*Supplemental Table 1. Description of Included Studies*

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|  | **Primary Sample Inclusion Criteria** | **Sample Size** | **Age**  **(%Female)** | **NSSI History *N* (NSSI Variable)** | **SA / Suicide History *N* (Suicide Variable)** | **Study Design (# of Assessments; Timing After Baseline)** | **Mediation vs. Moderation** | **Mediator / Moderator Construct** | **Covariates** |
| **Interpersonal Theory of Suicide** | | | | | | | | | |
|  |  | | | | | | | | |
| Chu et al., 2018 | Military service members, Veterans | 973 | 29.9 (21.1%) | 191  (lifetime history [binary]) | 231 (number of lifetime SAs [continuous]) | Cross-Sectional | Mediation / Moderated Mediation | Mediators: Thwarted belongingness x perceived burdensomeness, Acquired capability for suicide, Insomnia symptoms, Hopelessness,  Moderators: Acquired capability for suicide, thwarted belongingness, perceived burdensomeness | Age, Sex, Insomnia symptoms, Hopelessness, Thwarted belongingness, Perceived burdensomeness, Acquired capability |
| Harris et al., 2021\* | Adults via international web forums | 1020 | 26.54 (66.5%) | 834 (lifetime frequency [categorical]) | 75 (prior 28-day SA [binary]);  116 (prior 2-year SA [binary]) | Longitudinal (3; 28 days / 2 years) | Mediation | Fearlessness about death,  Affect misattribution, Affective suicide image ratings | N/R |
| Law et al., 2017 | S1: Undergraduate students;  S2: Adult community members (over recruited for SA) | S1: 145; S2: 99 | S1: 21.39 (71.2%);  S2: 23.63 (76.0%) | S1: 40;  S2: 36 (lifetime frequency [continuous]) | S1: 12;  S2: 35  (number of lifetime SAs [continuous]) | Cross-Sectional | Moderation | S1: Pain persistence, Pain threshold, Pain tolerance  S2: Pain persistence, Pain threshold, Pain tolerance, Distress persistence | S1: Socioeconomic status, Race, Sex, Pain tolerance  S2: Age, Race, Pain threshold, Pain tolerance, Pain threshold, Pain tolerance |
| Moseley et al., 2022 | Undergraduate students and young adults vis social media | 312 | 21.30 (89.7%) | 160 (lifetime frequency [categorical]) | 74 (number of lifetime SAs [continuous]) | Cross-sectional | Moderated - Mediation | Mediators: Pain tolerance; Fear of death by suicide; Mental rehearsal of suicide plans; Moderator: Autism diagnosis | Age, Sex, Depression score |
| **NSSI Characteristics** | |  |  |  |  |  |  |  |  |
| Ammerman et al., 2016 | Undergraduate students with lifetime NSSI history | 997 | 20.64 (67%) | 997  (lifetime frequency [categorical]) | 128 (lifetime SA [binary]) | Cross-Sectional | Moderation | Subjective pain during NSSI, Number of NSSI methods | Gender, Age |
| Anestis et al., 2015 | Undergraduate students | 1317 | 21.11 (78.8%) | 354  (lifetime frequency [continuous]) | 143 (number of lifetime SA [continuous]) | Cross-Sectional | Moderation | Number of NSSI methods | Depressive symptoms, Emotion (dys)regulation, Thwarted belongingness, Perceived burdensomeness. Fearlessness about death |
| O'Loughlin et al., 2020 | Undergraduate students with a lifetime NSSI history and NSSI onset prior to suicide outcome onset | 621 | 20.25 (83.4%) | 621 (lifetime frequency [continuous]) | 70 (lifetime SA [binary]) | Cross-Sectional | Mediation | 28 NSSI characteristics: 12 NSSI methods, 8 intrapersonal functions, 5 interpersonal functions, subjective pain, desire to stop engaging in NSSI, NSSI age of onset | Age, Gender, Race, Ethnicity, Lifetime SI |
| Moseley et al., 2022 | Undergraduate students and young adults vis social media | 312 | 21.30 (89.7%) | 160 (lifetime frequency); M1: Scratching [binary]; M2: Cutting [binary]; M3: Self-hitting [binary]; M4: Number of methods) | 74 (number of lifetime SA [continuous]) | Cross-sectional | Sequential mediation | Pain during NSSI; Habituation to NSSI; Acquired capability for suicide | Depression score |
| **Cognitive and/or Affective Factors** | | |  |  |  |  |  |  |  |
| Anestis et al., 2013 | Adults admitted to residential substance use disorder treatment program | 93 | 36.35 (45.2%) | 31  (lifetime frequency [continuous], number of methods [continuous]) | 24 (lifetime SA; SA history/lethality[continuous]a | Cross-Sectional | Moderation | Distress tolerance | Gender, Age, Income, Marital status, Depressive symptoms |
| Anestis & Selby, 2015 | Undergraduate students | 604 | 20.72 (79.5%) | 162  (lifetime frequency [continuous]) | 37  (number of lifetime SAs [continuous]) | Cross-Sectional | Moderation | Grit, Perseverance | Age, Income, Gender, Race/ethnicity, Depressive symptoms |
| Gratz et al., 2020 | S1: Adult online community sample;  S2: Adults admitted to residential substance use disorder treatment program | S1: 363; S2: 198 | S1: 39 (59.2%); S2: 34 (51%) | S1: 84;  S2: 73 (lifetime frequency [continuous]) | S1: 53;  S2: 44 (lifetime SA [binary]) | Cross-Sectional | Mediation | S1: Emotion regulation self-efficacy, Fearlessness about death;  S2: Emotion regulation self-efficacy, Acquired capability for suicide | S1: Income, Race, Ethnicity;  S2: N/R |
| Knorr et al., 2016 | Adults admitted to residential substance use disorder treatment program | 204 | 35 (51.0%) | 76 (lifetime history [binary]) | 50 (lifetime SA [binary]) | Cross-Sectional | Moderation | Lifetime Major depressive disorder history | Race, Ethnicity, Education, Generalized anxiety disorder, Opioid dependence, Borderline personality disorder, Psychotropic medication use |
| Muehlenkamp & Brausch, 2019 | Undergraduate students with past-year NSSI history | 828 | 18.9 (83.0%) | 828 (past-year frequency [continuous]; number of methods [continuous]) | 220 (prior year SA [binary]) | Cross-Sectional | Moderation | Resilience, Life satisfaction, Subjective happiness | N/R |
| Park & Ammerman, 2023 | Adults with lifetime NSSI history | 505 | 33.36 (42.2%) | 505 (lifetime frequency [continuous], number of methods) | 85 (lifetime SA [binary]) | Cross-Sectional | Moderation | Cognitive flexibility, Cognitive flexibility control subscale, Cognitive flexibility alternatives subscale | Sexual orientation |
| **Suicidal Thoughts and Planning** | |  |  |  |  |  |  |  |  |
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| Brackman et al., 2016 | Undergraduate students | 113 | 19 (68.1%) | 26  (past-year frequency [continuous]) | 7  (number of lifetime SAs [continuous]) | Cross-Sectional | Moderation | SI | Gender, Depressive symptoms |
| Sellers et al., 2021 | Adolescents hospitalized for suicide risk with co-occurring alcohol use | 69 | 15.7 (77%) | 38 (prior 90-day frequency [continuous]) | 44 (prior 90-day SA [binary]) | Cross-Sectional | Moderation | SP | Age, Gender |

*Note:* \*Longitudinal Study Design; S1 = Study 1, S2 = Study 2; NSSI = nonsuicidal self-injury; SA = suicide attempt; SI = suicidal ideation; SP = suicide planning; Study Design = Cross-sectional vs. Longitudinal;  a = a continuum ranging from no prior suicidal behavior to suicidal behavior with minimal bodily harm to highly lethal suicidal behavior; . A single study may belong to more than one category if multiple constructs were examined across models; if multiple constructs were examined in a single model, study was categorized based on majority.