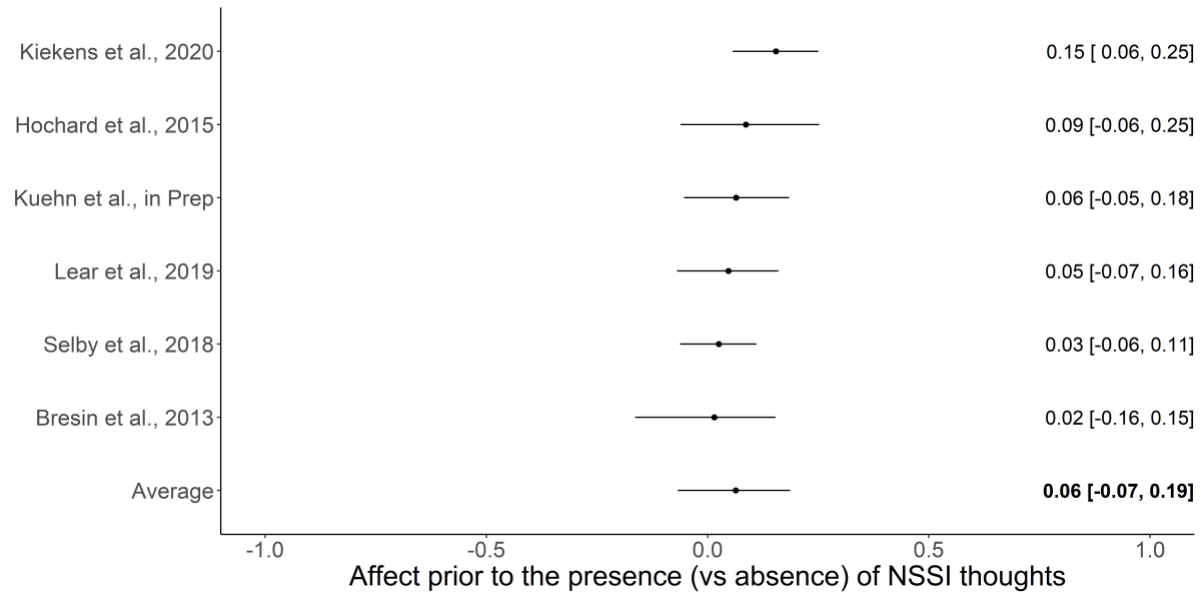
**Supplementary Figure 1:** Antecedent and Consequence NSSI thought models (n = 311 participants nested in 6 studies). Data presented as random effects estimates from a three-level model +/- 95% credible interval.
*Notes:* Average effect size (fixed effect from three level model and 95% credible interval) is in bold at the bottom of the respective plots.
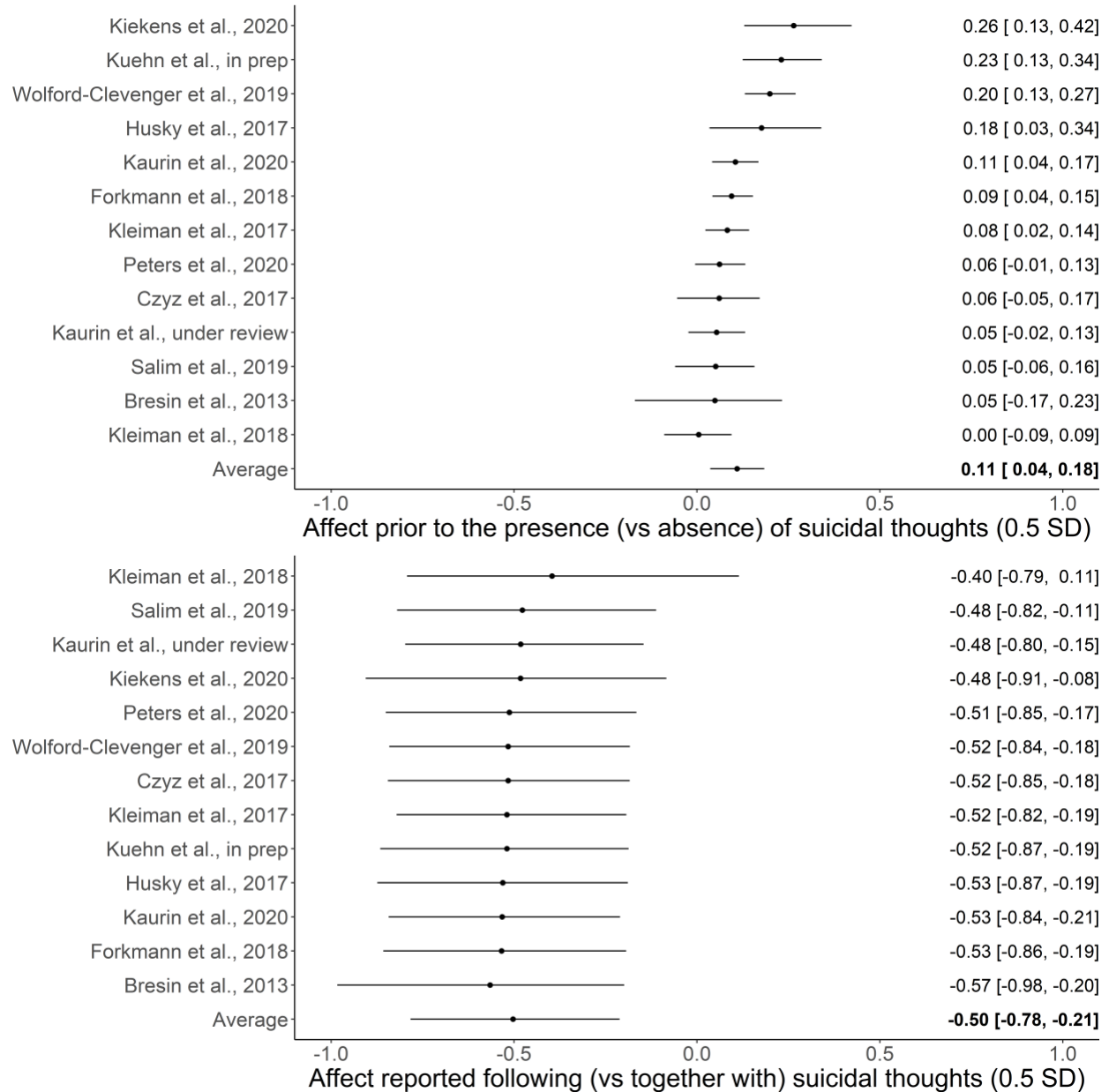
**Supplementary Figure 2.** Antecedent (*top*) and consequence (*bottom*) models of suicidal thoughts in which suicidal thoughts are determined to be present in Kleiman et al., 2017 and Kleiman et al., 2018 when higher than ½ a standard deviation of an individual's own average level of suicidal thoughts (n = 1108 participants nested in 13 studies). Data presented as random effects estimates from a three-level model +/- 95% credible interval.
*Notes:* Average effect size (fixed effect from three level model and 95% credible interval) is in bold at the bottom of the respective plots.
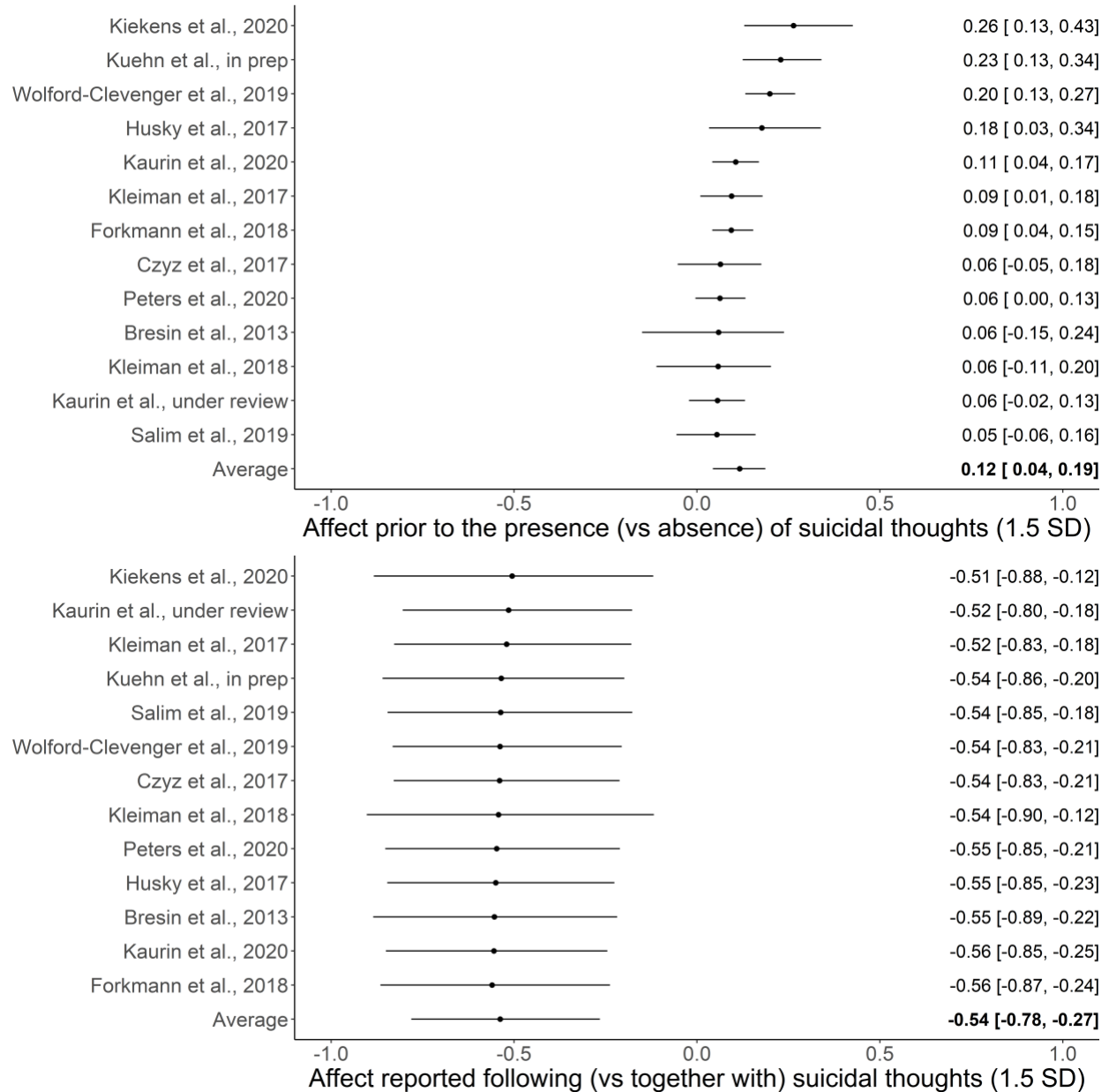
**Supplementary Figure 3.** Antecedent (*top*) and consequence (*bottom*) models of suicidal thoughts in which suicidal thoughts are determined to be present in Kleiman et al., 2017 and Kleiman et al., 2018 when higher than 1.5 standard deviations of an individual's own average level of suicidal thoughts (n = 1108 participants nested in 13 studies). Data presented as random effects estimates from a three-level model +/- 95% credible interval.
*Notes:* Average effect size (fixed effect from three level model and 95% credible interval) is in bold at the bottom of the respective plots.
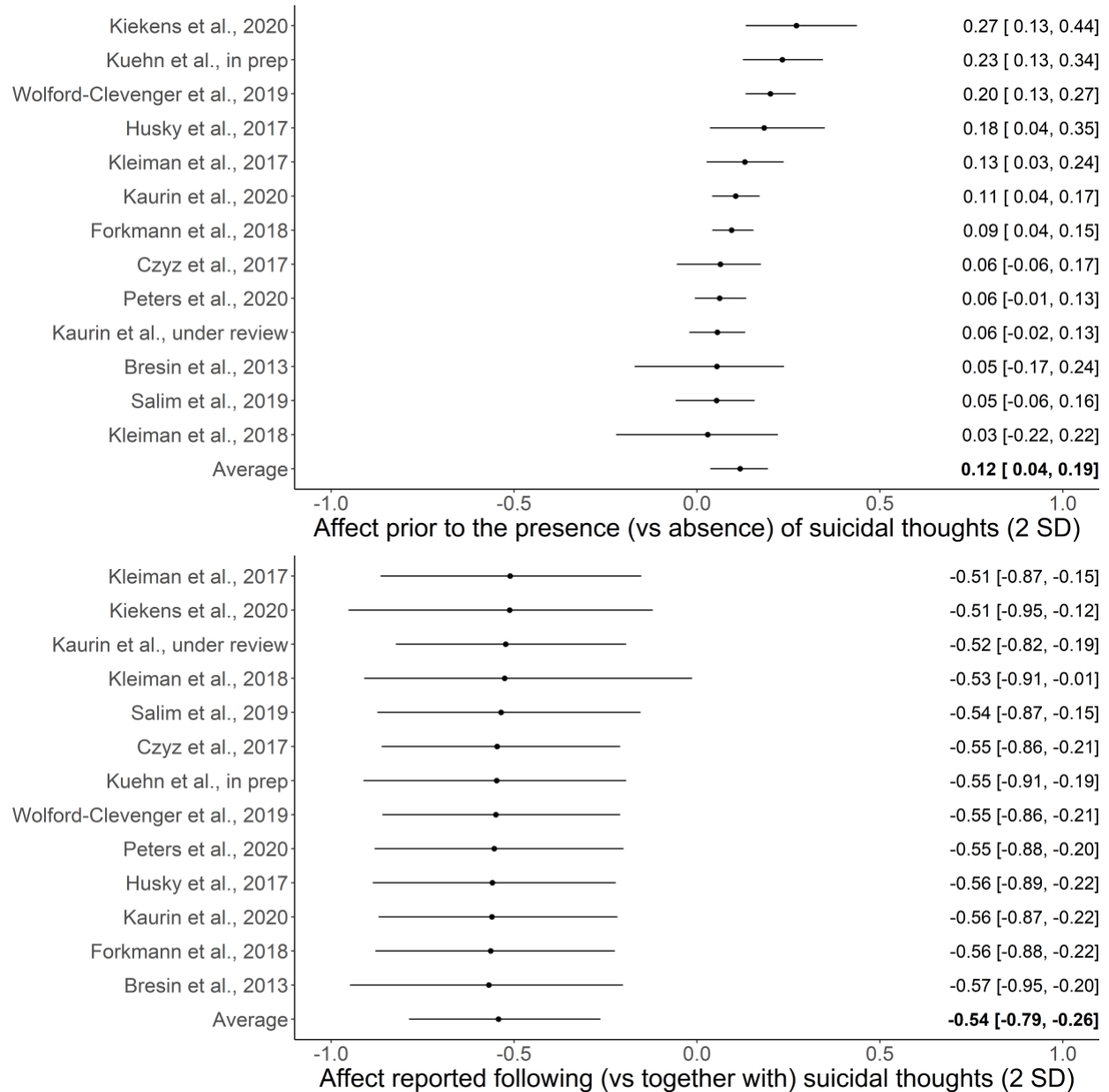
**Supplementary Figure 4.** Antecedent (*top*) and consequence (*bottom*) models of suicidal thoughts in which suicidal thoughts are determined to be present in Kleiman et al., 2017 and Kleiman et al., 2018 when higher than 2 standard deviations of an individual's own average level of suicidal thoughts (n = 1108 participants nested in 13 studies). Data presented as random effects estimates from a three-level model +/- 95% credible interval.

*Notes:* Average effect size (fixed effect from three level model and 95% credible interval) is in bold at the bottom of the respective plots.

**Supplementary Table 1.** Studies included in the systematic review

| Author (Year) | N | Outcome | Duration | Sampling Freq | Average Age | % Female | % White |
|---|---|---|---|---|---|---|---|
| Al-Dajani & Uliaszek[76] | 39 | Suicidal Thoughts | 14 | 4 | 30.85 | 66.70 | 48.70 |
| Ammerman et al.[77] | 51 | NSSI Behaviors | 7 | 4 | 28.82 | 74.5 | 33.00 |
| Andrewes et al.[78,79] | 107 | NSSI Thoughts; NSSI Behavior | 6 | 6 | 18.10 | 83.20 | 91.00 |
| Anestis et al.[80] | 127 | NSSI Behavior | 14 | 6 | 25.34 | 100 | 96.9 |
| Armey et al.[28] | 36 | NSSI Behavior | 7 | 6 | 18.70 | 75.00 | NA |
| Armey et al.[81] | 151 | Suicidal Thoughts | 21 | 5 | 40.88 | 62.00 | 90.6 |
| Ben-Zeev & Young[82] | 51 | Suicidal Thoughts | 7 | 5.85 | 36.70 | 78.40 | 64.7 |
| Ben-Zeev, Young, & Depp[83] | 30 | Suicidal Thoughts | 7 | 8 | 39.30 | 76.7 | 66.7 |
| Bresin, Carter, & Gordon[29] | 67 | NSSI Thoughts; NSSI Behavior; Suicidal Thoughts | 14 | 1 | 19.58 | 56.71 | NA |
| Briones-Buixassa et al.[84] | 64 | NSSI Behavior | 15 | 3 | 22.12 | 87.50 | NA |
| Cobo et al.[85] | 36 | Suicidal Thoughts | 196 | 2-4 | 41.70 | 86.10 | NA |
| Crowe et al.[86] | 64 | NSSI Thoughts; Suicidal Thoughts | 6 | 10 | 42.95 | 56.25 | 98.44 |

**Supplementary Table 1 (continued).** Studies included in the systematic review

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Czyz et al.[64,87.88] | 34 | NSSI Urges; NSSI Behavior; Suicidal Thoughts | 28 | 1 | 15.50 | 76.50 | 85.30 |
| Czyz et al.[89,90] | 78 | NSSI Behavior; Suicidal Thoughts | 28 | 1 | 15.19 | 67.90 | 83.30 |
| Dillon et al.[91] | 40 | NSSI Urges; NSSI Behavior | 28 | 3 | 46.65 | 27.50 | 45.00 |
| Ellison[92] | 11 | NSSI Thoughts; Suicidal Thoughts | 21 | 6 | 37.00 | 81.80 | 81.80 |
| Forkmann et al.[65, 93-95] | 74 | Suicidal Thoughts | 6 | 10 | 37.60 | 71.6 | NA |
| Glenn et al.[96,97] | 53 | NSSI Thoughts; NSSI Behaviors; Suicidal Thoughts; Suicidal Behaviors | 28 | 5 | 14.85 | 64.20 | 77.40 |
| Gratch et al[98] | 51 | Suicidal Thoughts | 7 | 6 | 36.30 | 56.00 | 56.30 |
| Hallard et al.[99] | 24 | Suicidal Thoughts | 6 | 7 | 35.30 | 37.33 | 100 |
| Hepp et al.[100,101] | 51 | NSSI Thoughts; NSSI Behaviors | 15 | 5 | 23.92 | 100 | NA |
| Hochard et al.[42,43] | 72 | NSSI Thoughts; NSSI Behaviors | 5 | 2 | 21.04 | 88.89 | NA |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Houben et al.[45] | 30 | NSSI Behaviors | 8 | 10 | 29.03 | 87.00 | NA |
| Humber et al.[106] | 21 | Suicidal Thoughts | 6 | 6 | 36.00 | 0.00 | 86.00 |
| Husky et al.[66] | 42 | Suicidal Thoughts | 7 | 5 | 37.90 | 73.80 | NA |
| Kaurin et al.[67] | 191 | Suicidal Thoughts | 21 | 6 | 33.43 | 78.00 | 74.00 |
| Kaurin et al.[68, 103] | 193 | Suicidal Thoughts | 21 | 6 | 33.32 | 79.00 | 74.00 |
| Kautz et al.[104] | 51 | NSSI Thoughts | 10 | 3 | 20.00 | 91.20 | 67.30 |
| Kiekens et al.[30] | 30 | NSSI Thoughts; NSSI Behaviors | 12 | 8 | 20.10 | 80.00 | NA |
| Kleiman et al.[41,105,106] | 54 | Suicidal Thoughts | 28 | 4 | 23.24 | 79.60 | 72.00 |
| Kleiman et al.[9,46,107] | 43 | Suicidal Thoughts | 28 | 1 | 23.28 | 78.00 | 73.00 |
| Kuehn et al., In Prep | 60 | NSSI Thoughts; NSSI Behaviors; Suicidal Thoughts | 14 | 5 | 18.58 | 76.67 | 53.33 |
| Law et al.[108] | 248 | Suicidal Thoughts | 14 | 5 | 43.90 | 67.30 | 59.70 |
| Lear et al.[69] | 47 | NSSI Thoughts; NSSI Urges; NSSI Behaviors | 14 | 1 | 19.87 | 91.50 | 80.90 |
| Links et al.[109] | 82 | Suicidal Thoughts | 21 | 6 | 33.50 | 82.90 | NA |
| Muehlenkamp et al.[70] | 131 | NSSI Behaviors | 14 | 6 | 25.30 | 100.00 | 96.90 |
| Oquendo et al.[110] | 51 | Suicidal Thoughts | 7 | 6 | 37.30 | 59.00 | 75.50 |

**Supplementary Table 1 (continued).** Studies included in the systematic review

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rogers[111] | 237 | Suicidal Thoughts; Suicidal Behaviors | 14 | 6 | 27.12 | 61.60 | 86.90 |
| Rourk et al.[112] | 21 | NSSI Thoughts; Suicidal Thoughts | 14 | 4 | 28.02 | 85.70 | 90.50 |
| Peters al.[40] | 39 | Suicidal Thoughts | 12 | 3 | 36.30 | 69.20 | NA |
| Porras-Segovia et al.[113] | 1709 | Suicidal Thoughts | 60 | 4 | 40.70 | 70.20 | NA |
| Salim et al.[44] | 89 | Suicidal Thoughts<br><br>Suicidal Behaviors | 5 | 1 | 24.00 | 100 | 81.20 |
| Santangelo et al.[71] | 46 | NSSI Behaviors | 4 | 12 | 15.88 | 100 | NA |
| Koenig et al.[114] | 73 | NSSI Behaviors | 3 | 12 | 15.48 | 100 | NA |
| Scala et al.[115] | 54 | NSSI Urges | 21 | 6 | 30.58 | 86.00 | 86.00 |
| Selby, Franklin, Carson-Wong, & Rizvi[72] | 47 | NSSI Behaviors | 14 | 5 | 28.19 | 66.00 | 64.00 |
| Selby, et al.[73, 116-118] | 47 | NSSI Thoughts; NSSI Behaviors; NSSI Behaviors | 14 | 5 | 19.07 | 68.10 | 38.30 |
| Snir et al.[119] | 152 | NSSI Urges; NSSI Behaviors | 21 | 5 | 32.92 | 69.70 | 54.61 |
| Stanley et al.[120,121] | 50 | NSSI Behaviors; Suicidal Thoughts | 7 | 6 | 30.60 | 86.00 | 56.00 |
| Stenzel et al.[122] | 61 | NSSI Urges; NSSI Behaviors | 7 | 5 | 24.21 | 88.50 | NA |

**Supplementary Table 1 (continued).** Studies included in the systematic review

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Turner et al.[123,124] | 60 | NSSI Urges; NSSI Behaviors | 14 | 1 | 23.25 | 85.00 | 53.00 |
| Vansteelandt et al.[74] | 32 | NSSI Behaviors | 8 | 10 | 28.00 | 84.00 | NA |
| Victor & Klonsky[125] | 84 | NSSI Behaviors | 14 | 1 | 23.30 | 71.40 | 28.60 |
| Victor et al.[126] | 62 | NSSI Thoughts; Suicidal Thoughts | 21 | 7 | 22.00 | 100 | 24.19 |
| Vine et al.[127] | 162 | NSSI Thoughts; Suicidal Thoughts | 4 | 10 | 12.03 | 47.00 | 40.00 |
| Wolford-Clevenger et al.[75,128] | 206 | NSSI Behaviors; Suicidal Thoughts; Suicide Attempts | 89 | 1 | 19.11 | 72.82 | 82.04 |
| Wolford-Clevenger[129] | 38 | Suicidal Thoughts | 30 | 1 | 28.63 | 70.60 | 84.20 |
| Zaki et al.[130] | 80 | NSSI Urges; NSSI Behaviors | 21 | 5 | 31.26 | 83.50 | 50.00 |

**Supplementary Table 2.** Methodological characteristics of studies included in meta-analysis

| Author (Year) | NA timescale | SITB wording/items | Timing | Daily diary or EMA | Sampling strategy |
|---|---|---|---|---|---|
| Armey et al.[28] | "How are you currently feeling" | NSSI only assessed at event-contingent samples | Retrospective | EMA | Signal- and event-contingent |
| Bresin et al.[29] | "How did you generally feel today" | "Today, how strong was your urge to harm yourself without wanting to die" [NSSI urges]<br><br>"Did you actually harm yourself today" [NSSI behaviors] | Momentary | Daily diary | Signal-contingent |
| Czyz et al.[64] | "In the past 24 hours, how much did you feel" | "At any point in the last 24 hr, did you have any thoughts of killing yourself?'[Suicidal thoughts] | Momentary | Daily diary | Signal-contingent |
| Forkmann et al.[65] | "Currently" | "Currently" | Momentary | EMA | Signal-contingent |
| Hochard et al.[42] | Pre- and post-sleep mood | "Today/since waking up, have you had thoughts of deliberately injuring yourself?" [NSSI thoughts]<br><br>"Today/since waking up, have you deliberately injured yourself?" [NSSI behaviors] | Momentary | EMA | Interval-contingent (pre/post sleep) |
| Houben et al.[45] | "How much are you currently feeling…" | "Since the last beep, have you self-harmed" [NSSI behaviors] | Retrospective | EMA | Signal-contingent |
| Husky et al.[66] | "What degree of intensity would best describe your **curren**t feelings" | "Since the previous assessment" | Retrospective | EMA | Signal-contingent |

**Supplementary Table 2 (continued).** Methodological characteristics of studies included in meta-analysis

| Author (Year) | NA timescale | SITB wording/items | Timing | Daily diary or EMA | Sampling strategy |
|---|---|---|---|---|---|
| Kaurin et al.[67] | "How ADJECTIVE did you feel right now?" | "Have you wished you were dead or wished you could go to sleep and not wake up?" | Momentary | EMA | Signal-contingent |
| Kaurin et al.[68] | "How [ADJECTIVE] did you feel during the interaction" (NA assessed only in response to a stressful interpersonal conflict) | "Since the interaction" | Momentary | EMA | Interval-contingent (interpersonal conflict) |
| Kiekens et al[30] | "Right now, I feel [emotion]" | "Right now, I think about self-injuring without suicidal intent" [NSSI thoughts] | Momentary | EMA | Signal-contingent |
| | | "Have you self-injured without wanting to die since the last beep?" [NSSI behaviors] | Retrospective | | |
| Kleiman et al.[41] | "Currently, how much are you feeling…" | "How intense is your desire to kill yourself right now?" | Momentary | EMA | Signal- and event-contingent |
| Kleiman et al.[9] | "How much did you feel" | "Today, how much did you wish to live" | Momentary | Daily diary | Signal-contingent |
| Kuehn et al., In Prep | "In the past 10 minutes, how much have you felt" | "Within the past 30 minutes, how strong has your intention been to kill yourself" [suicidal thoughts] | Momentary | EMA | Signal- and event-contingent |

**Supplementary Table 2 (continued).** Methodological characteristics of studies included in meta-analysis

| Author (Year) | NA timescale | SITB wording/items | Timing | Daily diary or EMA | Sampling strategy |
|---|---|---|---|---|---|
| Lear et al.[69] | "To what extent [you] have felt this way today" | "Since the last diary entry, did you feel an urge to self-injure?" | Momentary | Daily diary | Signal-contingent |
| Muehlenkamp et al.[70] | "Since the last beep" | "Since the last beep" | Momentary | EMA | Signal-, event-, and interval-contingent |
| Peters et al.[40] | "How do you feel right now" | "How suicidal are you right now" | Momentary | EMA | Signal-contingent |
| Salim et al.[44] | "In the past 24-hours" | "Today have you thought about or attempted to kill yourself" | Momentary | Daily diary | Signal-contingent |
| Santangelo et al.[71] | "At this moment I feel" | "In the past hour" | Retrospective | EMA | Signal-contingent |
| Selby et al.[72] | "Currently, I am feeling" | "Since the last assessment" | Retrospective | EMA | Signal-contingent |
| Selby et al.[73] | "Right now" | "Since the last assessment" | Retrospective | EMA | Signal- and event-contingent |
| Vansteelandt et al.[74] | "At this moment, I feel" | "Since the previous signal" | Retrospective | EMA | Signal-contingent |
| Wolford-Clevenger et al.[75] | "From the time you woke up to the time you went to bed" | "From the time you woke up to the time you went to bed" | Momentary | Daily diary | Signal-contingent |

**Supplementary Table 3.** Measurement and sample characteristics of studies included in meta-analysis

| Author (Year) | N | NA measure | SITB measure | Frequency of SITB | Compliance Rate | BPD (Y/N) |
|---|---|---|---|---|---|---|
| Armey et al.[28] | 36 | 18-items (e.g., Afraid, Disgusted, Guilty, Scornful, Hostile, etc.; 1-5) | Severity of NSSI (none, not at all, a little, somewhat, very, or extremely). Dichotomized > 0 = Presence of NSSI | 0.11 | 0.38 | No |
| Bresin et al.[29] | 67 | 10 items (sample distressed, guilt, angry at self, sadness, lonely; 0-5) | "Did you experience a thought/urge about NSSI?" (Y/N) | 0.12 | 0.66 | No |
| | | | "Did you engage in NSSI?" (Y/N) | 0.01 | | |
| | | | "Did you think about killing yourself?" (Y/N) | 0.04 | | |
| Czyz et al.[64] | 34 | 3 items (Miserable, Angry, Happy [reverse coded]; 1-5) | "At any point in the last 24h, did you harm yourself or hurt your body on purpose without the intention to die?" (Y/N) | 0.04 | 0.69 | No |
| | | | "At any point in the last 24h, did you have any thoughts of killing yourself? (Y/N) – also assessed frequency and duration of SI (continuous) | 0.17 | | |
| Forkmann et al.[65] | 74 | 6-items (Depressed, hopeless and anxious; 0-4), | Four items ("Life is not worth living", "There are more reasons to die", "I want to die", "I think about taking my life") | 0.68 | 0.36 | No |
| Hochard et al.[42] | 30 | 5-items (not specified, 1-5). | "Have you had thoughts of deliberately injuring yourself" (Y/N) | 0.08 | 0.91 | No |
| | | | "Have you deliberately injured yourself?" (Y/N) | 0.08 | | |
| Houben et al.[45] | 30 | 6-items (Anger, depressed, anxiety, stressed, happy, relaxed; 0-100) | Did you engage in NSSI? (Y/N) | 0.04 | 0.65 | Yes |

**Supplementary Table 3 (continued).** Measurement and sample characteristics of studies included in meta-analysis

| Author (Year) | N | NA measure | SITB measure | Frequency of SITB | Compliance Rate | BPD (Y/N) |
|---|---|---|---|---|---|---|
| Husky et al.[66] | 42 | 3-items (sad, hopeless, anxious; 1-7) | Since the last assessment, did you experience any 'negative thoughts? If yes, "did the content of your negative thought include suicidal ideation/self-harm" (Y/N) | 0.04 | 0.74 | No |
| Kaurin et al.[67] | 193 | 4 -items (Nervous, Sad, Guilty, Ashamed; 1-5) | 6-Y/N items ("Have you wished you were dead or wished you could go to sleep and not wake up?", "Have you actually had any thoughts of killing yourself?", "Have you been thinking about how you might do this?", "Have you had these thoughts and had some intention of acting on them?", "Have you started to work out or worked out the details of how to kill yourself?", "Do you intend to carry out this plan?". Summed | 0.14 | 0.74 | No |
| Kaurin et al.[68] | 191 | 4-items (Nervous, Sad, Irritated, Angry; 0-100) | Two questions: "Since the interaction," "Have you wished you were dead or wished you could go to sleep and not wake up?" and "Have you actually had any thoughts of killing yourself?" (Y/N) | 0.04 | 0.74 | Yes |
| Kiekens et al[30] | 30 | 6-items (Stressed, irritated, anxious, sad, hopeless, insecure; 0-6) | "Right now, I think about self-injuring without suicidal intent" (0 = Not at all – 6 = A lot) | 0.27 | 0.77 | No |
| | | | "Have you self-injured without wanting to die since the last beep?" | 0.08 | | |
| | | | Suicidal thought item not reported | 0.05 | | |

**Supplementary Table 3 (continued).** Measurement and sample characteristics of studies included in meta-analysis

| Author (Year) | N | NA measure | SITB measure | Frequency of SITB | Compliance Rate | BPD (Y/N) |
|---|---|---|---|---|---|---|
| Kleiman et al.[41] | 53 | 1-item (Sadness; 1-5). | 3-items ("Wish to live" [reversed coded], "wish to die", "desire to die". (0 – 2) | 0.16 | 0.64 | No |
| Kleiman et al.[9] | 54 | 8-items (Afraid, agitated, angry, anxious, burdensome, hopeless, lonely, sad; 0-4) | 3-items ("Desire to die by suicide, intention to die by suicide, and ability to resist suicidal urges [reverse coded])". (0 – 4) | 0.17 | 0.48 | No |
| Kuehn et al., In Prep | 60 | 5-items (Sad, Fear, Anger, Shame, Guilt; 0-100) | "Have you thought about harming yourself since the last assessment" Classified an NSSI thought if answered yes but denied NSSI behavior (below) | 0.03 | | No |
| | | | "Have you engaged in any self-harm in the past 30 minutes" If yes, "Did you intend to die as a result" (Y/N) | 0.01 | 0.81 | |
| | | | "What is your intent to kill yourself in this moment" 0 (None) – 4 (Severe) | 0.05 | | |
| Lear et al.[69] | 48 | 4-items (Guilty, Ashamed, Dissatisfied with self, Angry at self; 1-5). | "Since the last diary entry, did you feel an urge to self-injure?" (Y/N) | 0.39 | 0.79 | No |
| | | | "Since the last diary entry, did you self-injure?" (Y/N). | 0.09 | | |
| Muehlenkamp et al.[70] | 131 | 11-items (Afraid, lonely, irritable, ashamed, disgusted, nervous, dissatisfied with self, jittery, sad, distress, and angry at self; 1-5) | "Did you engage in any of the following" (''I cut myself'', ''I scratched myself'', ''I burned myself'', ''I hit myself'', and ''I banged my head'') (Y/N) | 0.01 | 0.78 | Yes |
| Peters et al.[40] | 39 | 2-items (Depressed, Angry; 0-100) | "How suicidal are you right now?" 0 - 100 | 0.79 | 0.64 | Yes |

| Author (Year) | N | NA measure | SITB measure | Frequency of SITB | Compliance Rate | BPD (Y/N) |
|---|---|---|---|---|---|---|
| Salim et al.[44] | 85 | 4-items (Depressed, hopeless, uninterested, and worried; 0 -3) | 3-items ("Today, have you thought about or attempted to kill yourself?" [Y/N], "Have you told someone today that you were going to commit suicide, or that you might do it?" [Y/N], "How likely is that you will attempt suicide someday" [0 = "Never" – 6 "Very likely"]) | 0.61 | 0.84 | No |
| Santangelo et al.[71] | 73 | 2-items (Discontent, Tense; 0 – 100) | At this moment, how strong is your urge to self-injure?" (0 – 100) | 0.02 | 0.81 | No |
| Selby et al.[72] | 47 | 5-items (Anger, fear, ashamed, worried, sad; 1-10) | "Since the last assessment, did self-injure? (Y/N)" | 0.01 | 0.95 | No |
| Selby et al.[73] | 47 | 11-items (Overwhelmed, sad, frustrated, angry, rejected, anxious, lonely, numb, guilty, ashamed, embarrassed; 0 -10) | "Since the last assessment, did you have any thoughts to self-injure" (Y/N)<br><br>"Since the last assessment, did self-injure? (Y/N)" | 0.16<br><br>0.04 | 1.00 | No |
| Vansteelandt et al.[74] | 32 | 2-items (Stressed, depressed; 0 – 100). | "Since the previous signal, I have engaged in auto-mutilation" (Y/N) | 0.04 | 0.64 | Yes |
| Wolford-Clevenger et al.[75] | 206 | 2-items (Depressed and angry; 0-32) | "The daily surveys assessed constructs similar to the baseline survey but in a briefer format, including interpersonal needs, alcohol and drug use, perceived capability for suicide, **suicidal thoughts and behaviors, non-suicidal self-injury**, emotional states, and perpetration and victimization of aggression" | 0.01<br><br>0.04<br><br><0.01 | 0.40 | No |

**Supplementary Table 4:** Moderation results in antecedent and consequence NSSI thought analyses.

| NSSI Thought Antecedent | | | |
|---|---|---|---|
| Moderator | | | |
| | β (SE) | 95% CI LB | 95% CI UB |
| # of prompts | 0.03 (0.03) | -0.03 | 0.07 |
| # of hours | -0.01 (0.01) | -0.02 | 0.01 |
| Frequency of SITB | 0.11 (0.35) | -0.60 | 0.76 |
| Compliance | -0.07 (0.37) | -0.77 | 0.68 |
| % women | 0.23 (0.35) | -0.50 | 0.89 |
| % white | 0.03 (0.38) | -0.75 | 0.77 |
| Mean age | 0.06 (0.08) | -0.11 | 0.22 |
| BPD (1 = Yes; 0 = No ) | NA | NA | NA |
| Sampling (1 = EMA; 0 = Daily Diary) | 0.10 (0.14) | -0.17 | 0.37 |
| Timing (1 = Momentary; 0 = Retrospective) | -0.07 (0.16) | -0.39 | 0.26 |
| NSSI Thought Consequence | | | |
| | β (SE) | 95% CI LB | 95% CI UB |
| # of prompts | 0.00 (0.04) | -0.08 | 0.10 |
| # of hours | -0.00 (0.01) | -0.03 | 0.02 |
| Frequency of SITB | -0.05 (0.38) | -0.80 | 0.69 |
| Compliance | 0.02 (0.39) | -0.74 | 0.74 |
| % women | 0.18 (0.39) | -0.60 | 0.93 |
| % white | 0.01 (0.44) | -0.89 | 0.87 |
| Mean age | 0.02 (0.13) | -0.23 | 0.26 |
| BPD (1 = Yes; 0 = No ) | NA | NA | NA |
| Sampling (1 = EMA; 0 = Daily Diary) | -0.03 (0.18) | -0.41 | 0.32 |
| Timing (1 = Momentary; 0 = Retrospective) | -0.12 (0.19) | -0.50 | 0.27 |

*Notes.* All coefficients reflect the product term between NSSI thoughts and the respective moderators. No studies that measured NSSI thoughts included participants diagnosed with BPD. β =average effect size (fixed effect from three level model); 95% credible interval LB = lower bound of the 95% credible interval; 95% CI UB = upper bound of the 95% credible interval.

**Supplementary Table 5:** Comparing average ES with and without Hochard et al. (2015).

| | k | ß | SE | 95% CI |
|---|---|---|---|---|
| **Hochard et al. (2015) Included** | | | | |
| NSSI thoughts ant | 6 | 0.06 | 0.06 | -0.07 – 0.19 |
| NSSI thoughts con | 6 | -0.63 | 0.09 | -0.79 – 0.44 |
| NSSI behaviors ant | 14 | 0.20 | 0.06 | 0.09 – 0.31 |
| NSSI behaviors con | 14 | -0.47 | 0.14 | -0.73 - -0.19 |
| **Hochard et al. (2015) Excluded** | | | | |
| NSSI thoughts ant | 5 | 0.06 | 0.09 | -0.14 – 0.22 |
| NSSI thoughts con | 5 | -0.64 | 0.10 | -0.82 – 0.40 |
| NSSI behaviors ant | 13 | 0.21 | 0.06 | 0.08 – 0.33 |
| NSSI behaviors con | 13 | -0.45 | 0.15 | -0.74 - -0.16 |

*Notes: β* =average effect size (fixed effect from three level model); 95% CI = 95% credible interval.

**Supplementary Table 6:** Comparing average ES with and without Salim et al. (2019)

|  | k | ß | SE | 95% CI |
|---|---|---|---|---|
| **Salim et al. (2019) Included** | | | | |
| Suicidal thoughts A | 13 | 0.11 | 0.04 | 0.03 – 0.19 |
| Suicidal thoughts C | 13 | -0.52 | 0.14 | -0.79 – -0.23 |
| **Salim et al. (2019) Excluded** | | | | |
| Suicidal thoughts A | 12 | 0.12 | 0.04 | 0.03 – 0.20 |
| Suicidal thoughts C | 12 | -0.55 | 0.14 | -0.82 – 0.26 |

*Notes: $\beta$* =average effect size (fixed effect from three level model); 95% CI = 95% credible interval.

**Supplementary Table 7:** Comparing average ES excluding NSSI thoughts and urges

| | k | ß | SE | 95% CI |
|---|---|---|---|---|
| **NSSI Urges Included** | | | | |
| NSSI thoughts A | 6 | 0.06 | 0.06 | -0.07 – 0.19 |
| NSSI thoughts C | 6 | -0.63 | 0.09 | -0.79 – -0.44 |
| **NSSI Urges Excluded** | | | | |
| NSSI thoughts A | 5 | 0.07 | 0.09 | -0.12 – 0.24 |
| NSSI thoughts C | 5 | -0.62 | 0.09 | -0.83 – -0.29 |

*Notes: β* =average effect size (fixed effect from three level model); 95% CI = 95% credible interval.

**Supplementary Table 8:** Comparing average ES controlling for autoregressive effects

| Main Antecedent Models | | | | |
|---|---|---|---|---|
| | k | ß | SE | 95% CI |
| NSSI thoughts | 6 | 0.06 | 0.06 | -0.07 – 0.19 |
| NSSI behaviors | 14 | 0.20 | 0.06 | 0.09 – 0.31 |
| Suicidal thoughts | 13 | 0.11 | 0.04 | 0.03 – 0.19 |

| Controlling for SITB at t-1 | | | | |
|---|---|---|---|---|
| | k | ß | SE | 95% CI |
| NSSI thoughts | 6 | 0.06 | 0.07 | -0.08 – 0.19 |
| NSSI behaviors | 14 | 0.18 | 0.06 | 0.07 – 0.30 |
| Suicidal thoughts | 13 | 0.12 | 0.04 | 0.03 – 0.21 |

| Main Consequence Models | | | | |
|---|---|---|---|---|
| | k | ß | SE | 95% CI |
| NSSI thoughts | 6 | -0.63 | 0.09 | -0.79 – -0.44 |
| NSSI behaviors | 14 | -0.47 | 0.14 | -0.73 – -0.19 |
| Suicidal thoughts | 13 | -0.52 | 0.14 | -0.79 – -0.23 |

| Controlling for NA at t-1 | | | | |
|---|---|---|---|---|
| | k | ß | SE | 95% CI |
| NSSI thoughts | 6 | -0.65 | 0.11 | -0.83 – -0.42 |
| NSSI behaviors | 14 | -0.51 | 0.16 | -0.82 – -0.18 |
| Suicidal thoughts | 13 | -0.65 | 0.17 | -0.98 – -0.30 |

*Notes: $\beta$* =average effect size (fixed effect from three level model); 95% CI = 95% credible interval.

**Supplementary Table 9:** Comparing average ES based on publication status

| All Available Data (Unpublished Studies Included) | | | | |
|---|---|---|---|---|
| | k | ß | SE | 95% CI |
| NSSI thoughts A | 6 | 0.06 | 0.06 | -0.07 – 0.19 |
| NSSI thoughts C | 6 | -0.63 | 0.09 | -0.79 – -0.44 |
| NSSI behaviors A | 14 | 0.20 | 0.06 | 0.09 – 0.31 |
| NSSI behaviors C | 14 | -0.47 | 0.14 | -0.73 – -0.19 |
| Suicidal thoughts A | 13 | 0.11 | 0.04 | 0.03 – 0.19 |
| Suicidal thoughts C | 13 | -0.52 | 0.14 | -0.79 – -0.23 |
| Unpublished Studies Excluded | | | | |
| | k | ß | SE | 95% CI |
| NSSI thoughts A | 5 | 0.06 | 0.09 | -0.13 – 0.24 |
| NSSI thoughts C | 5 | -0.63 | 0.12 | -0.83 – -0.37 |
| NSSI behaviors A | 13 | 0.17 | 0.05 | 0.07 – 0.28 |
| NSSI behaviors C | 13 | -0.45 | 0.15 | -0.73 – -0.14 |
| Suicidal thoughts A | 11 | 0.10 | 0.05 | 0.00 – 0.20 |
| Suicidal thoughts C | 11 | -0.46 | 0.17 | -0.77 – -0.11 |

*Notes:* $\beta$ =average effect size (fixed effect from three level model); 95% CI = 95% credible interval.