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Single-Session Interventions for Mental Health Problems and Service Engagement: Umbrella Review of Systematic Reviews and Meta-Analyses

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Abstract

Most people with mental health needs cannot access treatment; among those who do, many access services only once. Accordingly, single-session interventions (SSIs) may help bridge the treatment gap. We conducted the first umbrella review synthesizing research on SSIs for mental health problems and service engagement in youth and adults. Our search yielded 24 systematic reviews of SSIs, which included 415 unique trials. Twenty reviews (83.33%) reported significant, positive effects of SSIs for one or more outcomes (anxiety, depression, externalizing problems, eating problems, substance use, treatment engagement or uptake). Across 12 reviews that meta-analytically examined SSIs' effectiveness relative to controls, SSIs showed a positive effect across outcomes and age groups (standardized mean difference = −0.25, I^2 = 43.17%). Per AMSTAR 2 (A Measurement Tool to Assess Systematic Reviews), some methodological concerns emerged

across reviews, such as low rates of preregistration. Overall, findings support the clinical utility of SSIs for certain psychological problems and populations. Implementation research is needed to integrate effective SSIs into systems of care.

Contents

INTRODUCTION

Across the globe, there is a profound disparity between need and access to evidence-based mental health care. In high-income countries, only 36.8% of people with treatment needs access professional care; this rate stands at 13.7% in low- and middle-income countries (LMICs) (Evans-Lacko et al. 2018). Among the few who do access treatment, premature drop-out is common (Abel et al. 2022, McKay & Bannon 2004), and the services people receive are seldom evidence-based. They often amount to single, unstructured interactions with general health care providers, counselors, or crisis hotlines, the impacts of which are unclear (Evans-Lacko et al. 2018, Kazdin 2019). Indeed, the most common number of treatment sessions that people receive after initiating treatment is one—a statistic consistent across studies from Australia, the United States, Canada, Mexico, Japan, and Spain (Abel et al. 2022, Bados et al. 2007, Barrett et al. 2008, Ono et al. 2011, Weir et al.

2008). This number starkly contrasts with the design of many evidence-based therapies, which span 8 to 20 or more sessions in length. Accordingly, there is an urgent need to understand and optimize what can be achieved, given appropriate structure and targeting, within a person's first (and sometimes only) interaction with mental health support.

This need has catalyzed scientific and clinical interest in single-session interventions (SSIs) for mental health problems, which have been identified as a promising approach to bridging gaps in treatment systems (Schleider et al. 2020, Talmon 1990). SSIs are nothing new. Reports of clinically meaningful improvements from one-session treatment encounters have been documented across psychotherapy's history (Alexander et al. 1946, Bloom 1981, Breuer & Freud 1955, Cummings & Follette 1979, Spoerl 1975), and empirical evaluations of SSIs date back to the 1980s (Talmon 2012, Ost 1989). However, research on the topic has surged in the past decade (Joseph & Rajan 2024), in keeping with recent calls to reconsider how, where, and for whom psychological support can be delivered (Dodge et al. 2024, Kazdin 2019, Kazdin & Blase 2011).

SSIs are defined as "structured programs that intentionally involve only one visit or encounter with a clinic, provider, or program" (Schleider et al. 2020). SSIs have gone by many names, including "single-session therapy," referring to SSIs delivered by a mental health professional (Talmon 1990); "one-session treatment," referring to a specific treatment for specific phobias (Ost 1989); "ultrabrief interventions" (Bosse Chartier et al. 2023); and "one-at-a-time therapy," where each session is meant to stand on its own, with no assumed treatment duration (Dryden 2020). Here, we use "single-session interventions" as an umbrella term that is maximally inclusive as to what one-session supports can look like (e.g., online programs or in-person supports) and how they can be delivered (i.e., by trained therapists, by lay health workers, or as self-guided interventions with no provider). Importantly, SSIs are generally intended to be an as-needed approach to treatment. They may be completed once, on multiple occasions, or as adjuncts to intentionally longer-term care. There is no assumption within the SSI framework that individuals always can or should address all their concerns within one session; rather, SSIs are designed such that any individual session holds potential to yield some degree of positive, meaningful change, both in the short term and over time (Dryden 2020, Schleider et al. 2020). That is, SSIs acknowledge the dual realities that any given clinical encounter could be someone's last (whether or not they want or might benefit from additional support) and that any single session can nonetheless yield meaningful benefit (in the form of symptom reductions, increased support-seeking, or both).

Often, SSIs target core mechanisms of longer-term mental health interventions, such as a program teaching a single evidence-based intervention strategy for depression (cognitive restructuring, behavioral activation) or anxiety (in vivo exposure). However, SSIs are not confined to a specific theoretical orientation; they represent a model of treatment delivery—optimizing each encounter for clinical impact and instilling the belief that any moment can spur meaningful change—rather than a specific approach to providing care. Regardless of their focus and structure, SSIs' flexibility and brevity render them more scalable and affordable than their multisession counterparts. SSIs may be delivered by trained providers or via digital, self-guided programs and within diverse settings, including specialty mental health clinic wait lists, emergency departments, primary care, schools, and smartphones. As such, while SSIs cannot eliminate the need for longer and higher-intensity forms of mental health treatment (which some individuals will inevitably require), they are well-positioned to bridge gaps in treatment systems that less accessible supports are structurally unsuited to address.

SSIs have improved myriad patient-level outcomes, from diverse mental health problems—specific phobias (Wolitzky-Taylor et al. 2008), alcohol use (Walters et al. 2000, Samson & Tanner-Smit 2015), and depression (Schleider et al. 2022)—to service engagement [greater uptake of crisis support (Cohen et al. 2023), better odds of completing future outpatient treatment (Keegan

et al. 2024)]. Narrative reviews and systematic reviews (SRs) have supported the notion that SSIs hold promise to reduce mental health problems, both postintervention and many months later, in children, adolescents, and adults (Bloom 2001, Cameron 2007, Campbell 2012, Schleider & Weisz 2017). This literature fits with research suggesting that the number of treatment sessions does not consistently predict effectiveness (Ost & Ollendick 2017, Schleider & Weisz 2017, Shafran et al. 2021). However, individual studies—and even individual SRs—cannot capture the full evidence base on whether and for whom SSIs effect change. As with all forms of intervention, SSIs' effects are heterogeneous, and some studies have shown nonsignificant effects on symptoms (Lorenzo-Luaces & Howard 2023, Schleider et al. 2022). Additionally, prior SRs on SSIs have focused exclusively on specific age groups, such as children and adolescents (Schleider & Weisz 2017); problem types, such as substance use (Riper et al. 2011); and delivery modalities, such as face-to-face SSIs delivered by a professional (Bertuzzi et al. 2021). To our knowledge, there has been no systematic synthesis of what is known and unknown about SSIs' overall clinical utility; where they have and have not been effective, across outcomes and age groups; how their effects compare to those of multisession therapies; and implications of these findings for clinical practice and population-level efforts to mitigate the treatment gap. The goal of our systematic umbrella review is to address these questions via the broadest overview of research on mental health SSIs to date. Specifically, we sought to characterize whether, to what degree, and for which problems and populations SSIs have reduced mental health concerns and improved engagement with other mental and behavioral health services, based on SRs of SSI trials including children, adolescents, and adults.[1]

METHOD

Search Strategy

Methods and goals for this umbrella review were preregistered in PROSPERO (CRD42024511615) before initiating search procedures. The review team collaborated with a research librarian (A.W.) to create a comprehensive search of existing SRs and meta-analyses in March 2024. The search included a combination of database-specific controlled vocabulary and title/abstract terms for the concepts of SSIs for mental health problems and service engagement. The search was conducted on March 14, 2024, in the following databases: MEDLINE (Ovid), Cochrane Database of Systematic Reviews, APA PsycInfo (EBSCO), Web of Science (Clarivate), and ProQuest Dissertations & Theses Global. All databases were searched from inception to present without filters or limits. Results were downloaded and deduplicated using citation management software (EndNote). In addition to this systematic search, the first author (J.L.S.) manually searched PROSPERO's online repository of in-process reviews to identify potentially relevant ongoing but unpublished SRs. The full list of search terms and the numbers of results generated per term are included in the **Supplemental Appendix**. Unique search results were uploaded to a screening platform (Rayyan) for independent abstract screening by review team members.

Supplemental Material >

Inclusion and Exclusion Criteria

SRs evaluating the effectiveness of SSIs for mental health problems, substance use, or service engagement were eligible for inclusion. SRs were eligible for inclusion whether or not they included

[1]We initially planned to conduct a systematic search of randomized controlled trials of SSIs published since the most recent systematic review identified in our umbrella review, to ensure that our synthesis was as updated as possible. However, we identified several eligible SRs that were published in the previous year (2023–2024) as well as one eligible systematic review that was under peer review at the time of article coding. Given the recency of the included literature, we opted not to conduct a supplementary review of individual SSI trials.

a quantitative meta-analytic component. Narrative reviews without a systematic search approach were ineligible. SRs that discussed both SSIs and multisession interventions were eligible for inclusion so long as the overall effects of SSIs were reported separately from the aggregate effects of multisession interventions. We placed no restrictions on the kinds of trials included in the SRs (i.e., reviews could include randomized or nonrandomized evaluations of SSIs), on the ages of participants, on whether included interventions were designed as prevention or treatment programs, or on the kinds of mental health or service use outcomes targeted. For the purposes of identifying SRs eligible for inclusion, we defined interventions as single-session if they intentionally involved just one visit or encounter with a clinic, provider, or program (multihour interventions involving multiple modules or components qualified under this definition).

SRs of SSIs that targeted motivation or readiness to seek treatment rather than actual engagement with services were excluded from this umbrella review because motivation to engage with services has shown inconsistent associations with real-world service use. Additionally, SRs focused on single-session pharmacotherapy interventions (e.g., ketamine infusions) were excluded, given our focus on scalable psychosocial interventions. We also excluded SRs that focused exclusively on Critical Incident Stress Debriefing (CISD) for posttraumatic stress, given the established ineffectiveness and potential iatrogenic effects of this specific approach (Pia et al. 2011). **Supplemental Figure 1** shows the study search and identification flowchart. Initial study selection was conducted by five members of the author team (J.P.Z., A.R., B.K., A.G., E.S.) in collaboration with the first author (J.L.S.). Disagreements were resolved via discussion.

Supplemental Material >

Data Extraction

SRs that met the inclusion criteria were coded for characteristics of their included SSI trials, results, and SR quality indicators. All included SRs were doubly coded by two members of the author team, and all resulting codes were reviewed by the first author. Interrater reliability (IRR) was calculated on the full sample of coded studies. IRR was calculated as Cohen's κ for categorical data or intraclass correlation coefficient for continuous data. When IRR was below 0.8, coders met to discuss the discrepancy and recode the variable until IRR was above 0.8. Regardless of IRR, disagreements were resolved by discussion, collaborative article review, and independent recalculation of effect sizes (ESs) when applicable.

We coded each SR's methodology (SR with versus without meta-analysis); age range of participants in included SSI trials; countries of trials included in the SR; trial designs permitted in the SR (randomized, nonrandomized); years of publication for trials included in each SR; lengths (in minutes) of SSIs included in the SR; follow-up periods (in weeks) of trials included in the SR; types of trials included in the SR ("treatment," i.e., trials that specifically targeted people with a diagnosed psychiatric disorder or clinically increased symptoms based on a standardized measurement; "indicated/selective prevention," i.e., trials of people with increased symptoms or risk factors who are not necessarily experiencing disorders; or "universal prevention," i.e., trials that targeted all people regardless of symptoms or risk factors); and total numbers of SSI trials, as well as SSI trial participants, included in the SR. We also coded the outcome(s) of interest within SSI trials in each SR, including mental health outcomes (suicidal thoughts and behaviors; conduct or oppositional problems; substance use; attention problems, such as attention-deficit/hyperactivity disorder; anxiety; depression or mood problems; feeding/eating/weight problems; or general mental health problems/functioning) and service use outcomes (e.g., linkage to outpatient psychotherapy following SSI, emergency department readmission following SSI). In addition, we coded the types of SSIs evaluated (e.g., motivational interviewing, in vivo exposure, solution-focused therapy), the types of comparison conditions in SSI trials (e.g., multisession interventions, no-treatment or wait-list controls, length-matched placebo controls), whether included SSIs were delivered by

providers (and if so, provider types) or self-guided, and whether SSIs were delivered remotely (online or via telehealth) or in person.

Additionally, we coded each SR's overall findings. For SRs that included meta-analyses, we collected overall ESs and confidence intervals (CIs) for each mental health or service use outcome as well as the nature of comparison reflected by each ES (SSI versus nonactive/placebo controls, care as usual, or multisession interventions). For SRs that included moderator analyses, we narratively summarized results of moderation tests. For SRs that did not include meta-analyses, we generated narrative summaries of the overall effects reported by the author team, by outcome type. We also narratively coded whether and how each SR discussed implementation or dissemination of SSIs as part of its review.

Assessment of Methodological Quality

We assessed the methodological quality of included SRs using AMSTAR 2 (A Measurement Tool to Assess Systematic Reviews), a stringent, validated, and reliable tool (Shea et al. 2017). We chose AMSTAR 2 due to its free accessibility and its acceptable psychometric properties (Leclercq et al. 2020, Lorenz et al. 2020), including moderate to substantial IRR and acceptable convergent validity with the original AMSTAR (Shea et al. 2007) and the Risk of Bias in Systematic Reviews (Perry et al. 2021, Pieper et al. 2019, Whiting et al. 2016). Sixteen items reflecting indicators of SR methodological quality were rated as being sufficiently met ("yes"), somewhat met ("partial yes"), or not met ("no"). Here, we describe the percentage of reviews that scored positive on each AMSTAR 2 item; this approach provides an overall picture of methodological aspects of the included papers and follows recommendations for AMSTAR 2 scoring (the tool is not intended to produce an overall score) (Shea et al. 2017). The 16 AMSTAR 2 items are as follows:

1. Providing information about the use of the PICO (population, intervention, comparison, outcome) framework
2. Predefining or preregistering research methods
3. Stating a rationale for study design inclusion
4. Using a comprehensive literature search strategy
5. Addressing duplicate study selection
6. Addressing duplicate data extraction
7. Including a list of each study excluded during the coding process (with reasons for exclusion)
8. Detailed descriptions of included studies
9. Including risk of bias assessment
10. Reporting of funding sources for included studies
11. Using appropriate statistical methods in meta-analysis
12. Assessing the potential impact of bias on results
13. Considering bias in primary outcomes when interpreting results
14. Explaining observed heterogeneity in results
15. Investigating and discussing publication bias impact
16. Reporting of potential conflicts of interest

Four coauthors (J.P.Z., A.R., A.G., B.K.) independently analyzed the quality of each eligible review. In cases of unclear assessment, consensus was reached with the first author (J.L.S.). We did not apply AMSTAR 2's proposed quality classification system (high, moderate, low, or critically low quality) because this system produces a known floor effect and downgrades a large majority of reviews (often >95%) to low confidence even when most methodological aspects are sound (Li et al. 2022, Lorenz et al. 2020, Perry et al. 2021).

Evaluation of Overlap Across Systematic Reviews

When SRs use similar inclusion criteria, they may include the same primary studies. Evaluating the amount of primary study overlap is useful both descriptively, to characterize the corpus of SRs regarding SSIs, and analytically, to avoid placing undue emphasis on a small number of primary studies that are included in many SRs. To evaluate overlap in our umbrella review, we used the following steps (Hennessy & Johnson 2020). First, we created a citation matrix in which each row corresponded to a primary article, each column corresponded to an SR, and cell values indicated whether the primary article was included in the SR (1) or not (0). Our full citation matrix is shown in **Supplemental Table 1**. Using the citation matrix, we calculated the overall corrected covered area (CCA) for the umbrella review as well as pairwise CCA metrics for each pair of SRs. The pairwise CCA represents the percentage of primary studies shared by a given pair of SRs, and the overall CCA represents the degree of primary study overlap for the entire sample.

Supplemental Material >

Synthesis of Results

Because we were initially unsure whether a quantitative synthesis of SRs would be feasible within our umbrella review, we preregistered a narrative, descriptive synthesis approach to summarizing results across identified SRs. We ultimately identified more SRs than anticipated, including many meta-analyses, and we observed low overlap across reviews (as reported below). As such, we updated our approach to include narrative reviews (including SRs with and without a meta-analysis) as well as quantitative syntheses of meta-analytic reviews that compared SSIs to care-as-usual, placebo, or nonactive (no-treatment, wait-list) control conditions. We also created a forest plot to illustrate the overall effects of SSIs across meta-analytic SRs, organized by comparison type (SSI versus nonactive, placebo, or care-as-usual control; SSI versus multisession intervention; single-arm SSI trials) (see **Supplemental Figure 2**). To generate an overall second-order meta-analytic effect, we used a correlated effects model using the robumeta package in R. Each identified meta-analysis was coded as a study, and each meta-analytic ES comparing SSIs to controls reported within that study was coded as an ES. Within-study ES correlations used the robumeta default ($r = 0.80$). For this model, we computed the variance of each meta-analytic ES estimate as $s^2 = se^2$, where $se = [(95\%\ \text{CI range})/2]/1.96$. Heterogeneity was assessed using the I^2 statistic.

RESULTS

Study Selection and Inclusion

Of the 2,312 abstracts identified for screening (1,391 after removal of duplicate records), 63 full-text articles were retrieved for additional consideration. Of these articles, 40 were excluded (the reasons for exclusion are noted in **Supplemental Figure 1**). Two additional articles that met inclusion criteria were subsequently identified via manual search, including one preprint, a manuscript under consideration for publication (Ball et al. 2024). Ultimately, 25 SRs met criteria for inclusion in our umbrella review. During the coding process, we identified one SR (Stapleton et al. 2006) that provided insufficient information for interpretation of reported results; specifically, no information regarding statistical significance was provided to contextualize the meta-analytic SSI effect point estimates, which made them uninterpretable. As such, we synthesized the results of the 24 remaining SRs in the present umbrella review.

Characteristics of Included Systematic Reviews

The 24 included SRs were published between 2007 and 2024; 62.50% were published in the last 5 years (2019 or later) and 79.17% were published in the last decade (since 2014). The majority

(66.67%) of SRs published before 2014 focused on SSIs that targeted substance use; in contrast, the majority (88%) of SRs published in 2014 or later focused on SSIs that targeted other mental health problems (e.g., depression, anxiety). This pattern reflects the increase in research on SSIs for depression, anxiety, and related difficulties over the past decade. Only two of the SRs addressed the effects of SSIs on service engagement, reflecting a relative dearth of empirical attention to this topic.

Sixteen SRs (66.67%) included a quantitative meta-analysis; together, these meta-analyses included 322 individual randomized trials of SSIs and approximately 40,629 participants. The remaining eight SRs presented SSI effects narratively. Five SRs (20.83%) included SSIs for children, adolescents, and young adults (including ages 5–25), with two exclusively focused on SSIs for youth under age 19; ten SRs (41.67%) included SSIs for children, adolescents, and adults; and nine (37.50%) included SSIs for adults only. Across all SRs, participants included in SSI trials ranged from 5 to 90 years of age. Thirteen of the SRs included randomized controlled trials (RCTs) or quasi-randomized trials of SSIs exclusively, whereas 11 SRs included both RCTs and nonrandomized open trials. Across SRs, most of the included SSI trials took place in North America, Western Europe, or Australia; a handful of SRs included studies from LMICs, and one SR focused exclusively on SSIs in LMICs (Ghosh et al. 2022).

Regarding characteristics of the SSI trials in included SRs, 2 SRs focused on SSIs designed for prevention, 16 focused on SSIs designed for treatment, and 6 included both treatment- and prevention-focused SSIs. The SSIs included in SRs ranged widely in duration (1–480 min). SRs included an average of 2,457 participants (range: 46–10,508) across an average of 18 SSI trials (range: 2–73). Most SRs ($k = 16$) included trials of in-person, human-provided SSIs, some ($k = 7$) included trials of digital or paper-based self-guided SSIs, and a handful ($k = 3$) included trials of digital but human-facilitated SSIs (e.g., telehealth). At least seven SRs that included human-delivered SSIs noted that providers were not mental health professionals or trainees; rather, they included dental hygienists, emergency department nurses, and peer specialists. **Supplemental Table 2** presents detailed characteristics for all SRs included in this umbrella review.

Supplemental Material >

Per AMSTAR 2 (Shea et al. 2017), the reviews showed some areas of consistent methodological weakness and other areas of methodological strength. Only 50% of reviews preregistered their methods; 16% included a list of each study that was excluded from their review during the coding process (along with reasons for each study's exclusion), and 12.5% reported funding sources for the primary studies included in their review. In contrast, most SRs used a comprehensive literature search (100%), assessed and discussed publication bias (88.2%), and included satisfactory techniques for assessing risk of bias (70.8% for reviews including RCTs, 75% for reviews including nonrandomized studies). Detailed results of AMSTAR 2 assessments across items are presented in **Supplemental Table 3**.

Overlap in Included Systematic Reviews

There was a low degree of primary study overlap in the SRs. The overall CCA was 0.4%, and the median pairwise CCA (the percent overlap in primary studies between two SRs) was 0.0%. The maximum pairwise CCA was 16.7%, between Ghosh et al. (2022) and Tan et al. (2023). A matrix of pairwise CCA values is presented in **Supplemental Table 1**.

Overall Effects of Single-Session Interventions

Twenty of the 24 SRs reported beneficial effects of SSIs on one or more mental health or service engagement outcomes, based on significant meta-analytic estimates, authors' narrative syntheses of the literature, or both. Of the remaining four SRs, two reported evidence that SSIs did not

outperform care-as-usual controls (Mdege et al. 2013, Tan et al. 2023); both of these SRs focused on SSIs for alcohol use in individuals aged 16–77. The others reported inconclusive effects of SSIs due to limited numbers of studies (Adams 2024, which identified only two trials of SSIs for mental health problems in autistic individuals) or mixed effects across a small number of studies (Godbee & Kangas 2020, which identified four trials that tested the effect of the self-as-context module of acceptance and commitment therapy on adults' well-being). None of the SRs reported that SSIs showed a significant adverse effect on any mental health or service engagement outcomes.

Overall Single-Session Intervention Effects Across Age Groups

Both SRs that focused exclusively on children and adolescents reported benefits of SSIs relative to control conditions for one or more outcomes. Schleider & Weisz (2017) reported a significant meta-analytic effect ($g = 0.32$) across 50 SSI trials that targeted multiple problem types; domain-specific SSI benefits were identified for youth anxiety, conduct problems, and substance use. Carney & Myers (2012) reported a significant meta-analytic effect ($g = 0.11$) across four SSI trials that targeted problematic alcohol use in adolescents.

Similarly, all three SRs that included SSIs for children, adolescents, and young adults reported favorable SSI effects for one or more clinical outcomes. Ball et al. (2024) reported significant meta-analytic effects for digital, self-guided SSIs for youth anxiety symptoms ($g = 0.22$) and depression symptoms ($g = 0.12$) across 19 randomized trials. Chen & Zhu (2024) reported significant meta-analytic effects of exercised-based SSIs (e.g., high-intensity interval training) on children's and adolescents' symptoms of attention-deficit/hyperactivity disorder ($g = 0.28$–0.35) across 13 randomized trials. Schleider & Weisz (2017) found that, on average and across outcome domains, SSIs for school-aged children ($\leq$11 years, $g = 0.42$) and early adolescents (>11 and $\leq$15.50 years, $g = 0.44$) were more effective than SSI effects for older adolescents (>15.50 years, $g = 0.19$). Likewise, Chen & Zhu (2024) found that single-session exercise interventions for attention-related symptoms were generally more effective for preadolescents and early adolescents (ages 10–13, $g = 0.30$) and young adults (ages 18–24, $g = 0.42$) than for older adolescents (ages 14–17, $g = 0.18$).

Eight of the 10 SRs that included SSIs for both youth and adults found significant intervention benefits for one or more outcomes. Relative to controls, these reviews reported SSI benefits for substance use (Holliday et al. 2021, McGinnes et al. 2016, Riper et al. 2009), anxiety (Bertuzzi et al. 2021, Odgers et al. 2022, Wolitzky-Taylor et al. 2008), and eating and body image problems (Stice et al. 2007) as well as increased linkage to outpatient services and decreased use of high-intensity health care following discharge from psychiatric emergency departments (Bosse Chartier et al. 2023). The remaining two SRs identified nonsignificant effects for SSIs on substance use (Mdege et al. 2013) and inconclusive effects for SSIs targeted toward autistic individuals' mental health concerns (Adams 2024).

Of the nine SRs that focused exclusively on adults, seven reported significant SSI benefits for at least one outcome, specifically for substance use (Ghosh et al. 2022, Riper et al. 2011), anxiety (Dochat et al. 2021, Erbay Dalli et al. 2023, Yin et al. 2021), depression (Kim et al. 2023), and multiple problem types (Aafjes-van Doorn & Sweeney 2019). The remaining two identified nonsignificant effects for SSIs on substance use (Tan et al. 2023) and general functioning (Dochat et al. 2021) and mixed or inconclusive overall SSI effects for general well-being (Godbee & Kangas 2020).

Overall Single-Session Intervention Effects for Specific Clinical Outcomes

The subsections below describe overall SSI effects for some common clinical outcomes (for a summary, see **Table 1**).

Table 1 Summary of overall SSI effects for common clinical outcomes, across 24 systematic meta-analyses and narrative reviews, representing 415 unique clinical trials

SSI target/outcome	Number of systematic reviews	Number of systematic reviews reporting positive SSI effects	Evidence of effectiveness for youth?	Evidence of effectiveness for adults?	Examples of effective SSI content	Effective SSI delivery formats
Anxiety	9	8	Yes	Yes	In vivo exposure; behavioral activation	Provider-delivered; self-guided
Depression	6	5	Yes	Yes	Behavioral activation; growth mindset; solution-focused therapy	Provider-delivered; self-guided
Eating problems	2	1	No	Yes	Dissonance-based interventions	Provider-delivered; self-guided
Externalizing (attention-deficit/hyperactivity disorder, oppositional/conduct problems)	2	2	Yes	No	Brief behavioral parent training; exercise-based intervention	Provider-delivered
Service use, engagement	2	1	Yes	Yes	Safety Planning Intervention; Contract for Safety; family-based narrative intervention	Provider-delivered
Suicide-related thoughts or behaviors	1	1 (mixed)	No	Yes	Safety Planning Intervention; Contract for Safety	Provider-delivered
Substance use	10	8	Yes	Yes	Motivational interviewing; brief personalized feedback	Provider-delivered; self-guided

Most of the included systematic reviews summarized SSI effects across multiple clinical outcomes. As such, the sum of values in the "Number of systematic reviews" column exceeds the total number of systematic reviews in the umbrella review.

Abbreviation: SSI, single-session intervention.

Substance use. Eight of the 10 SRs that reported on SSIs for substance use found overall benefits for substance use–related outcomes. Among these SRs, nine focused on SSIs that targeted problematic alcohol use (seven of nine reported overall SSI benefits across follow-up periods of 1–52 weeks), and one focused on SSIs that targeted smoking cessation (this SR reported overall SSI benefits on smoking cessation rates 6 months later; Holliday et al. 2021). In the eight SRs that reported positive overall effects, included SSIs were described as motivational interviewing (including SSIs delivered by professionals, lay providers, and self-guided programs), brief personalized/normative feedback following identification of risk on a substance use screening tool, or a combination of the two. The two SRs that reported nonsignificant overall SSI effects also focused on motivational interviewing SSIs.

Anxiety. Eight of the nine SRs that reported on SSIs for anxiety found overall benefits for anxiety-related outcomes. Two of these SRs focused primarily on SSIs for specific phobias (both reported overall SSI benefits), and six reported the effects of SSIs on generalized anxiety symptoms (five reported overall SSI benefits). In the eight SRs that reported positive overall effects, included SSIs were described as in vivo or imaginal exposure therapies (including, but not limited to, one-session treatment for specific phobias), youth-focused behavioral interventions (defined as cognitive behavioral therapy, graded exposure, behavioral activation, psychoeducation, or a combination), youth-focused nonbehavioral interventions (defined as attention bias modification or growth mindset interventions), caregiver- or family-focused behavioral interventions (e.g., family- or parent-directed parent training), movement- or exercise-based interventions (yoga, tai chi), music therapy, and eclectic treatment sessions with licensed providers (including short-term psychodynamic therapy, solution-focused therapy, and components of dialectical behavioral therapy, acceptance and commitment therapy, and cognitive behavioral therapy) (Aafjes-van Doorn & Sweeney 2019, Kim et al. 2023). The SR that reported nonsignificant SSI effects for anxiety focused on a specific type of SSI, described as the "self-as-context component of acceptance and commitment therapy" (Godbee & Kangas 2020).

Depression. Five of the six SRs that reported on SSIs for depression found benefits for depression-related outcomes. In the five SRs that reported positive effects, included SSIs were described as youth-focused behavioral interventions (defined as cognitive behavioral therapy, graded exposure, behavioral activation, psychoeducation, or a combination), youth-focused nonbehavioral interventions (defined as attention bias modification, online self-guided SSIs, or growth mindset interventions), and eclectic treatment sessions with licensed providers spanning a variety of orientations (including short-term psychodynamic therapy, solution-focused therapy, and individual components of dialectical behavioral therapy, acceptance and commitment therapy, and cognitive behavioral therapy) (Aafjes-van Doorn & Sweeney 2019, Kim et al. 2023). One SR reported a numerically positive (favoring SSIs) but nonsignificant meta-analytic effect across six trials of SSIs for depression in youth (Schleider & Weisz 2017). Notably, a more recent SR focused on self-guided SSIs for youth depression that included 15 randomized trials (Ball et al. 2024)—11 of which were published after Schleider & Weisz's (2017) SR was conducted—did find a significant effect of SSIs on youth depression symptoms (see **Table 1** and **Supplemental Figure 2**).

Supplemental Material >

Eating problems. One of the two SRs that reported on SSIs for eating problems found benefits for these outcomes, including dieting, body mass, thin ideal internalization, and body dissatisfaction. Specifically, Stice et al. (2007) found a significant overall effect of eating disorder prevention programs of varying lengths for adolescents and adults. A moderation analysis identified no differences in effectiveness between single-session and multisession programs for multiple key outcomes (body dissatisfaction, thin ideal internalization, eating pathology, body

mass). In contrast, Schleider & Weisz (2017) found no significant overall effects of SSIs on eating disorder–related outcomes. However, the authors noted that the large point estimate (favoring SSIs over controls) and wide CI suggest the need for additional research in this domain.

Externalizing problems. The two SRs that reported on SSIs for externalizing problems (including conduct problems, oppositional behaviors, and symptoms of attention-deficit/hyperactivity disorder) each reported positive effects. The first SR (Chen & Zhu 2024) found that exercise-based SSIs, such as high-intensity interval training, had a positive overall effect on core symptoms of attention-deficit/hyperactivity disorder relative to care-as-usual control conditions. The second SR (Schleider & Weisz 2017) found that SSIs that included caregiver- or family-focused behavioral interventions (e.g., brief parent training) and youth-focused behavioral interventions (based in cognitive behavioral therapy) had a positive overall effect on youth conduct and oppositionality-related problems.

General functioning or multiple mental health problems. One SR found a significant, positive meta-analytic effect for SSIs for multiple types of youth mental health problems, collapsing effects across SSIs for depression, anxiety, conduct and attention problems, substance use, and eating problems ($g = 0.32$) (Schleider & Weisz 2017). Another SR identified no significant meta-analytic effect of acceptance and commitment therapy–based SSIs on general psychological functioning in adults (Dochat et al. 2021).

Suicide-related thoughts and behaviors. One SR summarized trials of SSIs that targeted suicide-related thoughts and behaviors (Bosse Chartier et al. 2023). This SR reported mixed overall effects: Two of the trials included in the narrative SR were found to significantly reduce suicidal thoughts and behaviors, and two found no significant SSI effects. SSIs that significantly reduced suicide attempts during follow-up periods of up to 6 months included a Safety Planning Intervention (Stanley et al. 2018) and Contract for Safety (Bryan et al. 2017), both of which were delivered to adult veterans admitted to emergency departments following a suicide-related crisis. Both are provider-delivered SSIs that involve a review of coping skills, identification of warning signs, limiting of access to lethal means, social support identification, and provision of crisis resources. The two SSIs that did not significantly reduce suicide-related behaviors were described in the SR as therapeutic assessment and the Family Intervention for Suicide Prevention (Asarnow et al. 2011), both delivered by emergency department staff.

Service use and engagement. Two SRs reported overall SSI effects on service use and engagement. The first SR (Bosse Chartier et al. 2023) narratively summarized trials that tested whether SSIs delivered in emergency departments, offered to people admitted for suicide-related thoughts and behavior, could (*a*) increase rates of linkage to outpatient mental health services following emergency department discharge and (*b*) reduce rates of rehospitalization following discharge. Across seven trials that assessed effects on outpatient service attendance, all suggested that emergency department–based SSIs [e.g., Safety Planning Intervention (Stanley et al. 2018), Contract for Safety (Bryan et al. 2017)] significantly increased youths' and adults' attendance at future outpatient mental health services compared to controls. Additionally, some trials suggested that SSIs significantly reduced rates of rehospitalization [e.g., a family-based narrative intervention for suicide prevention (Wharff et al. 2019), Crisis Response Plan (Bryan et al. 2017)], but others did not (e.g., Family Intervention for Suicide Prevention; Asarnow et al. 2011). The other SR that reported SSI effects on service use (McGinnes et al. 2016) found no evidence that SSIs (defined as provider-delivered, feedback-based interventions that take 10 min or less) reduced rates of hospital readmission among youth and adults at risk for alcohol-related harm. However, only two SSI trials that assessed rehospitalization outcomes were identified.

Overall Effects for Self-Guided and Human-Guided Single-Session Interventions

Four SRs focused exclusively on self-guided (digital or paper-based) SSIs or reported effects separately for self-guided SSIs. Each of these SRs reported significant overall benefits of self-guided SSIs in at least one outcome, relative to control conditions, for youth (Ball et al. 2024, Riper et al. 2009, Schleider & Weisz 2017) and adults (Ball et al. 2024, Riper et al. 2011). Sixteen SRs focused exclusively on human-delivered SSIs or reported effects separately for human-delivered SSIs. Fourteen reported significant overall benefits of human-delivered SSIs in at least one outcome.

One SR tested the moderating effect of SSI delivery strategy (self-guided versus human-delivered) (Schleider & Weisz 2017). In this SR, the meta-analytic effects of human-delivered SSIs ($g = 0.33$) and self-guided SSIs ($g = 0.21$) did not significantly differ from one another.

Overall Durability of Single-Session Intervention Effects

Fifteen of the 20 SRs specified the range of follow-up assessment periods across included SSI trials. Among SRs that identified significant overall SSI effects, follow-up assessment periods ranged widely both within and across SRs, from immediately postintervention to 2 years. The two SRs that reported nonsignificant overall effects for SSIs had follow-up assessment ranges of 3–52 weeks (Mdege et al. 2013) and 12–104 weeks (Tan et al. 2023).

One SR tested the moderating effect of follow-up length on overall SSI effectiveness (Schleider & Weisz 2017). Results suggested that SSI trials with follow-up periods of 0–2 weeks showed significantly larger effects, on average, than those with follow-up periods of 13 weeks or more ($g = 0.46$ for follow-ups of 0–2 weeks, $g = 0.07$ for follow-ups of 13 weeks or more). However, ESs for SSI trials with follow-up periods of 3–12 weeks ($g = 0.31$) did not significantly differ from ESs for trials with longer or shorter follow-up periods.

Meta-Analytic Effects of Single-Session Interventions Versus No-Treatment, Placebo, or Care-as-Usual Controls

Ten of the 12 meta-analytic reviews that compared SSIs for mental health problems to nonactive, placebo, or care-as-usual controls reported significant meta-analytic effects of SSIs on one or more outcomes. Five of the 12 meta-analyses reported multiple meta-analytic ESs for SSIs that targeted different problem types, which are presented in **Supplemental Table 1**. Estimates of between-study ES variability (I^2) ranged widely across meta-analyses (0–89%), and larger variability estimates emerged in SRs that included clinical outcomes across multiple problem domains (e.g., Schleider & Weisz 2017).

Supplemental Material >

A second-order correlated effects meta-regression model tested the overall effect of SSIs compared to control conditions across 12 meta-analyses reporting 23 meta-analytic effects (for a forest plot illustrating individual and overall meta-analytic effects, see **Supplemental Figure 2**). The mean meta-analytic ES was small but statistically significant (standardized mean difference = −0.25; 95% CI −0.30, −0.19; $p < 0.001$; $I^2 = 43.17\%$), suggesting low to moderate heterogeneity.

Most of the significant meta-analytic SSI effects reported across the SRs fell within the small-to-medium range ($g = -0.59$ to -0.12). Two significant SSI effects were very small ($g = -0.06$ and $g = -0.08$, both referencing overall effects of SSIs on alcohol use in adolescents), and one was very large ($g = -1.83$, referencing the effects of SSIs on adult anxiety symptoms). Nonsignificant meta-analytic SSI effect estimates also fell within this range ($g = -1.34$ to -0.08). Across all meta-analyses, the probability that a person receiving SSI would fare better than an individual in a control group ranged from 51.69% to 90.22%. More conservatively, excluding all large meta-analytic effects ≥1.0 as potential outliers, this range was 51.69% to 66.17%.

Regarding meta-analytic effects of SSIs versus controls on specific problems, six of seven meta-analyses reporting on SSIs for substance use reported significant benefits, as did four of four meta-analyses reporting on SSIs for anxiety, one of two meta-analyses reporting on SSIs for depression, and two of two meta-analysis reporting on SSIs for externalizing symptoms (oppositional, conduct, or attention-related problems). The only meta-analysis to examine the effects of SSIs versus controls on eating problems did not find a significant overall effect (Schleider & Weisz 2017); however, as noted above, the large point estimate and wide prediction interval suggest the need for additional research. Likewise, the only meta-analysis to assess the effects of SSIs on general functioning did not find significant benefits for this outcome (Dochat et al. 2021). Regarding moderation analyses, Schleider & Weisz (2017) found that SSI effects on youth anxiety and externalizing problems were significantly larger, on average, than SSI effects on depression and substance use.

Two SRs reported no significant meta-analytic effects of SSIs compared to controls (Dochat et al. 2021, Tan et al. 2023). However, one of these SRs (Dochat et al. 2021) narratively reported SSI benefits on other mental health outcomes (depression, anxiety) that could not be meta-analyzed due to small numbers of studies.

Meta-Analytic Single-Session Intervention Effects Across Control Condition Types

Most meta-analyses included SSI trials with multiple types of control conditions (e.g., no treatment, wait list, care as usual, attention-only control, placebo) and did not systematically investigate the impact of control condition type. However, Schleider & Weisz (2017) found that SSI effects were largest for trials with no-treatment or wait-list controls ($g = -0.40$) and were smaller—but still significantly larger than zero—for SSI trials with an active control, such as psychosocial placebo or brief psychoeducation ($g = -0.14$). In contrast, Holliday et al. (2021) found no evidence for differences in SSI effects on smoking cessation by control condition type.

Effects of Single-Session Versus Multisession Interventions

Four meta-analytic reviews quantitatively compared the effectiveness of SSIs and multisession interventions. Two SRs reported no significant differences between SSIs and multisession interventions for most outcomes (e.g., body dissatisfaction, thin ideal internalization, body mass; Stice et al. 2007) or all outcomes (anxiety symptoms at 2- to 60-week follow-up; Wolitzky-Taylor et al. 2008). One SR reported a significant difference favoring single-session motivational interviewing interventions ($g = -0.55$) over multisession motivational interviewing interventions ($g = -0.03$) for reducing alcohol use among adults in LMICs, across 4- to 36-week follow-ups (Ghosh et al. 2022). In this SR, multisession interventions did not outperform nonactive control conditions, but SSIs did. Conversely, one SR reported significant differences favoring multisession digital interventions ($g = -0.61$) over single-session digital interventions ($g = -0.27$) for reducing problematic alcohol use among adults, across 6- to 9-month follow-ups (Riper et al. 2011). In this SR, both multisession interventions and SSIs significantly outperformed control conditions on average.

Additionally, two SRs descriptively compared the magnitude of SSI versus multisession intervention effects, without testing whether ESs significantly differed by intervention length. Mdege et al. (2013) reported no consistent effects of SSIs, but some benefits of multisession brief interventions (3–4 sessions), on alcohol consumption in older adolescents and adults across follow-ups of 1 month to 1 year. Similarly, Tan et al. (2023) reported that, relative to care as usual, multisession brief interventions but not SSIs were effective in reducing adults' problematic alcohol use across follow-ups of 3 months to 2 years.

Consideration of Single-Session Intervention Implementation Across Systematic Reviews

Most SRs discussed the potential benefits of disseminating and implementing efficacious SSIs to increase timely access to evidence-based mental health supports. Promising implementation settings that were discussed included primary care clinics, schools and universities, emergency departments, general dentistry practices, online virtual spaces, and clinic wait lists. However, no SRs systematically reported any outcomes related to SSI implementation (e.g., SSIs' overall reach to individuals who might benefit from them, fidelity of SSI implementation for human-delivered interventions, sustainment of SSIs after formal evaluation periods, barriers or facilitators to SSI delivery).

DISCUSSION

We conducted the first umbrella review synthesizing extant research on SSIs for mental health problems and service engagement in children, adolescents, and adults. Across 24 SRs, evidence generally supported small to medium, statistically significant effects of SSIs on a variety of mental health problems and certain types of service engagement. Across reviews, 20 reported significant effects of SSIs for one or more problem types, 2 reported nonsignificant overall effects of SSIs, and 2 reported mixed or inconclusive effects. Across 12 reviews that meta-analytically examined the impact of SSIs on mental health problems, SSIs showed a small, positive overall effect across problem types and age groups ($g = -0.25$) relative to active (in most cases) and nonactive controls. To contextualize this effect, a recent umbrella review of meta-analyses of multisession therapies for adults, spanning all psychiatric disorders, found an overall effect of $g = -0.34$ (Leichsenring et al. 2022). Likewise, the effect of multisession youth psychotherapy across RCTs has been estimated at $g = -0.46$ overall (including trials with no-treatment controls) (Weisz et al. 2017) and $g = -0.29$ compared to care-as-usual controls (Weisz et al. 2013). Additionally, across four SRs that directly compared SSIs and multisession interventions, evidence did not support the superiority of multisession over single-session approaches for specific phobias or eating disorder prevention programs. Evidence was mixed for interventions that were aimed at reducing problematic alcohol use: One meta-analysis suggested the superiority of SSIs, and the other suggested the superiority of multisession interventions.

The results carry considerable clinical and population health implications. Certain SSIs present a low-cost, effective means of expanding the reach and impact of extant mental health care systems—one that is uniquely positioned to support individuals who cannot or are hesitant to access higher-intensity support. Direct comparisons to multisession interventions suggest that, in some cases and for some problems, SSIs may perform similarly to longer-term psychotherapies in reducing mental health concerns. This result does not indicate that multisession treatments should be replaced with SSIs; meeting population-wide mental health needs will inevitably require a constellation of tiers and types of support (cf. Kazdin 2019). Rather, present findings add to the ample evidence against the assumption that "more is always better" when it comes to psychological treatment. Several patterns emerged that suggest SSIs' potential utility across age groups and problem types. The results also highlight domains in need of further empirical attention and raise several implementation considerations.

What kinds of clinical content did evidence-based SSIs include? Effective SSIs tended to include not just psychoeducation and resource provision but also opportunities to identify, learn, or practice a specific coping skill frequently included in longer-term evidence-based treatments (e.g., cognitive, behavioral, or solution-focused therapies). For example, SSIs that significantly reduced depression included behavioral activation or solution-focused intervention elements, and

several effective anxiety-focused SSIs included in vivo or imaginal exposure. Even SSIs designed to increase service engagement included some skill-building components (e.g., identifying existing coping skills via safety planning). As such, in practice settings, we recommend focusing on deploying SSIs that include skill-building opportunities rather than SSIs focused on psychoeducation or resource provision alone. It is possible that skill-building components may help strengthen clients' hope, self-efficacy, and perceived control, which have been identified as potential SSI change mechanisms (Schleider et al. 2020). Formal tests of these mechanistic pathways, and the specific impacts of skill-building SSI components, remain an important direction for future SSI research.

SSIs showed the most consistently positive effects in decreasing anxiety problems, including specific phobias and generalized anxiety symptoms. Eight of nine SRs that examined anxiety-focused SSIs reported overall positive effects; the sole SR that reported nonsignificant effects focused on a specific type of SSI (described as the self-as-context module from acceptance and commitment therapy). The relative strength of evidence for anxiety-focused SSIs mirrors the broader psychotherapy literature, which affirms the overall utility of anxiety-focused treatments for youth and adults (Cuijpers et al. 2024, Weisz et al. 2017). Well-established treatments such as in vivo exposure and cognitive behavioral strategies characterized effective anxiety-focused SSIs, just as they characterize effective multisession anxiety treatments. This finding fits with an extensive literature suggesting that brief, concentrated anxiety interventions can be effective, in some cases to similar degrees as longer-term, high-intensity treatments (Ost & Ollendick 2017, Stoll et al. 2020).

Contrasting the results of a prior meta-analysis (Schleider & Weisz 2017), our umbrella review suggests the utility of certain SSIs for depression symptoms, particularly self-guided SSIs for youth and young adults (Ball et al. 2024) and therapist-delivered SSIs for adults (e.g., Bertuzzi et al. 2021, Kim et al. 2023). These shifts reflect increased empirical attention to depression-focused SSIs in recent years, particularly online SSIs for adolescents teaching components of longer-term EBTs (e.g., self-guided behavioral activation SSIs; Schleider et al. 2022). While the effects appear to be consistent, they are also small and heterogeneous, indicating the likely importance of outcome moderators. We are not aware of evidence for consistent moderators of depression-focused SSIs, although several sociodemographic factors have been shown not to moderate outcomes (McDanal et al. 2024, Szkody et al. 2023). As such, efforts to parse heterogeneity in depression-focused SSI outcomes—owing to when SSIs are offered (e.g., at points of perceived need and initial treatment outreach, when motivation is high; Schleider et al. 2024), to whom SSIs are offered, or both—remain an important area for future study.

Effects of SSIs on substance use (mainly, alcohol use) were mostly positive but very small. This aligns with literature on multisession substance use interventions, which have also yielded small and inconsistent benefits (Huh et al. 2015, Tanner-Smith & Lipsey 2015). In our review, the 2 (out of 10) SRs that reported nonsignificant overall SSI effects for substance use focused on wide age ranges (from late adolescence to older adulthood) and longer-term follow-ups (spanning 1–2 years), suggesting the potential limits of these SSIs—namely, their effects may not endure beyond weeks to months postintervention, and they may be weaker for adults and older adults. It might also prove fruitful to explore SSI approaches beyond motivational interviewing, a popular approach that has shown consistently modest impacts over time. Future research on scalable follow-up strategies to augment the effects of brief substance use SSIs, beyond motivational interviewing techniques, may be worth investigating.

In the one SR to address SSIs for suicide-related thoughts and behaviors, safety planning–focused SSIs delivered in emergency departments consistently increased follow-up outpatient service use and decreased hospital readmission rates. However, SSIs variably reduced

suicide-related behaviors (e.g., attempts), which were assessed in only three of the trials included in the review. Impacts on service engagement hold considerable clinical importance: Suicide risk can fluctuate dramatically in the period following hospital discharge, and connecting with follow-up care can be essential for suicide prevention. SSIs have also enhanced crisis resource uptake in other settings. For instance, SSIs deployed to social media users flagged as in crisis based on their search terms (e.g., searches for "suicide" or "self-h@rm") have significantly increased uptake of crisis resources relative to static lists of hotlines and text lines (Cohen et al. 2023, Jaroszewski et al. 2019). However, it is important to highlight that these SSI trials did not assess impacts on suicidal thoughts and behaviors and instead focused on service engagement outcomes. Preventing suicide is extraordinarily difficult, and very few interventions—regardless of length or intensity—have reduced suicide-related behaviors over time (Dobias et al. 2023, Fox et al. 2020). In future research and implementation efforts, we suggest focusing attention toward further optimizing SSIs' demonstrated potential to enhance connections with follow-up support among people at high risk for suicide while including assessments of suicide-related outcomes in SSI trials to more comprehensively gauge their potential clinical benefit.

Two reviews investigated SSIs for externalizing or attention-related symptoms for youth, and both reported significant meta-analytic effects for SSIs relative to controls ($g = 0.24$–0.52). The contents of these SSIs tended to reflect established elements of multisession treatments for externalizing problems in children (e.g., parent-directed strategies such as labeled praise and reward charts, youth-directed strategies such as structured physical activity), potentially accounting for the consistency of their effects. In contrast, the literature on SSIs for eating disorders—especially treatment-focused SSIs—remains nascent. A review by Stice et al. (2007) suggested that multisession and single-session eating disorder prevention programs exert similar impacts on outcomes, including body dissatisfaction and thin ideal internalization; however, Schleider & Weisz (2017) found no overall effects for SSIs that targeted eating disorder symptoms. Recently, pilot trials have suggested the utility of targeted, online SSIs for reducing body dissatisfaction in youth at high risk for eating disorders (Smith et al. 2023) and adults with recurrent binge eating (Messer et al. 2024). Given the promise of online SSIs for youth mental health (Ball et al. 2024) and the demonstrated secondary effects of depression-focused online SSIs on 3-month restrictive eating outcomes in at least one large trial (Schleider et al. 2022), the promise of these targeted interventions to help mitigate eating disorder symptoms warrants further study.

There was wide variability in follow-up periods across reviews of SSIs, and only one (Schleider & Weisz 2017) systematically examined the durability of SSI effects. This meta-analysis suggested that SSI effects were strongest in the shorter term (up to 12 weeks) and waned over time, especially for studies with follow-ups of 1 year or longer. This pattern suggests at least three next steps for SSI research. First, identifying early indicators of an individual's likelihood of responding to an SSI beyond 12-week follow-up can inform efficient allocation of triage resources. Second, future work should explore scalable strategies to extend SSIs' effects. Recent work suggests that the benefits of online, self-guided SSIs can be strengthened and sustained by longer-term supports that require little to no effort from users (e.g., automated text messages that reinforce an SSI's content and promote skill rehearsal) (Hecht et al. 2023, Susman et al. 2024). The utility of such strategies, especially in combination with SSIs with high scalability potential (self-guided SSIs), may forward population mental health efforts. Third, virtually all trials of SSIs to date have tested the impact of a single, stand-alone SSI rather than the effect of having access to SSIs on an as-needed basis. It is scientifically and clinically important to understand what can be accomplished through stand-alone SSIs; simultaneously, the impacts of SSIs when offered within explicit one-at-a-time delivery frameworks remain largely unknown. Integrating digital SSIs within just-in-time treatment systems, yoked to individuals' experiences of distress, has shown initial promise

(Dobias et al. 2022), as have walk-in services where SSIs are offered without wait lists, precisely when people seek support (Harper-Jacques & Foucault 2014, Harris-Lane et al. 2023, Riemer et al. 2018). The clinical and practical benefits of such systems represent a promising but relatively unexplored area of study.

More broadly, our umbrella review aimed to characterize the methodological quality of SRs of SSIs using AMSTAR 2. We found shortcomings common across most reviews, including low rates of preregistration (especially for papers published before 2018), listing each study's reason for exclusion, and reporting the primary study funding—all of which were done in $\leq$50% of reviews. In contrast, most studies included satisfactory techniques for assessing risk of bias, appropriately justified study designs, performed study selection and data extraction in duplicate, and included comprehensive literature searches. Notably, many (if not most) prior umbrella reviews of psychotherapy meta-analyses have shown similar, substantial methodological shortcomings per AMSTAR 2 (e.g., Berendsen et al. 2024, De Santis et al. 2022, Sanchez de Ribera et al. 2020). To strengthen the rigor of SRs of SSIs and other mental health interventions, we recommend that researchers closely reference AMSTAR 2 as a methodological guide.

Our review highlights gaps in SSI research. First, no SRs focused on SSIs for older adults despite significant needs for accessible mental health interventions for this population. Additionally, one of the included SRs highlighted the dearth of research on SSIs adapted for autistic children or adults' mental health needs (Adams 2024), which are high and underaddressed. Given initial evidence that digital SSIs can reduce depressive symptoms in autistic youth (Gerber et al. 2024), this reflects a promising area of future study. Third, no SRs evaluated SSIs that targeted traumatic stress. The lack of focus on trauma-focused SSIs may reflect a distancing of trauma researchers from brief interventions, following unhelpful-to-negative effects observed for CISD interventions (reviews of which were intentionally excluded from our synthesis). Several facets of CISD make it unlike effective SSIs (e.g., CISD uses arguably coercive strategies that direct people to relive traumatic experiences shortly after experiencing them, contrasting directly with evidence-based treatment approaches). Moreover, brief non-CISD interventions, such as written exposure therapy (which is not an SSI but is still quite brief), have shown noninferiority to longer treatments for posttraumatic stress disorder (Held et al. 2019, Sloan et al. 2022); likewise, solution-focused single-session therapies have been applied to trauma-affected populations in humanitarian contexts, where treatment resources are often scarce (Paul & Ommeren 2013). As such, investigating the potential for SSIs to support trauma-affected populations presents a promising avenue for future work.

Most of the SRs included in our synthesis noted the possible scalability of SSIs. However, scalability potential is not synonymous with implementation success. None of the 24 reviews on the effectiveness of SSIs reported on implementation outcomes, such as the proportion of individuals with unmet mental health needs who accessed or completed an SSI when offered, the fidelity of SSI delivery, or sustainment after research projects ended. Likewise, no reviews addressed determinants of (un)successful SSI deployment, which likely vary across populations, SSI implementation contexts (e.g., online, in schools, in emergency departments), and by broader ecological factors (e.g., availability of insurance reimbursement for SSIs, laws regarding youths' ability to access mental health supports independently; Schleider & Fox 2025). As such, research on the dissemination and implementation of evidence-based SSIs remains lacking and needed. We have previously discussed steps that researchers can take, by applying validated theories and frameworks from implementation science, to better integrate effective SSIs into existing systems of care (Cohen et al. 2024). To help realize the often-discussed promise of SSIs to bridge gaps in mental health care, we recommend an integrative focus on both effectiveness and implementation outcomes in future SSI research (Curran et al. 2012).

Overall, a large body of research supports the modest but significant clinical utility of certain self-guided and provider-delivered SSIs for youth and adults, including SSIs that target anxiety symptoms, depression symptoms, substance use, and externalizing problems (in youth), as well as SSIs to enhance connections with longer-term care. Direct comparisons to multisession treatments suggest that SSIs may, in some contexts, perform similarly to longer-term psychotherapies. However, SSIs will prove most useful as a means of complementing and extending existing mental health care systems rather than as one of replacing multisession therapies—which a subset of people do access and benefit from, and which some individuals will require regardless of SSI completion. Implementation research will be essential in realizing the demonstrated potential of SSIs to help bridge the treatment gap by supporting individuals within and beyond formal systems of care.

SUMMARY POINTS

1. The need for sustainable methods of bridging the mental health treatment gap has spurred interest in single-session interventions (SSIs), defined as structured programs that intentionally involve just one encounter with a clinic, provider, or program.
2. Our umbrella review aimed to characterize whether, how much, and for which problems and populations SSIs have reduced mental health concerns and improved service engagement, based on systematic reviews of SSI trials including children, adolescents, and adults.
3. Across 24 systematic reviews of SSIs, which included 415 unique clinical trials, 20 reviews reported significant, positive effects of SSIs for one or more clinical outcomes. Across 12 reviews that meta-analytically examined SSIs' effectiveness, SSIs showed a significant, beneficial effect across outcomes and age groups relative to controls (standardized mean difference = −0.25).
4. Some methodological concerns emerged across systematic reviews, such as low rates of review preregistration, suggesting opportunities for methodological improvement.
5. Evidence supports modest but significant clinical utility of certain SSIs for youth and adults, including SSIs that target anxiety symptoms, depression symptoms, substance use, and externalizing problems (in youth), and SSIs to enhance connections with longer-term care.
6. SSIs may prove most useful as a means of complementing, extending, and increasing the accessibility of mental health systems rather than replacing higher-intensity treatments.
7. Implementation research is needed to realize the potential of SSIs to support individuals within and outside formal systems of care.

DISCLOSURE STATEMENT

J.L.S. serves on the Scientific Advisory Board for Walden Wise and the Clinical Advisory Board for Koko, has received consulting fees from United Health and Woebot, and receives book royalties from New Harbinger; Oxford University Press; and Little, Brown Book Group. She is co-founder and chief scientific advisor for Mindly. No Mindly products were used or are referenced in the present manuscript. The authors report no other financial conflicts or competing interests.

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LITERATURE CITED

References in boldface indicate systematic reviews or meta-analyses that have been included in the present umbrella review.

Aafjes-van Doorn K, Sweeney K. 2019. The effectiveness of initial therapy contact: a systematic review. *Clin. Psychol. Rev.* 74:101786. https://doi.org/10.1016/j.cpr.2019.101786

Abel MR, Bianco A, Gilbert R, Schleider JL. 2022. When is psychotherapy brief? Considering sociodemographic factors, problem complexity, and problem type in U.S. adolescents. *J. Clin. Child Adolesc. Psychol.* 51(5):740–49. **https://doi.org/10.1080/15374416.2020.1759076**

Adams D. 2024. Brief report: single-session interventions for mental health challenges in autistic people: an (almost) empty systematic review. *J. Autism Dev. Disord.* https://doi.org/10.1007/s10803-024-06313-6

Alexander F, French TM, Bacon CL, Benedek T, Fuerst RA, et al. 1946. *Psychoanalytic Therapy: Principles and Application*. New York: Ronald Press

Asarnow JR, Baraff LJ, Berk M, Grob CS, Devich-Navarro M, et al. 2011. An emergency department intervention for linking pediatric suicidal patients to follow-up mental health treatment. *Psychiatr. Serv.* 62(11):1303–9. **https://doi.org/10.1176/appi.ps.62.11.1303**

Bados A, Balaguer G, Saldana C. 2007. The efficacy of cognitive-behavioral therapy and the problem of drop-out. *J. Clin. Psychol.* 63(6):585–92. **https://doi.org/10.1002/jclp.20368**

Ball J, Thompson Z, Meiser-Stedman R, Chiu K. 2024. *Self-administered single session interventions for mental health in young people: a systematic review and meta-analysis*. Work. Pap., Univ. East Anglia, Norwich, UK. https://doi.org/10.2139/ssrn.4856261

Barrett MS, Chua WJ, Crits-Christoph P, Gibbons MB, Casiano D, Thompson D. 2008. Early withdrawal from mental health treatment: implications for psychotherapy practice. *Psychotherapy* 45(2):247–67. **https://doi.org/10.1037/0033-3204.45.2.247**

Berendsen S, Berendse S, van der Torren J, Vermeulen J, de Haan L. 2024. Cognitive behavioural therapy for the treatment of schizophrenia spectrum disorders: an umbrella review of meta-analyses of randomised controlled trials. *EClinicalMedicine* 67:102392. **https://doi.org/10.1016/j.eclinm.2023.102392**

Bertuzzi V, Fratini G, Tarquinio C, Cannistra F, Granese V, et al. 2021. Single-session therapy by appointment for the treatment of anxiety disorders in youth and adults: a systematic review of the literature. *Front. Psychol.* 12:721382. https://doi.org/10.3389/fpsyg.2021.721382

Bloom BL. 1981. Focused single session therapy: initial development and evaluation. In *Forms of Brief Therapy*, ed. SH Budman, pp. 167–216. New York: Guilford

Bloom BL. 2001. Focused single-session psychotherapy: a review of the clinical and research literature. *Brief Treat. Crisis Interv.* 1(1):75–86. **https://doi.org/10.1093/brief-treatment/1.1.75**

Bosse Chartier G, Lam F, Bergmans Y, Lofchy J, Bolton JM, et al. 2023. "Psychotherapy in the pressure cooker": a systematic review of single session psychosocial interventions in emergency departments for suicide-related thoughts or behaviors. *J. Psychiatr. Pract.* 29(4):291–307. https://doi.org/10.1097/PRA.0000000000000725

Breuer J, Freud S. 1955. *The Standard Edition of the Complete Psychological Words of Sigmund Freud*, Vol. 2: *Studies on Hysteria (1893–1895)*, transl. SJ London. London: Hogarth

Bryan CJ, Mintz J, Clemans TA, Leeson B, Burch TS, et al. 2017. Effect of crisis response planning versus contracts for safety on suicide risk in U.S. Army Soldiers: a randomized clinical trial. *J. Affect. Disord.* 212:64–72. **https://doi.org/10.1016/j.jad.2017.01.028**

Cameron CL. 2007. Single session and walk-in psychotherapy: a descriptive account of the literature. *Couns. Psychother. Res.* 7(4):245–49. **https://doi.org/10.1080/14733140701728403**

Campbell A. 2012. Single-session approaches to therapy: time to review. *Aust. N.Z. J. Fam. Ther.* 33(1):15–26. **https://doi.org/10.1017/aft.2012.3**

Carney T, Myers B. 2012. Effectiveness of early interventions for substance-using adolescents: findings from a systematic review and meta-analysis. *Subst. Abuse Treat. Prev. Policy* 7:25. https://doi.org/10.1186/1747-597X-7-25

Chen JW, Zhu K. 2024. Single exercise for core symptoms and executive functions in ADHD: a systematic review and meta-analysis. *J. Atten. Disord.* 28(4):399–414. https://doi.org/10.1177/10870547231217321

Cohen K, Dobias M, Morris R, Schleider J. 2023. Improving uptake of mental health crisis resources: randomized test of a single-session intervention embedded in social media. *J. Behav. Cogn. Ther.* 33(1):24–34. **https://doi.org/10.1016/j.jbct.2022.12.001**

Cohen KA, Smith AC, Schleider JL. 2024. Integrating single-session interventions into existing care systems: conceptualizing implementation through the RE-AIM framework. *Adv. Psychiatry Behav. Health* 4(1):81–89. **https://doi.org/10.1016/j.ypsc.2024.04.006**

Cuijpers P, Miguel C, Ciharova M, Harrer M, Basic D, et al. 2024. Absolute and relative outcomes of psychotherapies for eight mental disorders: a systematic review and meta-analysis. *World Psychiatry* 23(2):267–75. **https://doi.org/10.1002/wps.21203**

Cummings NA, Follette WT. 1979. Brief psychotherapy and medical utilization. *Psychology and National Health Insurance: A Sourcebook*, ed. CA Kiesler, NA Cummings, GR VandenBos, pp. 228–33. Washington, DC: Am. Psychol. Assoc. **https://doi.org/10.1037/10070-022**

Curran GM, Bauer M, Mittman B, Pyne JM, Stetler C. 2012. Effectiveness-implementation hybrid designs: combining elements of clinical effectiveness and implementation research to enhance public health impact. *Med. Care* 50(3):217–26. **https://doi.org/10.1097/MLR.0b013e3182408812**

De Santis KK, Lorenz RC, Lakeberg M, Matthias K. 2022. The application of AMSTAR2 in 32 overviews of systematic reviews of interventions for mental and behavioural disorders: a cross-sectional study. *Res. Synth. Methods* 13(4):424–33. **https://doi.org/10.1002/jrsm.1532**

Dobias ML, Chen S, Fox K, Schleider JL. 2023. Brief interventions for self-injurious thoughts and behaviors in young people: a systematic review. *Clin. Child Fam. Psychol. Rev.* 26(2):482–568. **https://doi.org/10.1007/s10567-023-00424-9**

Dobias ML, Morris R, Schleider JL. 2022. Single-session interventions embedded within Tumblr: acceptability, feasibility, and utility study. *JMIR Form. Res.* 6(7):e39004. **https://doi.org/10.2196/39004**

Dochat C, Wooldridge JS, Herbert MS, Lee MW, Afari N. 2021. Single-session acceptance and commitment therapy (ACT) interventions for patients with chronic health conditions: a systematic review and meta-analysis. *J. Context. Behav. Sci.* 20:52–69. https://doi.org/10.1016/j.jcbs.2021.03.003

Dodge KA, Prinstein MJ, Evans AC, Ahuvia IL, Alvarez K, et al. 2024. Population mental health science: guiding principles and initial agenda. *Am. Psychol.* 79(6):805–23. **https://doi.org/10.1037/amp0001334**

Dryden W. 2020. Single session one-at-a-time therapy: a personal approach. *Aust. N.Z. J. Fam. Ther.* 41(3):283–301. **https://doi.org/10.1002/anzf.1424**

Erbay Dalli O, Bozkurt C, Yildirim Y. 2023. The effectiveness of music interventions on stress response in intensive care patients: a systematic review and meta-analysis. *J. Clin. Nurs.* 32(11–12):2827–45. https://doi.org/10.1111/jocn.16401

Evans-Lacko S, Aguilar-Gaxiola S, Al-Hamzawi A, Alonso J, Benjet C, et al. 2018. Socio-economic variations in the mental health treatment gap for people with anxiety, mood, and substance use disorders: results from the WHO World Mental Health (WMH) surveys. *Psychol. Med.* 48(9):1560–71. **https://doi.org/10.1017/S0033291717003336**

Fox KR, Huang X, Guzman EM, Funsch KM, Cha CB, et al. 2020. Interventions for suicide and self-injury: a meta-analysis of randomized controlled trials across nearly 50 years of research. *Psychol. Bull.* 146(12):1117–45. **https://doi.org/10.1037/bul0000305**

Gerber AH, Nahmias A, Schleider JL, Lerner MD. 2024. Results from a pilot randomized controlled trial of a single-session growth-mindset intervention for internalizing symptoms in autistic youth. *J. Autism Dev. Disord.* **https://doi.org/10.1007/s10803-024-06341-2**

Ghosh A, Singh P, Das N, Pandit PM, Das S, Sarkar S. 2022. Efficacy of brief intervention for harmful and hazardous alcohol use: a systematic review and meta-analysis of studies from low middle-income countries. *Addiction* 117(3):545–58. https://doi.org/10.1111/add.15613

Godbee M, Kangas M. 2020. The relationship between flexible perspective taking and emotional well-being: a systematic review of the "self-as-context" component of acceptance and commitment therapy. *Behav. Ther.* 51(6):917–32. https://doi.org/10.1016/j.beth.2019.12.010

Harper-Jacques S, Foucault D. 2014. Walk-in single-session therapy: client satisfaction and clinical outcomes. *J. Syst. Ther.* 33(3):29–49. **https://doi.org/10.1521/jsyt.2014.33.3.29**

Harris-Lane LM, Keeler-Villa NR, Bol A, Burke K, Churchill A, et al. 2023. Implementing One-at-a-Time Therapy in community addiction and mental health centres: a retrospective exploration of the implementation process and initial outcomes. *BMC Health Serv. Res.* 23(1):982. **https://doi.org/10.1186/s12913-023-09923-5**

Hecht CA, Gosling SD, Bryan CJ, Jamieson JP, Murray JS, Yeager DS. 2023. When do the effects of single-session interventions persist? Testing the mindset + supportive context hypothesis in a longitudinal randomized trial. *JCPP Adv.* 3(4):e12191. **https://doi.org/10.1002/jcv2.12191**

Held P, Bagley JM, Klassen BJ, Pollack MH. 2019. Intensively delivered cognitive-behavioral therapies: an overview of a promising treatment delivery format for PTSD and other mental health disorders. *Psychiatr. Ann.* 49(8):339–42. **https://doi.org/10.3928/00485713-20190711-01**

Hennessy EA, Johnson BT. 2020. Examining overlap of included studies in meta-reviews: guidance for using the corrected covered area index. *Res. Synth. Methods* 11(1):134–45. **https://doi.org/10.1002/jrsm.1390**

Holliday R, Hong B, McColl E, Livingstone-Banks J, Preshaw PM. 2021. Interventions for tobacco cessation delivered by dental professionals. *Cochrane Database Syst. Rev.* 2(2):CD005084. **https://doi.org/10.1002/14651858.CD005084.pub4**

Huh D, Mun EY, Larimer ME, White HR, Ray AE, et al. 2015. Brief motivational interventions for college student drinking may not be as powerful as we think: an individual participant-level data meta-analysis. *Alcohol Clin. Exp. Res.* 39(5):919–31. **https://doi.org/10.1111/acer.12714**

Jaroszewski AC, Morris RR, Nock MK. 2019. Randomized controlled trial of an online machine learning-driven risk assessment and intervention platform for increasing the use of crisis services. *J. Consult. Clin. Psychol.* 87(4):370–79. **https://doi.org/10.1037/ccp0000389**

Joseph J, Rajan SK. 2024. Evolution of single-session therapy: a bibliometric analysis. *Am. J. Psychother.* 77(2):71–78. **https://doi.org/10.1176/appi.psychotherapy.20230054**

Kazdin AE. 2019. Annual research review: expanding mental health services through novel models of intervention delivery. *J. Child Psychol. Psychiatry* 60(4):455–72. **https://doi.org/10.1111/jcpp.12937**

Kazdin AE, Blase SL. 2011. Rebooting psychotherapy research and practice to reduce the burden of mental illness. *Perspect. Psychol. Sci.* 6(1):21–37. **https://doi.org/10.1177/1745691610393527**

Keegan E, Waller G, Tchanturia K, Wade TD. 2024. The potential value of brief waitlist interventions in enhancing treatment retention and outcomes: a randomised controlled trial. *Cogn. Behav. Ther.* 53(6):608–20. **https://doi.org/10.1080/16506073.2024.2351867**

Kim J, Ryu N, Chibanda D. 2023. Effectiveness of single-session therapy for adult common mental disorders: a systematic review. *BMC Psychol.* 11(1):373. https://doi.org/10.1186/s40359-023-01410-0

Leclercq V, Beaudart C, Tirelli E, Bruyere O. 2020. Psychometric measurements of AMSTAR 2 in a sample of meta-analyses indexed in PsycINFO. *J. Clin. Epidemiol.* 119:144–45. **https://doi.org/10.1016/j.jclinepi.2019.10.005**

Leichsenring F, Steinert C, Rabung S, Ioannidis JPA. 2022. The efficacy of psychotherapies and pharmacotherapies for mental disorders in adults: an umbrella review and meta-analytic evaluation of recent meta-analyses. *World Psychiatry* 21(1):133–45. **https://doi.org/10.1002/wps.20941**

Li L, Asemota I, Liu B, Gomez-Valencia J, Lin L, et al. 2022. AMSTAR 2 appraisal of systematic reviews and meta-analyses in the field of heart failure from high-impact journals. *Syst. Rev.* 11(1):147. **https://doi.org/10.1186/s13643-022-02029-9**

Lorenz RC, Matthias K, Pieper D, Wegewitz U, Morche J, et al. 2020. AMSTAR 2 overall confidence rating: lacking discriminating capacity or requirement of high methodological quality? *J. Clin. Epidemiol.* 119:142–44. **https://doi.org/10.1016/j.jclinepi.2019.10.006**

Lorenzo-Luaces L, Howard J. 2023. Efficacy of an unguided, digital single-session intervention for internalizing symptoms in web-based workers: randomized controlled trial. *J. Med. Internet Res.* 25:e45411. **https://doi.org/10.2196/45411**

McDanal R, Shen J, Fox KR, Eaton NR, Schleider JL. 2024. Predicting transdiagnostic symptom change across diverse demographic groups in single-session interventions for adolescent depression. *Clin. Psychol. Sci.* 12(6):1056–74. **https://doi.org/10.1177/21677026231199437**

McGinnes RA, Hutton JE, Weiland TJ, Fatovich DM, Egerton-Warburton D. 2016. Review article: effectiveness of ultra-brief interventions in the emergency department to reduce alcohol consumption: a systematic review. *Emerg. Med. Australas.* 28(6):629–40. https://doi.org/10.1111/1742-6723.12624

McKay MM, Bannon WM Jr. 2004. Engaging families in child mental health services. *Child Adolesc. Psychiatr. Clin. N. Am.* 13(4):905–21. **https://doi.org/10.1016/j.chc.2004.04.001**

Mdege ND, Fayter D, Watson JM, Stirk L, Sowden A, Godfrey C. 2013. Interventions for reducing alcohol consumption among general hospital inpatient heavy alcohol users: a systematic review. *Drug Alcohol Depend.* 131(1–2):1–22. https://doi.org/10.1016/j.drugalcdep.2013.01.023

Messer M, Fuller-Tyszkiewicz M, Liu C, Anderson C, Linardon J. 2024. A randomized controlled trial of an online single session intervention for body image in individuals with recurrent binge eating. *Int. J. Eat. Disord.* 57(8):1668–79. **https://doi.org/10.1002/eat.24213**

Odgers K, Kershaw KA, Li SH, Graham BM. 2022. The relative efficacy and efficiency of single- and multi-session exposure therapies for specific phobia: a meta-analysis. *Behav. Res. Ther.* 159:104203. https://doi.org/10.1016/j.brat.2022.104203

Ono Y, Furukawa TA, Shimizu E, Okamoto Y, Nakagawa A, et al. 2011. Current status of research on cognitive therapy/cognitive behavior therapy in Japan. *Psychiatry Clin. Neurosci.* 65(2):121–29. **https://doi.org/10.1111/j.1440-1819.2010.02182.x**

Ost LG. 1989. One-session treatment for specific phobias. *Behav. Res. Ther.* 27(1):1–7. **https://doi.org/10.1016/0005-7967(89)90113-7**

Ost LG, Ollendick TH. 2017. Brief, intensive and concentrated cognitive behavioral treatments for anxiety disorders in children: a systematic review and meta-analysis. *Behav. Res. Ther.* 97:134–45. **https://doi.org/10.1016/j.brat.2017.07.008**

Paul KE, Ommeren MV. 2013. A primer on single session therapy and its potential application in humanitarian situations. *Intervention* 11(1):8–23

Perry R, Whitmarsh A, Leach V, Davies P. 2021. A comparison of two assessment tools used in overviews of systematic reviews: ROBIS versus AMSTAR-2. *Syst. Rev.* 10(1):273. **https://doi.org/10.1186/s13643-021-01819-x**

Pia F, Burkle FM, Stanley SAR, Markenson D. 2011. ACFASP review: Critical Incident Stress Debriefing (CISD). *Int. J. Aquatic Res. Educ.* 1(1):9. **https://doi.org/10.25035/ijare.05.01.09**

Pieper D, Puljak L, Gonzalez-Lorenzo M, Minozzi S. 2019. Minor differences were found between AMSTAR 2 and ROBIS in the assessment of systematic reviews including both randomized and nonrandomized studies. *J. Clin. Epidemiol.* 108:26–33. **https://doi.org/10.1016/j.jclinepi.2018.12.004**

Riemer M, Stalker CA, Dittmer L, Cait C-A, Horton S, et al. 2018. The walk-in counselling model of service delivery: Who benefits most? *Can. J. Commun. Ment. Health* 37(2):29–47. **https://doi.org/10.7870/cjcmh-2018-019**

Riper H, Spek V, Boon B, Conijn B, Kramer J, et al. 2011. Effectiveness of E-self-help interventions for curbing adult problem drinking: a meta-analysis. *J. Med. Internet Res.* 13(2):e42. https://doi.org/10.2196/jmir.1691

Riper H, van Straten A, Keuken M, Smit F, Schippers G, Cuijpers P. 2009. Curbing problem drinking with personalized-feedback interventions: a meta-analysis. *Am. J. Prev. Med.* 36(3):247–55. https://doi.org/10.1016/j.amepre.2008.10.016

Samson JE, Tanner-Smit EE. 2015. Single-session alcohol interventions for heavy drinking college students: a systematic review and meta-analysis. *J. Stud. Alcohol Drugs* 76(4):530–43. https://doi.org/10.15288/jsad.2015.76.530

Sanchez de Ribera O, Trajtenberg N, Christensen LS. 2020. Evaluating the quality of meta-analytical reviews using the AMSTAR-2: a systematic review of meta-analytical reviews regarding child sexual abuse interventions. *Child Abuse Negl.* 104:104463. **https://doi.org/10.1016/j.chiabu.2020.104463**

Schleider JL, Dobias M, Sung J, Mumper E, Mullarkey MC. 2020. Acceptability and utility of an open-access, online single-session intervention platform for adolescent mental health. *JMIR Ment. Health* 7(6):e20513. **https://doi.org/10.2196/20513**

Schleider JL, Fox KR. 2025. Multilevel interventions that protect and promote youth autonomy could reduce depression at scale. *J. Am. Acad. Child Adolesc. Psychiatry*. 64(3):P318–20. **https://doi.org/10.1016/j.jaac.2024.05.014**

Schleider JL, Mullarkey MC, Fox KR, Dobias ML, Shroff A, et al. 2022. A randomized trial of online single-session interventions for adolescent depression during COVID-19. *Nat. Hum. Behav.* 6(2):258–68. **https://doi.org/10.1038/s41562-021-01235-0**

Schleider JL, Smith AC, Graham AK. 2024. Timing matters in (mis)identifying moderators and mediators of digital interventions for eating disorders: commentary on McClure et al. 2023. *Int. J. Eat. Disord.* 57(5):1141–44. **https://doi.org/10.1002/eat.24185**

Schleider JL, Weisz JR. 2017. Little treatments, promising effects? Meta-analysis of single-session interventions for youth psychiatric problems. *J. Am. Acad. Child Adolesc. Psychiatry* 56(2):107–15. https://doi.org/10.1016/j.jaac.2016.11.007

Shafran R, Myles-Hooton P, Bennett S, Ost LG. 2021. The concept and definition of low intensity cognitive behaviour therapy. *Behav. Res. Ther.* 138:103803. **https://doi.org/10.1016/j.brat.2021.103803**

Shea BJ, Grimshaw JM, Wells GA, Boers M, Andersson N, et al. 2007. Development of AMSTAR: a measurement tool to assess the methodological quality of systematic reviews. *BMC Med. Res. Methodol.* 7:10. **https://doi.org/10.1186/1471-2288-7-10**

Shea BJ, Reeves BC, Wells G, Thuku M, Hamel C, et al. 2017. AMSTAR 2: a critical appraisal tool for systematic reviews that include randomised or non-randomised studies of healthcare interventions, or both. *BMJ* 358:j4008. **https://doi.org/10.1136/bmj.j4008**

Sloan DM, Marx BP, Resick PA, Young-McCaughan S, Dondanville KA, et al. 2022. Effect of written exposure therapy versus cognitive processing therapy on increasing treatment efficiency among military service members with posttraumatic stress disorder: a randomized noninferiority trial. *JAMA Netw. Open* 5(1):e2140911. **https://doi.org/10.1001/jamanetworkopen.2021.40911**

Smith AC, Ahuvia I, Ito S, Schleider JL. 2023. Project Body Neutrality: piloting a digital single-session intervention for adolescent body image and depression. *Int. J. Eat. Disord.* 56(8):1554–69. **https://doi.org/10.1002/eat.23976**

Spoerl OH. 1975. Abstract: single session—psychotherapy. *Dis. Nerv. Syst.* 36(6):283–85. **https://www.ncbi.nlm.nih.gov/pubmed/1149589**

Stanley B, Brown GK, Brenner LA, Galfalvy HC, Currier GW, et al. 2018. Comparison of the Safety Planning Intervention with follow-up versus usual care of suicidal patients treated in the emergency department. *JAMA Psychiatry* 75(9):894–900. **https://doi.org/10.1001/jamapsychiatry.2018.1776**

Stapleton AB, Lating J, Kirkhart M, Everly GS Jr. 2006. Effects of medical crisis intervention on anxiety, depression, and posttraumatic stress symptoms: a meta-analysis. *Psychiatr. Q.* 77(3):231–38. **https://doi.org/10.1007/s11126-006-9010-2**

Stice E, Shaw H, Marti CN. 2007. A meta-analytic review of eating disorder prevention programs: encouraging findings. *Annu. Rev. Clin. Psychol.* 3:207–31. https://doi.org/10.1146/annurev.clinpsy.3.022806.091447

Stoll RD, Pina AA, Schleider J. 2020. Brief, non-pharmacological, interventions for pediatric anxiety: meta-analysis and evidence base status. *J. Clin. Child Adolesc. Psychol.* 49(4):435–59. **https://doi.org/10.1080/15374416.2020.1738237**

Susman ES, Chen S, Kring AM, Harvey AG. 2024. Daily micropractice can augment single-session interventions: a randomized controlled trial of self-compassionate touch and examining their associations with habit formation in US college students. *Behav. Res. Ther.* 175:104498. **https://doi.org/10.1016/j.brat.2024.104498**

Szkody E, Chang Y, Schleider JL. 2023. Serving the underserved? Uptake, effectiveness, and acceptability of digital SSIs for rural American adolescents. *J. Clin. Child Adolesc. Psychol.* **https://doi.org/10.1080/15374416.2023.2272935**

Talmon M. 1990. *Single-Session Therapy: Maximizing the Effect of the First (and Often Only) Therapeutic Encounter*. San Francisco: Jossey-Bass

Talmon M. 2012. When less is more: lessons from 25 years of attempting to maximize the effect of each (and often only) therapeutic encounter. *Aust. N.Z. J. Fam. Ther.* 33(1):6–14. **https://doi.org/10.1017/aft.2012.2**

Tan CJ, Shufelt T, Behan E, Chantara J, Koomsri C, et al. 2023. Comparative effectiveness of psychosocial interventions in adults with harmful use of alcohol: a systematic review and network meta-analysis. *Addiction* 118(8):1414–29. https://doi.org/10.1111/add.16187

Tanner-Smith EE, Lipsey MW. 2015. Brief alcohol interventions for adolescents and young adults: a systematic review and meta-analysis. *J. Subst. Abuse Treat.* 51:1–18. https://doi.org/10.1016/j.jsat.2014.09.001

Walters ST, Bennett ME, Miller JH. 2000. Reducing alcohol use in college students: a controlled trial of two brief interventions. *J. Drug Educ.* 30(3):361–72. **https://doi.org/10.2190/JHML-0JPD-YE7L-14CT**

Weir S, Willis M, Young J, Perlesz A. 2008. *The Implementation of Single Session Work in Community Health*. La Trobe Univ., Melbourne, Aust.

Weisz JR, Kuppens S, Eckshtain D, Ugueto AM, Hawley KM, Jensen-Doss A. 2013. Performance of evidence-based youth psychotherapies compared with usual clinical care: a multilevel meta-analysis. *JAMA Psychiatry* 70(7):750–61. **https://doi.org/10.1001/jamapsychiatry.2013.1176**

Weisz JR, Kuppens S, Ng MY, Eckshtain D, Ugueto AM, et al. 2017. What five decades of research tells us about the effects of youth psychological therapy: a multilevel meta-analysis and implications for science and practice. *Am. Psychol.* 72(2):79–117. **https://doi.org/10.1037/a0040360**

Wharff EA, Ginnis KB, Ross AM, White EM, White MT, Forbes PW. 2019. Family-based crisis intervention with suicidal adolescents: a randomized clinical trial. *Pediatr. Emerg. Care* 35(3):170–75. **https://doi.org/10.1097/PEC.0000000000001076**

Whiting P, Savovic J, Higgins JP, Caldwell DM, Reeves BC, et al. 2016. ROBIS: a new tool to assess risk of bias in systematic reviews was developed. *J. Clin. Epidemiol.* 69:225–34. **https://doi.org/10.1016/j.jclinepi.2015.06.005**

Wolitzky-Taylor KB, Horowitz JD, Powers MB, Telch MJ. 2008. Psychological approaches in the treatment of specific phobias: a meta-analysis. *Clin. Psychol. Rev.* 28(6):1021–37. https://doi.org/10.1016/j.cpr.2008.02.007

Yin JC, Tang LJ, Dishman RK. 2021. The effects of a single session of mindful exercise on anxiety: a systematic review and meta-analysis. *Ment. Health Phys. Act.* 21:100403. https://doi.org/10.1016/j.mhpa.2021.100403