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Behavioral Activation Disseminated by Non–Mental Health Professionals, Paraprofessionals, and Peers: A Systematic Review

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There is a striking disparity between the number of individuals with significant mental health concerns and those who are able to access care globally. One promising solution to expanding the mental health taskforce is task-sharing, or employing nonspecialists in the delivery of evidence-based interventions. Behavioral activation (BA), a brief intervention that focuses on scheduling rewarding activities into one's daily life, may have promise for delivery using task-sharing approaches due to its straightforward, flexible nature. The aim of this systematic review was to examine the current state of the literature on non-specialist-delivered BA and evaluate the evidence base of this approach. Three databases (Pubmed, PsycInfo, and Cochrane) were searched, and all articles were screened for inclusion criteria by two research assistants, included the review of titles, abstracts, and full-text. The final dataset consisted of 13 research studies, represented through 15 articles. A meta-analysis was conducted to examine the overall pooled effects of peer-delivered BA on depressive symptoms (the most widely examined clinical outcome). Studies reported on effectiveness and implementation outcomes of non-specialist-delivered BA for depression, substance use, loneliness, trauma survivors, and individuals with comorbid physical health conditions. Results provide initial support for the effectiveness of BA utilizing a task-sharing approach, and highlight the feasibility and acceptability of using nonspecialists to deliver BA in a variety of contexts, including low-resource settings.

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THE STRIKING DISPARITY between the number of individuals with significant mental health concerns and those who are able to access care is a critical public health concern. Indeed, approximately 35–75% of individuals globally need, but do not receive, mental health services (WHO, 2021). Within the U.S., 52.9 million people are estimated to have a mental illness, yet in 2020, only approximately 24.3 million people received any form of mental healthcare (Substance Abuse and Mental Health Services Administration [SAMHSA], 2021). In America, this treatment gap disproportionately affects historically underserved, marginalized communities, even after adjusting for levels of need (Cook et al., 2013). For instance, racial/ethnic minoritized individuals often have less access to mental health providers than their White counterparts, due to various barriers such as (but not limited to) stigma and systemic racism (Institute of Medicine [U.S.] Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care, 2003). Further, racial/ethnic minoritized individuals are more likely to receive inadequate (i.e., culturally unacceptable, non-evidence based, etc.) mental health care (Cook et al., 2014), which may lead to decreases in help-seeking behavior from community members. Low- and middle-income countries (LMICs) also have significantly fewer mental health providers than high-income countries (Rathod et al., 2017). This lack of access to, and engagement in, care has important individual and public health implications, such as an increased prevalence of substance use disorder and high rates of unemployment, homelessness, incarceration, and disability (Reeves et al., 2011). It is evident that innovative treatment delivery models must be employed to fill this treatment gap; however, while evidence-based interventions (EBIs) exist (e.g., cognitive behavioral therapy; Coull & Morris, 2011), they often do not reach those most in need because, in part, EBIs can be resource-intensive to deliver and difficult to scale.

One promising solution to expanding access to EBIs and growing the mental health care taskforce is task-sharing, or models where health care is delivered by trained nonspecialists (e.g., community healthcare workers, peers, teachers, community leaders, etc.). There has been an expanding interest in utilizing task-sharing models in health care due to the potential for increasing access to EBIs in a sustainable, culturally acceptable, cost-effective manner. As compared to traditional models, task-sharing models are uniquely suited to engage community members who have deep ties to and cultural understanding of their communities as interventionists, potentially bolstering the acceptability of EBIs. Indeed, task-sharing models have been employed in an array of contexts in the U.S. and abroad, including both physical medicine (Ashengo et al., 2017; Falk et al., 2020; Zhao et al., 2021) and mental health care (Hoeft et al., 2018; Musyimi et al., 2017; Thirthalli et al., 2019). Task-sharing in mental health care, specifically, has been found to be cost-effective (Patel et al., 2009), acceptable and feasible (Magidson et al., 2020; Padmanathan & De Silva, 2013; Satinsky et al., 2020), and effective in treating mental health problems (Patel et al., 2009). Task-sharing is also effective in enhancing treatment engagement for comorbid physical health concerns, such as HIV (Mdege et al., 2013).

BEHAVIORAL ACTIVATION

Behavioral activation (BA) is a manualized intervention with robust evidence supporting its efficacy in improving mood and behavioral health problems across a variety of populations (Kanter et al., 2010; Lewinsohn et al., 1976). BA may also have specific promise for delivery using task-sharing approaches due to its straightforward, flexible nature, relative to other EBIs that require more intensive training, such as cognitive behavioral therapy (CBT). Importantly, BA has comparable efficacy to other widely used EBIs, such as CBT (Gortner et al., 1998; Jacobson et al., 1996), but may be more cost- and time-efficient (Richards et al., 2016). BA is focused on scheduling rewarding activities into one's daily schedule (Kanter et al., 2010) and draws from reinforcement models, which posit that people with mental and behavioral health conditions lack adequate positive reinforcement from prosocial activities in their environment (Kanter et al., 2010; Lejuez et al., 2011). A lack of reinforcement for healthy, positive behaviors then may result in further decreases in these behaviors, ultimately leading to the maintenance of negative affect and depressive symptoms (Skinner, 1974). Thus, the goal of BA is to engage in behaviors that increase opportunities for positive reinforcement from taking part in adaptive activities in one's environment. In turn, this may lead to increases in positive thoughts and affect.

A large literature suggests that BA is highly effective in decreasing symptomology across a number of mental and behavioral health conditions. For instance, recent meta-analyses suggest

BA yields large reductions in depressive (Stein et al., 2021) and PTSD (Etherton & Farley, 2020) symptoms, and small-to-medium sized reductions in anxiety (Cuijpers et al., 2007; Stein et al., 2021). BA has also been shown to be effective in the treatment of substance use disorders (SUDs; Daughters et al., 2018; Magidson et al., 2011; Martínez-Vispo et al., 2018) and medication adherence improvement (e.g., HIV antiretroviral medication; Daughters et al., 2010; Magidson et al., 2014, 2021). Further, BA has been found effective in improving general well-being in clinical and nonclinical samples (Mazzucchelli et al., 2010), as well as in treating postbereavement grief (Papa et al., 2013). These findings point to the potential utility of BA in treating a variety of mental and behavioral health concerns.

Despite the promise of this approach for improving access to care for individuals with mental health needs, most of the available research on implementing BA utilizes trained mental health professionals to deliver the intervention (Kanter et al., 2010), which may be resource-intensive and have limited scalability in low-resource settings. Consistent with more cost-efficient task-sharing models, however, an emerging literature indicates that BA is also feasible and acceptable for nonspecialist (i.e., peers, community health workers) delivery across a number of psychological conditions and health-related behaviors and conditions (e.g., depression, SUD, medication adherence) in the U.S. (Kleinman et al., 2020; Raue, Dawson, et al., 2019; Satinsky et al., 2020) and LMICs (Magidson et al., 2020, 2021; Singla et al., 2017). While employing nonspecialists in delivering BA has the potential to increase access to EBIs broadly, it is also possible that these models may have unique implementation implications for underserved, ethnic/racial minority communities, bolstering cultural acceptability and feasibility as compared to traditional models (Kleinman et al., 2020; Satinsky et al., 2020).

CURRENT STUDY

The aim of this systematic review and meta-analysis was to examine the current state of the literature on non-specialist-delivered BA and evaluate the evidence base of this approach for broader scalability. We refer to interventionists as nonspecialists to indicate individuals without broader mental health training, though these individuals have likely received training in BA training later on as a part of their interventionist role in the current research studies. This review synthesizes literature on the effectiveness (i.e., clinical outcomes) of non-specialist-delivered, manualized BA, as well as its associated implementation outcomes (i.e., feasibility, acceptability, fidelity). A meta-analysis was also conducted to examine the effects of non-specialist delivered BA on depressive symptoms.

Methods

This systematic review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) approach (Moher et al., 2009).

ELIGIBILITY CRITERIA

All articles were screened for the following inclusion criteria: (1) intervention provider is a nonspecialist (defined below); (2) manualized, time-limited behavioral activation or activity scheduling treatment is utilized; (3) clinical, implementation, and/or activation outcomes are examined; and (4) written in English. Consistent with other reviews of this workforce (Bunn et al., 2021; Hoeft et al., 2018; Pedersen et al., 2020), nonspecialists were defined as those not holding broader training in a mental health/psychological/clinical field (i.e., social work, psychology, psychiatry); interventionists holding a bachelor's degree in one of the aforementioned fields were deemed eligible, so long as they did not report having prior specialized training in BA. Interventions delivered by graduate students, junior mental health workers or research assistants in these fields, as well as computerized/nonhuman interventions were excluded. No restrictions were placed on participant population, age, or clinical disorder. Further, no restrictions were placed on comparator/control conditions or on study designs to be included.

For the purpose of this study, we defined BA as a manualized intervention including (at least) the following elements: (1) increasing patient self-monitoring of daily activities, and (2) scheduling of activities (based on Ekers et al., 2014). Studies of interventions that included these components of BA combined with other interventions (e.g., cognitive therapies) were reviewed to assess if any results were reported in a way that would allow for disentangling the effects of BA alone.

SEARCH STRATEGY

Three databases were searched (Pubmed, PsychInfo, and Cochrane Library) using: (a) behavioral activation; *and* nonspecialist search terms. The final search terms used were: ("behavioral activation" OR "activity scheduling" or "behavioural activation" OR "behavior activation" OR "behavioral therapy" NOT "cognitive behavioral therapy") AND (lay professional OR

paraprofessional OR community health worker OR peer OR nurses OR non-mental health professionals OR non-specialist health workers OR lay). Data was initially collected January–February of 2021. In order to ensure up-to-date results, a second search was conducted in March of 2022 for papers published between February 2021–March 2022.

Following the deletion of duplicate articles, article titles and abstracts were screened by two research assistants, and studies not meeting eligibility requirements were excluded (see Figure 1). Discrepancies were discussed with a third, Ph.D.-level clinical psychologist until a consensus was reached. A full-text review of remaining articles was then conducted to confirm that all

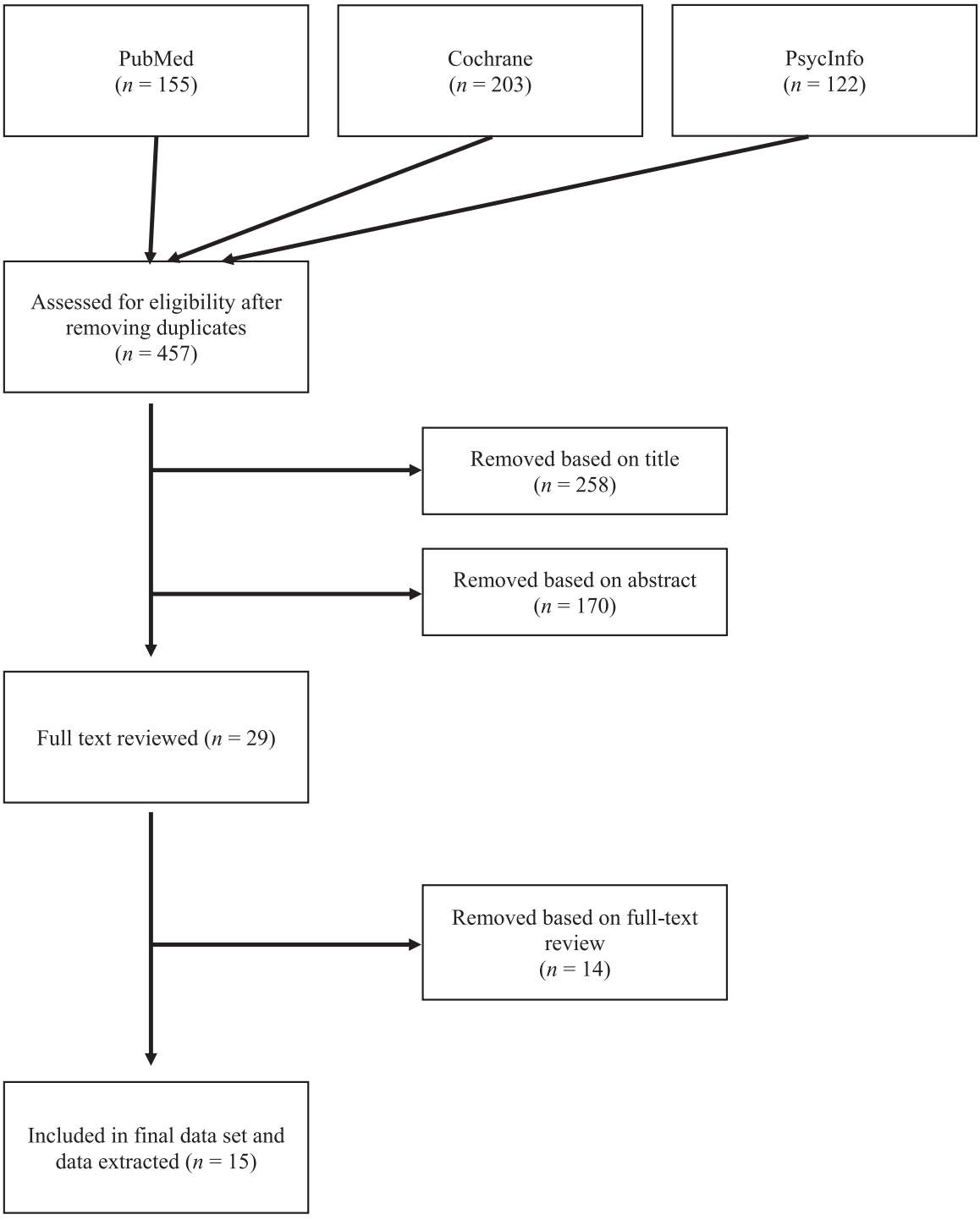

FIGURE 1 PRISMA Flow Diagram.

papers met inclusion criteria and would be included in the final dataset. Both research assistants reviewed until 80% agreement was met, and subsequent articles were reviewed by one research assistant each.

DATA EXTRACTION AND QUALITY ASSESSMENT

Data from included articles was then extracted and entered into a tracking sheet. To ensure reliability, two research assistants extracted data from the first five articles. Results were consistent, and, thus, data from all remaining articles were completed by one research assistant each. Variables extracted from articles included: citation, interventionist description, patient population description, study methodology, intervention setting, intervention description, control condition description, recruitment method, study completion rates, clinical outcomes and times of measurement, implementation outcomes, and study-identified limitations.

For randomized control trials (RCTs), the National Heart, Lung, and Blood Institute's (NHLBI's) Quality Assessment of Controlled Intervention Studies tool was used. For studies with no control group (e.g., stepped-wedge trials, open-label pilots, etc.), the NHLBI's Quality Assessment Tool for Before-After (Pre-Post) Studies with No Control Group was used. The Critical Appraisal Skills Programme (CASP) checklist was used for the assessment of qualitative studies.

META ANALYSIS

A meta-analysis was conducted to examine the overall pooled effects of peer-delivered BA on depressive symptoms (the most widely examined clinical outcome). A fixed effects meta-analytic model was evaluated using MetaXL (Barendregt & Doi, 2016), an add-on extension for Microsoft Excel. Standardized mean differences of pre-post change between active and comparison conditions with accompanying 95% CI were computed for each study. Heterogeneity between studies was evaluated by examining the Q and I^2 statistic. Q statistics reflect statistical differences between groups, such that a significant Q value indicates heterogeneity between studies. The I^2 statistic categorizes heterogeneity, with *a priori* benchmarks of 25%, 50%, and 75% reflecting low, medium, and high levels of heterogeneity between studies. Sensitivity analyses were conducted to assess the contribution of individual studies to heterogeneity.

Results

LITERATURE SEARCH RESULTS

The reference databases search yielded 457 unique results after removing 23 duplicates. Two reviewers screened each publication based on title, and removed all publications that were deemed by consensus to be unrelated to the search terms, resulting in a remaining 199 publications. Two reviewers then reviewed all abstracts, using consensus to resolve discrepancies and consulting a third arbiter when needed. Abstract review resulted in the removal of 170 publications. Following abstract review, 29 publications were reviewed in full-text. Seventeen publications were double-reviewed in order to ensure consistency among reviewers. Full-text review resulted in a final dataset of 15 publications. Of these 15, two sets of articles (Bruce et al., 2021, Choi et al., 2020b, 2020a, 2021) reported results utilizing the same samples. Thus, we will be reporting on 13 total research studies (reported via 15 articles).

STUDY DESIGN AND QUALITY

Of the 13 included studies, 8 were RCTs, 1 used a stepped wedge design, 1 was an open-label feasibility pilot, and 4 were qualitative or mixed-methods feasibility studies; the 2 articles reporting additional information from included RCTs included qualitative findings and data from a 1-year follow-up. Studies ranged in duration, and outcomes were assessed at various intervals ranging from 3 to 9 months. Eight of the articles received a quality rating of good (Bolton et al., 2014; Choi et al., 2021; Giusto et al., 2022; Magidson et al., 2021; Patel et al., 2017; Raue et al., 2021; Satinsky et al., 2020; Webster et al., 2016), which was the highest rating. The other seven articles (Au, 2015; Bruce et al., 2021; Choi et al., 2020a; Choi et al., 2020b; Darnell et al., 2019; Raue et al., 2019; Walker et al., 2018) received a rating of fair for an array of reasons, including a lack of reporting on randomization and blinding processes ($n = 6$), having dropout rates above 20% ($n = 5$), and lack of reporting on statistical power ($n = 4$). No articles were found to be methodologically poor.

STUDY CHARACTERISTICS

Participants

Nine of the 13 studies recruited participants with clinically significant/elevated depressive symptoms, and three recruited participants with

problematic substance use (see Table 1). Of the studies that recruited participants with depressive symptoms, two focused on participants with comorbid physical health conditions (i.e., multidrug resistant tuberculosis and long-term physical conditions more broadly; Magidson et al., 2021; Walker et al., 2018), and one recruited trauma survivors with depressive symptoms (Bolton et al., 2014). One study recruited participants with elevated levels of loneliness (Bruce et al., 2021; Choi et al., 2020b). Four studies included treatment setting staff and/or interventionists as study participants in addition to patient participants (Darnell et al., 2019; Raue et al., 2021; Satinsky et al., 2020; Webster et al., 2016). Across all studies, sample sizes ranged from 4 to 495. Five of the 13 studies did not report on racial/ethnic identities of their samples; of those that did report race/ethnicity, a majority (n = 5) had primarily White samples. Mean sample ages ranged from approximately 30 to 76 years old. A majority of the included studies (n = 10) used samples which primarily identified as women (i.e., samples were greater than 50% female-identifying), while 3 of the 13 used primarily male-identifying samples (Darnell et al., 2019; Giusto et al., 2022; Satinsky et al., 2020).

BA Interventions

All included interventions utilized manualized, time-limited behavioral activation or activity scheduling. Intervention dosage varied across studies, ranging from 5 to 12 weekly 30- to 60-minute sessions. One study (Darnell et al., 2019) did not specify intervention session frequency, but stated that the intervention lasted 1 month. A subset of studies (Choi et al., 2020b; Darnell et al., 2019; Giusto et al., 2022; Magidson et al., 2021; Patel et al., 2017; Raue et al., 2019; Walker et al., 2018) reported utilizing additional components aside from activity scheduling, including, but not limited to: psychoeducation, SMART goals, motivational interviewing, masculinity discussion strategies, and problem-solving skills (e.g., Life Steps). While inclusion criteria specified that studies including other interventions such as CBT may be included if it was possible to disentangle the effects of BA alone in the results, we found no such studies.

Interventionists, Training, and Supervision

Interventionists in the included studies had a variety of educational and vocational backgrounds, including: public health workers (n = 1), undergraduate students (n = 1), community mental health workers (n = 1), peer recovery specialists/persons with shared experience (n = 3; includes shared substance use and fatherhood experiences), nurses (n = 2), senior citizen volunteers (n = 2), persons with bachelor's degrees working in various unrelated roles such as communications and teaching (n = 2), and community members broadly (n = 1). Interventionist training length varied greatly between studies,[1] ranging from a 1-day workshop (Darnell et al., 2019) to a 3-week-long workshop and 6-month-long internship (Patel et al., 2017). Of note, one study (Bruce et al., 2021; Choi et al., 2020b) did not report the length of training. Trainings were often led by either Ph.D.-level clinicians (n = 4) and/or social workers from the study team (n = 2). Supervision was often conducted by those who led the trainings on a weekly basis (n = 6); however, two studies did not specify the frequency of supervision (Bruce et al., 2021; Choi et al., 2020a, 2020b, 2021). One study offered no detail on supervision, including information on whether or not it occurred (Walker et al., 2018).

EFFECTIVENESS OUTCOMES

Seven of the 13 included studies reported on effectiveness outcomes.

Depressive Symptoms

Six included studies reported depressive symptom outcomes; all six studies utilized a randomized control trial design (Au, 2015; Bolton et al., 2014; Choi et al., 2020a; Choi et al., 2020b; Patel et al., 2017; Raue et al., 2019). These studies used the following validated scales: the Center for Epidemiologic Studies–Depression Scale (CES-D), Hamilton Depression Rating Scale (HAMD), Patient Health Questionnaire 9 (PHQ-9), the Hopkins Symptom Checklist for Depression and Anxiety, and Beck Depression Inventory Version II (BDI-II). The majority of these studies (five of six) reported statistically significant findings indicating that participants receiving nonspecialist-led BA showed improvements in depressive symptoms in comparison to controls, which most often included active controls, treatment as usual (TAU) or psychoeducation (Au, 2015; Bolton et al., 2014; Choi et al., 2020a, 2020b; Patel et al., 2017). While one study (Raue et al., 2019) did not find a statistically significant reduction in depressive symptoms for participants who received BA (compared to the control) at follow-up, authors descriptively reported that participants randomized to the intervention condition showed a mean 8-point

[1] Some studies reported on preliminary qualitative findings, rather than interventions. Thus, not all numbers will add to the review sample size (N = 13).

Table 1
Summary of Findings

Author, year	Clinical pathology/study sample	Study design	Interventionist background	Intervention Country	Effectiveness outcomes	Implementation outcomes
Au, 2015	Primary caregivers of patients with Alzheimer's who are also their spouse, child, or sibling of the care recipient ($N = 96$) – observed levels of depression symptoms	RCT	University students	China	Significant reduction in depressive symptoms compared to control; the psychoeducation & BA group showed significant reduction between midpoint and post treatment, whereas the psychoeducation alone group did not.	–
Bolton et al., 2014	Depression in trauma survivors of systemic violence ($N = 281$)	RCT	Community mental health workers	Iraq	BA had significant effects on depression, dysfunction, post-traumatic stress, post-traumatic grief, and anxiety compared to controls.	–
Bruce et al., 2021[a]	Home-delivered meal clients aged 50+ who reported loneliness to case managers ($N = 64$)	RCT	Bachelors-level individuals with no previous training	USA	At one-year, Tele-BA participants, compared to controls, reported higher social interaction and satisfaction with social support and lower levels of loneliness, depression, and disability.	–
Choi et al., 2020a[b]	Homebound, depressed elderly individuals ($N = 277$)	RCT	Bachelors-level individuals with no previous training	USA	Compared to controls, BA participants showed significant reductions in depressive symptoms and disability scores, as well as improvements in social engagement and activities and satisfaction with participation in social roles. BA, did not, however, out-perform a group who problem-solving therapy.	Authors state their findings suggest that lay counselors can deliver evidence-based treatment with fidelity, but did not report fidelity scores.
Choi et al., 2020b[a]	Home-delivered meal clients aged 50+ who reported loneliness to case managers ($N = 89$)	RCT	Bachelors-level individuals with no previous training	USA	Effect sizes show that Tele-BA had a medium effect on reducing loneliness and small-to-medium effects on the rest of the outcome measures (depression, disability and satisfaction with social support), all in the expected directions.	–
Choi et al., 2021[b]	90 depressed, homebound older adults in Central Texas who were enrolled in the Tele-BA arm of an RCT listed above (Choi et al., 2020a)	Mixed-methods results of an RCT listed above	Bachelors-level individuals with no previous training	USA	–	Participants quantitatively scored the intervention highly in both feasibility and acceptability. Qualitative data supported feasibility and acceptability of the non-specialist led intervention as well.
Darnell et al., 2019	40 patients and 4 nurses from two level II trauma centers in hospitals	Mixed-methods; pilot of non-specialist BA training	Nurses with no previous mental health training	USA	–	Nurse exit interview responses reflected willingness and greater confidence in engaging patients around mental health concerns after training, particularly with ongoing support from the intervention supervisory team. Nurses also demonstrated high intervention fidelity.
Giusto et al., 2022	Fathers with alcohol use disorder ($N = 9$). Of note, depressive symptoms were a target of the intervention, but this was not screened due to common under-reporting.	Open-label feasibility pilot; qualitative exit interviews	Men from the community who are also fathers	Kenya	–	The non-professional led BA intervention was found to have high feasibility and acceptability through high completion rates ($n = 8$) and high rates of homework completion. and Participant indicated that they enjoyed and understood intervention content, perceived BA utility in their life, and found session length to be acceptable.
Magidson et al., 2021	Individuals with substance use disorder and who are living with HIV ($N = 61$).	RCT	A community health worker with shared experience (i.e., a peer)	South Africa	Participants who received the BA intervention self-reported lower frequency of alcohol use compared to those in the control, however both groups exhibited decreases in biomarker assessments of alcohol use. A behavioral measure of HIV medication adherence indicated that those who received the intervention had a larger increase in adherence than those in the control (descriptively).	Participants rated the intervention as having high feasibility, acceptability and appropriateness. 70% of participants completed the entirety of the intervention, whereas 68% of the control group attended at least one session of TAU. The interventionist displayed high fidelity through both self-report and independent-rater assessment.

Patel et al., 2017	Individuals with depression ($N = 495$)	RCT	Lay therapists recruited from the local community	India	Participants who received the BA intervention ad significantly lower depression symptom severity than the control group. The intervention group also showed better results in secondary outcomes, including disability, days out of work, intimate partner physical violence in women, and suicidal thoughts or attempts, than the control.	The incremental cost per quality-adjusted life-year gained was $9333, with an 87% chance of being cost-effective in the study setting. Feasibility and acceptability were evidenced by high ratings of therapy quality and treatment completion.
Raue et al., 2021	Patients ($n = 140$), volunteers ($n = 124$) and administrators and staff ($n = 12$) across four senior centers	Preliminary mixed-methods study	Senior center volunteers	USA	–	81% of clients reported that they would consider participating in the intervention, and 59% percent of volunteers expressed interest in learning how to deliver the intervention. Administrators and staff reported high comfort levels with proposed volunteer training procedures. Administrators and staff also identified funding and staffing challenges that may act as a barrier to intervention feasibility. 25% of patients were endorsed elevated depressive symptoms (the primary outcome of interest).
Raue et al., 2019	Senior center patients with depression ($N = 18$)	RCT	Senior center volunteers	USA	While there were no statistically significant differences in depressive symptoms between groups at 12-week follow-up, intervention clients showed an 8-point reduction in comparison with a 0-point reduction among the control.	Participants who received the intervention reported high levels of satisfaction with the intervention and showed high levels of attendance. 64% (7/11) of volunteer interventionists completed the intervention training.
Satinsky et al., 2020	Community resource center clients with past or present problematic substance use ($n = 30$) and staff ($n = 5$), as well as community peer recovery coaches (PRCs; $n = 6$)	Preliminary qualitative study	PRC	USA	–	Clients, staff and PRCs provided feedback that BA would be appropriate to be delivered by PRCs to people with substance use disorder. Participants also identified both barriers and facilitators to the intervention, and found that with modifications, the intervention would be feasible. Clients indicated high levels of interest in working with a PRC due to traits such as their shared substance use experience and ability to role model recovery.
Walker et al., 2018	Patients with multidrug-resistant tuberculosis (MDR-TB) and depression ($n = 12$); those who did not screen for depression or low social support ($n = 123$) received other forms of support through the stepped care model	Mixed-methods stepped care model intervention	MDR-TB treatment center staff with no previous training	Nepal	–	The authors found that due to MDR-TB staff (i.e., intervention counselors) time constraints, the intervention was not feasible in this setting. Counselor diary reports and interviews with counselors, patients and other staff evidenced intervention acceptability. Authors report high intervention fidelity but do not report a fidelity score.
Webster et al., 2016	Medical center staff ($n = 10$) and patients with long-term physical conditions and co-morbid depression ($n = 4$)	Nested qualitative evaluation within a service development pilot	Practice nurses	United Kingdom	–	Participants saw nurse delivered BA as acceptable and potentially effective; found the intervention to the acceptable in terms of its simplicity and workability. Various barriers including payment/funding of nurses, competing practice priorities, and lack of engagement indicated that this intervention may not be feasible in this setting.

[a,b] Publications report results from the same sample.

HAM-D reduction, whereas there was no change in the mean in the control condition.

Across studies the effect magnitude ranged from 0.48 to 2.19 (Figure 2). Meta-analysis results suggest an overall significant effect for peer-delivered BA in reducing depressive symptoms relative to comparison conditions ($d = 0.61$, 95% CI = 0.48 to 0.74), indicating a medium effect size. Results of tests for heterogeneity suggest medium (but not reaching statistically significant) levels of heterogeneity between studies ($I^2 = 52\%$; $Q = 10.40$, $p = 0.060$). A sensitivity analysis was conducted by excluding individual studies. Findings indicate only small changes in the degree of heterogeneity and nonsignificant changes in results, reflecting the diversity of studies on lay-delivered approaches available in the literature.

Substance Use

One study (Magidson et al., 2021) reported on substance use as a primary outcome. This study utilized both self-report (Timeline Follow-back; TLFB) and biomarker measures of alcohol use (PEth), and monitored HIV medication adherence as a secondary outcome using a behavioral measurement tool called Wisepill. Results indicated that individuals using drugs and alcohol, there was a greater reduction in alcohol use quantity in the active condition compared to enhanced TAU over 6 months through self-report (TLFB), though both groups had a significant decrease in PEth (biomarker of alcohol use). This study also observed a higher increase in HIV medication adherence in the intervention group than the comparison condition, though the authors did not find statistically significant differences between the two groups.

Loneliness

One study reported loneliness as a primary outcome (Choi et al., 2020b), utilizing the 8-item PROMIS (Patient-Reported Outcomes Measurement Information System) Social Isolation Scale (PROMIS-L). This study reported that nonspecialist-led BA significantly reduced loneliness at posttreatment follow-up compared to the control condition (Choi et al., 2020b) as well as at 1-year follow-up (Bruce et al., 2021).

Posttraumatic Stress, Posttraumatic Grief, and Anxiety

One study (Bolton et al., 2014) investigated changes in posttraumatic stress, posttraumatic grief, and anxiety symptoms as secondary outcomes. This study did not clearly define the measures used to assess these outcomes, but reported moderate effects on all secondary outcomes for individuals who received the BA intervention.

Activation

Two studies reported on levels of behavioral engagement/activation (i.e., the degree to which participants engaged in rewarding, positive behaviors) as a study outcome (Choi et al., 2020a; Patel et al., 2017). Both found that participants who received BA reported significantly higher levels of behavioral engagement/activation than the control group at posttreatment follow-up.

IMPLEMENTATION OUTCOMES

Feasibility and Acceptability

The included studies differed in their definitions and operationalizations of feasibility and acceptability, some in ways which overlapped. Due to this, we describe these findings within one section, although feasibility and acceptability are indeed two distinct constructs. Of the 13 studies, 7 reported feasibility outcomes (Giusto et al., 2022; Magidson et al., 2021; Patel et al., 2017; Raue et al., 2019; Satinsky et al., 2020; Walker et al., 2018; Webster et al., 2016). Of these 7, no

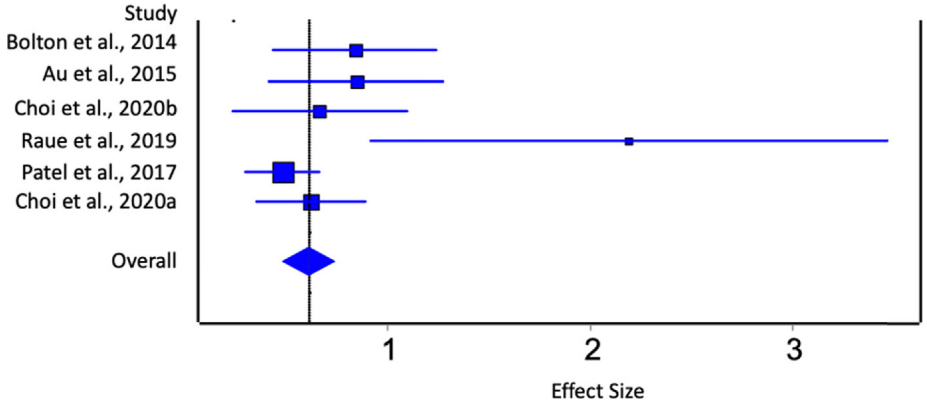

FIGURE 2 A Forest plot of the effect size of differences in the changes in depressive symptoms from pre to post intervention (with upper and lower CI bars).

study reported establishing specific criteria or benchmarks *a priori* to define feasibility. Throughout all of the 7 studies, feasibility was difficult to define and explicitly separate from acceptability. Feasibility was operationalized in a number of ways, including: how well the intervention could be delivered within the study setting's current treatment program (Walker et al., 2018), the extent to which the intervention could be integrated into the everyday practice of a collaborative care framework (Webster et al., 2016), the success of training lay volunteers to deliver the intervention with fidelity (Raue et al., 2019), the uptake of patients, meaning the percentage who initiated the intervention in addition to session attendance (Magidson et al., 2021), and patient session attendance coupled with homework completion rates (Giusto et al., 2022). Two of the studies did not report definitions of feasibility (Satinsky et al., 2020, and Patel et al., 2017).

Both Walker et al. (2018) and Webster et al. (2016) concluded their interventions were not feasible to administer in their study settings (multidrug-resistant tuberculosis treatment centers and primary care practices) due to various barriers such as a lack of time for nurses to commit to the intervention, shared resources being used on higher priority tasks, a lack of engagement by team members, and competing team member priorities that were expressed during interventionist and study team member semistructured interviews. On the other hand, client, staff, and peer recovery coach feedback from qualitative interviews in Satinsky et al. (2020) suggested the intervention could be feasible in that setting (a community center in a low-resource area). Similarly, Raue et al. (2019) suggested their intervention was feasible in aging service settings given the high success rate they achieved in training lay professionals to deliver the intervention with fidelity but noted the small sample size of volunteer interventionists as a limitation of this finding. Magidson et al. (2021) found their intervention to be feasible, noting that 100% of participants completed at least one intervention session and 70% attended all six sessions. Additionally, Giusto et al. (2022) conducted qualitative interviews with participants who reported the utility of the intervention content in their lives and acceptance of the session length. Participants in this study had high rates of homework completion and session attendance (97.6%). Using these findings, Giusto et al. (2022) concluded their intervention was feasible. Finally, Patel et al. (2017) reported high rates of participant retention (93%) at 3-month follow-up with qualitative data reflecting high ratings of therapy quality by clients as evidence of the feasibility of their intervention.

Nine of the 13 studies reported acceptability outcomes (Choi et al., 2021; Darnell et al., 2019; Giusto et al., 2022; Magidson et al., 2021; Raue et al., 2019; Raue et al., 2021; Satinsky et al., 2020; Walker et al., 2018; Webster et al., 2016). Again, no study explicitly reported establishing criteria or benchmarks for acceptability *a priori,* and did not clearly operationalize how determinations were made regarding construct findings. Acceptability was more broadly defined in several ways, including: client willingness to participate in the intervention (Raue et al., 2021), staff comfort with the proposed procedures (Raue et al., 2021), patient completion of homework activities (Giusto et al., 2022), patient willingness and satisfaction with working with a nonspecialist (Choi et al., 2021, Satinsky et al., 2020, Webster et al., 2016), patient initiation of the intervention (Magidson et al., 2021), patient session attendance (Giusto et al., 2022, and Magidson et al., 2021), and client satisfaction (Raue et al., 2019). Acceptability was also grouped with feasibility in 3 of the studies (Choi et al., 2021, Giusto et al., 2022, Magidson et al., 2021). Each of the 9 studies deemed their intervention acceptable to their respective participants, including patients, clients, counsellors, coaches, and staff. Qualitative measures such as interviews (Darnell et al., 2019; Giusto et al., 2022; Raue et al., 2021; Satinsky et al., 2020; Walker et al., 2018; Webster et al., 2016), reflective diaries (Walker et al., 2018), and open-ended survey responses (Raue et al., 2019; Raue et al., 2021) were used to obtain feedback about the acceptability of the interventions. Three studies used a quantitative measure of acceptability. Raue et al. (2019) examined mean scores on a measure of client satisfaction composed of three items on a 4-point scale, in addition to open-ended questions, and determined the intervention was acceptable. Similarly, Magidson et al. (2021) examined mean scores on a measure validated for assessing implementation outcomes in low- and middle-income countries (LMICs), including acceptability using an established measure (Haroz et al., 2019), but did not report if a specific cut-off was used. The authors reported determining that results indicated acceptability. Last, Choi et al. (2021) assessed acceptability using an 11-item Treatment Evaluation Inventory scale developed for geriatric depression treatments. Mean scores indicated very high levels of acceptability of Tele-BA by lay counselors, but no specific cut-off was used.

Fidelity

Of the 13 studies, 5 reported fidelity outcomes (Choi et al., 2020a; Darnell et al., 2019; Magidson et al., 2021; Raue et al., 2019; Walker et al., 2018). Of the 2, two reported their interventions could be delivered with fidelity, but did not specify a threshold for what would meet these criteria (Choi et al., 2020a; Walker et al., 2018). Like the other implementation constructs, specific cutpoints to determine whether an intervention was delivered with overall fidelity was not included in any of the studies, although specific thresholds were made for determining the fidelity of individual sessions in three studies. Fidelity was monitored in Walker et al. (2018) through counsellor diaries reflecting the specific content covered in each intervention session. In another study, the authors reported that a clinical social worker evaluated fidelity in 20% of the intervention sessions, but did not specify the procedures for measuring fidelity or coding session content (Choi et al., 2020a).

Three of the studies (Darnell et al., 2019; Magidson et al., 2021; Raue et al., 2019) included specific, *a priori* criteria to define fidelity outcomes of individual intervention sessions (e.g., 80% of content was delivered as intended within one session) but did not specify an overall benchmark for intervention fidelity (e.g., 80% of all content was delivered as intended, across sessions). In Darnell et al. (2019), fidelity was defined as adherence to the primary intervention component, activity scheduling. Coders evaluated whether interventionists explained the role of avoidance in maintaining depressive symptoms and how activity scheduling could counter this avoidance. Study team members used an adherence checklist to evaluate the audio recordings of the nurse interventionists' sessions. Nurses could be classified as meeting criteria for "basic adherence" if they identified activity scheduling or goal setting as the primary focus of the session in addition to assigning some level of homework consistent with the patient's goals. All nurse interventionists in the study met criteria for basic adherence. The scores generated by this checklist in addition to scores from an adapted version of a code for measuring behavior change counselling (MITI 3.1.1) suggested the intervention could be delivered with fidelity. In Raue et al. (2019), fidelity was measured using the "Do More, Feel Better" form, including a 6-point rating scale ranging from *very poor* to *very good*. "Satisfactory fidelity" was defined as receiving a score of three or greater. Study investigators rated sessions based on the different elements counsellors covered in each session, and 85% of those sessions met criteria for satisfactory fidelity. Authors concluded the intervention could be delivered with fidelity. Last, Magidson et al. (2021) measured fidelity by randomly selecting 20% of sessions to code. Using a checklist of core session components, session recordings were rated by the interventionist themselves and an independent coder. The coder also rated common factors such as verbal communication, self-disclosure, normalization, and empathy using the ENhancing Assessment of Common Therapeutic Factors (ENACT). Interventionist self-reported fidelity was 96.5% whereas the average independent rater fidelity was 91.7%, suggesting the intervention was delivered with high levels of fidelity. Independent raters also reported high ENACT skills.

Cost Effectiveness

Only 1 (Patel et al., 2017) of the 13 studies included outcomes on cost-effectiveness. This study utilized the incremental cost per quality-adjusted life-year (QALY) gained as a measure of cost-effectiveness and created a cost-effectiveness acceptability curve demonstrating the willingness to pay per QALY gained from the intervention. The authors found an 87% chance of the intervention being cost-effective in the study setting, primary health centers in Goa, India.

Discussion

The goal of the current paper was to systematically review existing research on the effectiveness and implementation outcomes related to the delivery of an evidence-based intervention (BA) by nonspecialist interventionists. Importantly, task-sharing models that use nonspecialists to disseminate therapy have been widely implemented in LMICs and may offer a scalable and cost-effective approach to meeting the mental health needs of individuals in low-resource communities in the U.S. The current review identified 15 manuscripts (reflecting 13 unique studies) meeting inclusion criteria and a synthesis of these findings suggest promising outcomes for delivery of BA by nonspecialists. Results largely indicated the implementation potential and effectiveness of this approach but also highlight areas for future research. Types of nonspecialists varied, including volunteers, nurses/medical staff, bachelor's-level individuals, community health workers, peers, and university students, suggesting a wide array of nonspecialists who may be able to successfully deliver EBIs. Moreover, interventions took place in a variety of settings, including the U.S., South Africa, Iraq, China, England, Nepal, Kenya, and India.

All 13 studies examining the efficacy of non-specialist-delivered BA utilized manualized, time-limited interventions, and most focused on reducing depressive symptoms or related affect (including loneliness). Results largely found statistically significant decreases internalizing and relative symptomology and meta-analytic findings point specifically to the effectiveness of BA in reducing depressive symptoms. Given that depression is the leading cause of disability worldwide (Friedrich, 2017), task-sharing models that can effectively decrease depressive symptoms are particularly promising for reducing the global public health burden of this disorder. In contrast, this review revealed that strikingly little attention has been paid to the effectiveness of BA delivered by nonspecialists in treating other (nondepressive) disorders. Indeed, our review only found two studies that evaluated this approach in other clinical contexts (specifically, substance use and trauma exposure), despite evidence that BA delivered by specialized providers is effective at reducing a variety of mental and behavioral health problems and improving health outcomes (e.g. medication adherence, treatment retention; Daughters et al., 2010, 2018; Magidson et al., 2011, 2021). Moreover, only one study directly examined the effectiveness of non-specialist-delivered BA in increasing behavioral engagement/activation, the hypothesized mechanism-of-action in reinforcement models of transdisease processes. Thus, additional research into the effectiveness of this approach in targeting behavioral engagement will be critical for understanding how BA may drive changes across clinical outcomes.

Findings from the current review also suggested that, of the limited studies focused on implementation outcomes, findings appear to generally demonstrate that BA can be delivered feasibly, acceptably, and with fidelity by nonspecialists (Choi et al., 2020a; Choi et al., 2021; Darnell et al., 2019; Giusto et al., 2022; Magidson et al., 2021; Patel et al., 2017; Raue et al., 2019, 2021; Satinsky et al., 2020; Walker et al., 2018; Webster et al., 2016). Of note, two studies (Walker et al., 2018; Webster et al., 2016) reported that their studies lacked feasibility due to various factors, including source constraints and difficulty engaging staff. Given significant barriers to accessing evidence-based mental and behavioral health care, especially in low-resource settings (Keynejad et al., 2018), the ability to implement BA in nontraditional contexts (i.e., community-based centers, aging service settings) supports the promise of the scalability and widespread implementation of this approach. However, this review further highlighted the need for more research on a number of implementation outcomes as well as cost-effectiveness. For instance, only three studies assessed interventionist fidelity, suggesting a clear need for future research that can examine the fidelity of interventions delivered by nonspecialists. Additional study is also needed to determine the type and frequency of training that is required for nonspecialists and whether that may impact the cost and timeline of peer-delivered interventions. Moreover, only one study directly examined the cost-savings associated with utilizing a nonspecialist to deliver BA, finding support for this approach in improving functional outcomes relative to expenditures (Patel et al., 2017). Moreover, most of the studies included in this review failed to set specific, *a priori,* benchmarks for determining implementation success, which may have led to bias in interpreting findings.

A number of limitations within the current literature suggest specific avenues for future research. Of note, an important component of BA is how activities are chosen, aiming to identify and schedule activities that are in alignment with one's life values. We were not able to reliably determine if this was a component of the BA delivered in each of the included studies; how activities are chosen as a part of BA should be considered in future reviews. Relatedly, some of the included studies incorporated aspects other EBIs (e.g., Motivational Interviewing, Life Steps); although each study described their intervention as being primarily BA-based, we cannot disentangle the results in relation to BA versus other EBI components. It is also important to note that most BA manuals were likely streamlined from traditional BA for nonspecialist delivery. Furthermore, only approximately 50% (8 of 13) of studies included in this review were RCTs, considered the gold-0standard methodological approach for determining effectiveness. Additional, appropriately powered RCTs are needed for evaluating the effectiveness of this approach relative to alternative interventions or delivery models. Moreover, of the studies that did use RCT methodologies, none compared outcomes to BA delivered by trained specialists, limiting our ability to evaluate the noninferiority, or superiority, of non-specialist-delivered BA relative to more expensive dissemination methods. Fifth, additional factors associated with increases in either effectiveness or implementation potential related to delivery of BA by nonspecialists, such as reductions in stigma, improved affiliation related to cultural congruence, or perceived appropriateness of the intervention, need to be identified and further examined. Moreover, while a majority

of studies reported high levels of intervention cost-effectiveness, feasibility, and acceptability, these findings may not fully translate to real-world clinical settings or outside of a research context. Finally, only one study examined cost-effectiveness, an important step for future research as one of the hypothesized advantages of task-sharing approaches is their possibility for significant cost savings.

Despite these limitations, our review of the literature provides initial support for the effectiveness of BA delivered using a task-sharing approach. While future research is needed to understand the effectiveness of non-specialist-delivered BA, especially in treating disorders other than depression, results indicate the potential of this approach for application across a broader spectrum of mental and behavioral health disorders. Moreover, these findings highlight the plausibility of utilizing nonspecialists to increase the availability of EBIs in settings that have not traditionally been utilized for delivery of mental and behavioral health services. In turn, increased access to evidence-based care may address one cause of inequities in health outcomes among individuals from low-resource communities.

References

Ashengo, T., Skeels, A., Hurwitz, E. J. H., Thuo, E., & Sanghvi, H. (2017). Bridging the human resource gap in surgical and anesthesia care in low-resource countries: A review of the task sharing literature. *Human Resources for Health, 15*(1), 77. https://doi.org/10.1186/s12960-017-0248-6.

Au, A. (2015). Developing volunteer-assisted behavioral activation teleprograms to meet the needs of Chinese dementia caregivers. *Clinical Gerontologist: The Journal of Aging and Mental Health, 38*(3), 190–202. https://doi.org/10.1080/07317115.2015.1008118. APA PsycInfo®.

Barendregt, J. J., & Doi, S. A. (2016). MetaXL user guide. *Version, 4*, 2011–2016.

Bolton, P., Bass, J. K., Zangana, G. A. S., Kamal, T., Murray, S. M., Kaysen, D., Lejuez, C. W., Lindgren, K., Pagoto, S., Murray, L. K., Van Wyk, S. S., Ahmed, A. M. A., Mohammad Amin, N. M., & Rosenblum, M. (2014). A randomized controlled trial of mental health interventions for survivors of systematic violence in Kurdistan, Northern Iraq. *BMC Psychiatry, 14*, 15. https://doi.org/10.1186/s12888-014-0360-2. APA PsycInfo®.

Bruce, M. L., Pepin, R., Marti, C. N., Stevens, C. J., & Choi, N. G. (2021). One Year Impact on Social Connectedness for Homebound Older Adults: Randomized Controlled Trial of Tele-delivered Behavioral Activation Versus Tele-delivered Friendly Visits. *The American Journal of Geriatric Psychiatry, 29*(8), 771–776. https://doi.org/10.1016/j.jagp.2021.05.005.

Bunn, M., Gonzalez, N., Falek, I., Weine, S., & Acri, M. (2021). Supporting and Sustaining Nonspecialists to Deliver Mental Health Interventions in Low- and Middle-Income Countries: An Umbrella Review. *Intervention, 19*(2), 155. https://doi.org/10.4103/INTV.INTV_47_20.

Choi, N. G., Caamano, J., Vences, K., Marti, C. N., & Kunik, M. E. (2021). Acceptability and effects of tele-delivered behavioral activation for depression in low-income homebound older adults: In their own words. *Aging & Mental Health, 25*(10), 1803–1810. https://doi.org/10.1080/13607863.2020.1783516.

Choi, N., Marti, C., Wilson, N., Chen, G., Sirrianni, L., Hegel, M., ... Kunik, M. (2020a). Effect of Telehealth Treatment by Lay Counselors vs by Clinicians on Depressive Symptoms Among Older Adults Who Are Homebound: A Randomized Clinical Trial. *JAMA Network Open, 3*(8), e2015648.

Choi, N., Pepin, R., Marti, C., Stevens, C., & Bruce, M. (2020b). Improving Social Connectedness for Homebound Older Adults: Randomized Controlled Trial of Tele-Delivered Behavioral Activation Versus Tele-Delivered Friendly Visits. *American Journal of Geriatric Psychiatry*. https://doi.org/10.1016/j.jagp.2020.02.008.

Cook, B. L., Manning, W., & Alegría, M. (2013). Measuring Disparities across the Distribution of Mental Health Care Expenditures. *The Journal of Mental Health Policy and Economics, 16*(1), 3–12.

Cook, B. L., Zuvekas, S. H., Carson, N., Wayne, G. F., Vesper, A., & McGuire, T. G. (2014). Assessing Racial/Ethnic Disparities in Treatment across Episodes of Mental Health Care. *Health Services Research, 49*(1), 206–229. https://doi.org/10.1111/1475-6773.12095.

Coull, G., & Morris, P. G. (2011). The clinical effectiveness of CBT-based guided self-help interventions for anxiety and depressive disorders: A systematic review. *Psychological Medicine, 41*(11), 2239–2252. https://doi.org/10.1017/S0033291711000900.

Cuijpers, P., van Straten, A., & Warmerdam, L. (2007). Behavioral activation treatments of depression: A meta-analysis. *Clinical Psychology Review, 27*(3), 318–326. https://doi.org/10.1016/j.cpr.2006.11.001.

Darnell, D. A., Parker, L. E., Wagner, A. W., Dunn, C. W., Atkins, D. C., Dorsey, S., & Zatzick, D. F. (2019). Task-shifting to improve the reach of mental health interventions for trauma patients: Findings from a pilot study of trauma nurse training in patient-centered activity scheduling for PTSD and depression. *Cognitive Behaviour Therapy, 48*(6), 482–496. https://doi.org/10.1080/16506073.2018.1541928. APA PsycInfo®.

Daughters, S. B., Magidson, J. F., Anand, D., Seitz-Brown, C. J., Chen, Y., & Baker, S. (2018). The effect of a behavioral activation treatment for substance use on post-treatment abstinence: A randomized controlled trial. *Addiction, 113*(3), 535–544. https://doi.org/10.1111/add.14049.

Daughters, S. B., Magidson, J. F., Schuster, R. M., & Safren, S. A. (2010). ACT HEALTHY: A Combined Cognitive-Behavioral Depression and Medication Adherence Treatment for HIV-Infected Substance Users. *Cognitive and Behavioral Practice, 17*(3), 309–321.

Ekers, D., Webster, L., Straten, A. V., Cuijpers, P., Richards, D., & Gilbody, S. (2014). Behavioural Activation for Depression; An Update of Meta-Analysis of Effectiveness and Sub Group Analysis. *PLOS ONE, 9*(6), e100100.

Etherton, J. L., & Farley, R. (2020). Behavioral activation for PTSD: A meta-analysis. *Psychological Trauma: Theory, Research, Practice, and Policy*. https://doi.org/10.1037/tra0000566, No Pagination Specified-No Pagination Specified.

Falk, R., Taylor, R., Kornelsen, J., & Virk, R. (2020). Surgical Task-Sharing to Non-specialist Physicians in Low-Resource Settings Globally: A Systematic Review of the

Literature. *World Journal of Surgery, 44*(5), 1368–1386. https://doi.org/10.1007/s00268-019-05363-7.

Friedrich, M. J. (2017). Depression Is the Leading Cause of Disability Around the World. *JAMA, 317*(15), 1517. https://doi.org/10.1001/jama.2017.3826.

Giusto, A. M., Ayuku, D., & Puffer, E. S. (2022). Learn, Engage, Act, Dedicate (LEAD): Development and feasibility testing of a task-shifted intervention to improve alcohol use, depression and family engagement for fathers. *International Journal of Mental Health Systems, 16*(1), 16. https://doi.org/10.1186/s13033-022-00522-1.

Gortner, E. T., Gollan, J. K., Dobson, K. S., & Jacobson, N. S. (1998). Cognitive-behavioral treatment for depression: Relapse prevention. *Journal of Consulting and Clinical Psychology, 66*(2), 377–384. https://doi.org/10.1037//0022-006x.66.2.377.

Haroz, E. E., Bolton, P., Nguyen, A. J., Lee, C., Bogdanov, S., Bass, J., Singh, N. S., Doty, B., & Murray, L. (2019). Measuring implementation in global mental health: Validation of a pragmatic implementation science measure in eastern Ukraine using an experimental vignette design. *BMC Health Services Research, 19*(1), 262. https://doi.org/10.1186/s12913-019-4097-y.

Hoeft, T. J., Fortney, J. C., Patel, V., & Unützer, J. (2018). Task-Sharing Approaches to Improve Mental Health Care in Rural and Other Low-Resource Settings: A Systematic Review. *The Journal of Rural Health: Official Journal of the American Rural Health Association and the National Rural Health Care Association, 34*(1), 48–62. https://doi.org/10.1111/jrh.12229.

Institute of Medicine (US) Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care (2003). *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care* (B. D. Smedley, A. Y. Stith, & A. R. Nelson, Eds.). National Academies Press (US). http://www.ncbi.nlm.nih.gov/books/NBK220358/.

Jacobson, N. S., Dobson, K. S., Truax, P. A., Addis, M. E., Koerner, K., Gollan, J. K., ... Prince, S. E. (1996). A component analysis of cognitive-behavioral treatment for depression. *Journal of Consulting and Clinical Psychology, 64*(2), 295–304. https://doi.org/10.1037//0022-006x.64.2.295.

Kanter, J. W., Manos, R. C., Bowe, W. M., Baruch, D. E., Busch, A. M., & Rusch, L. C. (2010). What is behavioral activation?: A review of the empirical literature. *Clinical Psychology Review, 30*(6), 608–620. https://doi.org/10.1016/j.cpr.2010.04.001.

Keynejad, R. C., Dua, T., Barbui, C., & Thornicroft, G. (2018). WHO Mental Health Gap Action Programme (mhGAP) Intervention Guide: A systematic review of evidence from low and middle-income countries. *Evidence-Based Mental Health, 21*(1), 30–34. https://doi.org/10.1136/eb-2017-102750.

Kleinman, M. B., Felton, J. W., Seitz-Brown, C. J., Bradley, V. D., Belcher, A., Bennett, M., Greenblatt, A., & Magidson, J. F. (2020). Adapting a Peer-Delivered Behavioral Activation Intervention to Support Retention in Methadone Maintenance Treatment for a Low-income, Minority Population. *Addiction Science & Clinical Practice, 15* (Supplement 2).

Lejuez, C. W., Hopko, D. R., Acierno, R., Daughters, S. B., & Pagoto, S. L. (2011). Ten Year Revision of the Brief Behavioral Activation Treatment for Depression: Revised Treatment Manual. *Behavior Modification, 35*(2), 111–161. https://doi.org/10.1177/0145445510390929.

Lewinsohn, P. M., Biglan, A., & Zeiss, A. M. (1976). Behavioral treatment of Depression. In P. O. Davidson (Ed.), *The behavioral management ofanxiety, depression and pain* (pp. 91–146). Brunner/Mazel.

Magidson, J. F., Andersen, L. S., Satinsky, E. N., Myers, B., Kagee, A., Anvari, M., & Joska, J. A. (2020). "Too much boredom isn't a good thing": Adapting behavioral activation for substance use in a resource-limited South African HIV care setting. *Psychotherapy, 57*(1), 107–118. https://doi.org/10.1037/pst0000257.

Magidson, J. F., Gorka, S. M., MacPherson, L., Hopko, D. R., Blanco, C., Lejuez, C. W., & Daughters, S. B. (2011). Examining the effect of the Life Enhancement Treatment for Substance Use (LETS ACT) on residential substance abuse treatment retention. *Addictive Behaviors, 36*(6), 615–623. https://doi.org/10.1016/j.addbeh.2011.01.016.

Magidson, J. F., Joska, J. A., Belus, J. M., Andersen, L. S., Regenauer, K. S., Rose, A. L., Myers, B., Majokweni, S., O'Cleirigh, C., & Safren, S. A. (2021). Project Khanya: Results from a pilot randomized type 1 hybrid effectiveness-implementation trial of a peer-delivered behavioural intervention for ART adherence and substance use in HIV care in South Africa. *Journal of the International AIDS Society, 24*(S2), e25720.

Magidson, J. F., Seitz-Brown, C. J., Safren, S. A., & Daughters, S. B. (2014). Implementing Behavioral Activation and Life-Steps for Depression and HIV Medication Adherence in a Community Health Center. *Cognitive and Behavioral Practice, 21*(4), 386–403. https://doi.org/10.1016/j.cbpra.2013.10.002.

Martínez-Vispo, C., Martínez, Ú., López-Durán, A., Fernández Del Río, E., & Becoña, E. (2018). Effects of behavioural activation on substance use and depression: A systematic review. *Substance Abuse Treatment, Prevention, and Policy, 13*(1), 36. https://doi.org/10.1186/s13011-018-0173-2.

Mazzucchelli, T. G., Kane, R. T., & Rees, C. S. (2010). Behavioral activation interventions for well-being: A meta-analysis. *The Journal of Positive Psychology, 5*(2), 105–121. https://doi.org/10.1080/17439760903569154.

Mdege, N. D., Chindove, S., & Ali, S. (2013). The effectiveness and cost implications of task-shifting in the delivery of antiretroviral therapy to HIV-infected patients: A systematic review. *Health Policy and Planning, 28*(3), 223–236. https://doi.org/10.1093/heapol/czs058.

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & Group, T. P. (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLOS Medicine, 6*(7), e1000097.

Musyimi, C. W., Mutiso, V. N., Ndetei, D. M., Unanue, I., Desai, D., Patel, S. G., Musau, A. M., Henderson, D. C., Nandoya, E. S., & Bunders, J. (2017). Mental health treatment in Kenya: Task-sharing challenges and opportunities among informal health providers. *International Journal of Mental Health Systems, 11*, 45. https://doi.org/10.1186/s13033-017-0152-4.

Padmanathan, P., & De Silva, M. J. (2013). The acceptability and feasibility of task-sharing for mental healthcare in low and middle income countries: A systematic review. *Social Science & Medicine, 97*, 82–86. https://doi.org/10.1016/j.socscimed.2013.08.004.

Papa, A., Sewell, M. T., Garrison-Diehn, C., & Rummel, C. (2013). A randomized open trial assessing the feasibility of behavioral activation for pathological grief responding. *Behavior Therapy, 44*(4), 639–650. https://doi.org/10.1016/j.beth.2013.04.009.

Patel, V., Simon, G., Chowdhary, N., Kaaya, S., & Araya, R. (2009). Packages of Care for Depression in Low- and

Middle-Income Countries. *PLOS Medicine, 6*(10), e1000159.

Patel, V., Weobong, B., Weiss, H. A., Anand, A., Bhat, B., Katti, B., Dimidjian, S., Araya, R., Hollon, S. D., King, M., Vijayakumar, L., Park, A.-L., McDaid, D., Wilson, T., Velleman, R., Kirkwood, B. R., & Fairburn, C. G. (2017). The Healthy Activity Program (HAP), a lay counsellor-delivered brief psychological treatment for severe depression, in primary care in India: A randomised controlled trial. *The Lancet, 389*(10065), 176–185. https://doi.org/10.1016/S0140-6736(16)31589-6.

Pedersen, G. A., Lakshmin, P., Schafer, A., Watts, S., Carswell, K., Willhoite, A., Ottman, K., Van't Hof, E., & Kohrt, B. A. (2020). Common factors in psychological treatments delivered by non-specialists in low- and middle-income countries: Manual review of competencies. *Journal of Behavioral and Cognitive Therapy, 30*(3), 165–186. https://doi.org/10.1016/j.jbct.2020.06.001.

Rathod, S., Pinninti, N., Irfan, M., Gorczynski, P., Rathod, P., Gega, L., & Naeem, F. (2017). Mental Health Service Provision in Low- and Middle-Income Countries. *Health Services Insights, 10*. https://doi.org/10.1177/1178632917694350, 1178632917694350.

Raue, P. J., Dawson, A., Hoeft, T., Russo, J., Ferguson, D., Green, L., Petersky, C., & Kaplan, C. (2019). Acceptability of a lay-delivered intervention for depression in senior centers. *Aging & Mental Health*. https://doi.org/10.1080/13607863.2019.1698515. APA PsycInfo®.

Raue, P. J., Dawson, A., Hoeft, T., Russo, J., Ferguson, D., Green, L., Petersky, C., & Kaplan, C. (2021). Acceptability of a lay-delivered intervention for depression in senior centers. *Aging & Mental Health, 25*(3), 445–452. https://doi.org/10.1080/13607863.2019.1698515.

Reeves, W. C., Strine, T. W., Pratt, L. A., Thompson, W., Ahluwalia, I., Dhingra, S. S., McKnight-Eily, L. R., Harrison, L., D'Angelo, D. V., Williams, L., Morrow, B., Gould, D., Safran, M. A., & Centers for Disease Control and Prevention (CDC) (2011). Mental illness surveillance among adults in the United States. *MMWR Supplements, 60*(3), 1–29.

Richards, D. A., Ekers, D., McMillan, D., Taylor, R. S., Byford, S., Warren, F. C., Barrett, B., Farrand, P. A., Gilbody, S., Kuyken, W., O'Mahen, H., Watkins, E. R., Wright, K. A., Hollon, S. D., Reed, N., Rhodes, S., Fletcher, E., & Finning, K. (2016). Cost and Outcome of Behavioural Activation versus Cognitive Behavioural Therapy for Depression (COBRA): A randomised, controlled, non-inferiority trial. *Lancet (London, England), 388* (10047), 871–880. https://doi.org/10.1016/S0140-6736(16)31140-0.

Satinsky, E. N., Doran, K., Felton, J. W., Kleinman, M., Dean, D., & Magidson, J. F. (2020). Adapting a peer recovery coach-delivered behavioral activation intervention for problematic substance use in a medically underserved community in Baltimore City. *PLoS ONE, 15*(1). https://doi.org/10.1371/journal.pone.0228084.

Singla, D. R., Kohrt, B. A., Murray, L. K., Anand, A., Chorpita, B. F., & Patel, V. (2017). Psychological Treatments for the World: Lessons from Low- and Middle-Income Countries. *Annual Review of Clinical Psychology, 13*, 149–181. https://doi.org/10.1146/annurev-clinpsy-032816-045217.

Skinner, B. F. (1974). *About Behaviorism*. Knopf Doubleday.

Stein, A. T., Carl, E., Cuijpers, P., Karyotaki, E., & Smits, J. A. J. (2021). Looking beyond depression: A meta-analysis of the effect of behavioral activation on depression, anxiety, and activation. *Psychological Medicine, 51*(9), 1491–1504. https://doi.org/10.1017/S0033291720000239.

Substance Abuse and Mental Health Services Administration (SAMHSA) (2021). *Key Substance Use and Mental Health Indicators in the United States: Results from the 2020 National Survey on Drug Use and Health* (HHS Publication No. PEP21-07-01-003, NSDUH Series H-56). Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. https://www.samhsa.gov/data/.

Thirthalli, J., Sivakumar, P. T., & Gangadhar, B. N. (2019). Preventing Late-Life Depression Through Task Sharing: Scope of Translating Evidence to Practice in Resource-Scarce Settings. *JAMA Psychiatry, 76*(1), 7–8. https://doi.org/10.1001/jamapsychiatry.2018.2898.

Walker, I. F., Khanal, S., Hicks, J. P., Lamichhane, B., Thapa, A., Elsey, H., Baral, S. C., & Newell, J. N. (2018). Implementation of a psychosocial support package for people receiving treatment for multidrug-resistant tuberculosis in Nepal: A feasibility and acceptability study. *PLoS ONE, 13*(7), 15. https://doi.org/10.1371/journal.pone.0201163. APA PsycInfo®.

Webster, L. A. D., Ekers, D., & Chew-Graham, C. A. (2016). Feasibility of training practice nurses to deliver a psychosocial intervention within a collaborative care framework for people with depression and long-term conditions. *BMC Nursing, 15*, 71. https://doi.org/10.1186/s12912-016-0190-2.

Zhao, Y., Hagel, C., Tweheyo, R., Sirili, N., Gathara, D., & English, M. (2021). Task-sharing to support paediatric and child health service delivery in low- and middle-income countries: Current practice and a scoping review of emerging opportunities. *Human Resources for Health, 19* (1), 95. https://doi.org/10.1186/s12960-021-00637-5.

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