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Association of Task-Shared Psychological Interventions With Depression Outcomes in Low- and Middle-Income Countries
A Systematic Review and Individual Patient Data Meta-analysis

Eirini Karyotaki, PhD; Ricardo Araya, MD, PhD; Ronald C. Kessler, PhD; Ahmed Waqas, MD, PhD; Arvin Bhana, PhD; Atif Rahman, PhD; Camila T. Matsuzaka, MD; Clara Miguel, MSc; Crick Lund, PhD; Emily C. Garman, PhD; Etheldreda Nakimuli-Mpungu, PhD; Inge Petersen, PhD; John A. Naslund, PhD; Marguerite Schneider, PhD; Siham Sikander, PhD; Mark J. D. Jordans, PhD; Melanie Abas, MD, PhD; Pauline Slade, PhD; Stephen Walters, PhD; Traolach S. Brugha, MD; Toshi A. Furukawa, MD, PhD; Yagmur Amanvermez, MSc; Marcelo F. Mello, MD, PhD; Milton L. Wainberg, MD, PhD; Pim Cuijpers, PhD; Vikram Patel, MD, PhD

IMPORTANCE Task sharing, the training of nonspecialist workers with no formal experience in counseling, is a promising strategy for addressing the large gap in treatment for depression in low- and middle-income countries (LMICs).

OBJECTIVE To examine the outcomes and moderators of task-shared psychological interventions associated with depression severity, response, and remission.

DATA SOURCES Systematic literature searches in PubMed, Embase, PsycINFO, and Cochrane Library up to January 1, 2021.

STUDY SELECTION Randomized clinical trials (RCTs) of task-shared psychological interventions compared with control conditions for adults with depressive symptoms in LMICs were included.

DATA EXTRACTION AND SYNTHESIS Two researchers independently reviewed the titles, abstracts, and full text of articles from an existing generic meta-analytic database that includes all RCTs on psychotherapy for depression. A systematic review and individual patient data (IPD) meta-analysis was used to estimate the outcomes of task-shared psychological interventions across patient characteristics using mixed-effects models. Procedures for abstracting data and assessing data quality and validity followed the Preferred Reporting Items for Systematic Reviews and Meta-analyses reporting guideline.

MAIN OUTCOMES AND MEASURES Primary outcome was reduction in depression symptom severity measured by the 9-item Patient Health Questionnaire (PHQ-9). Response and remission rates were also estimated.

RESULTS Of 13 eligible trials, 11 (4145 participants) contributed IPD. Task-shared psychological interventions were associated with a greater decrease in depressive symptom severity than control conditions (Hedges *g*, 0.32; 95% CI, −0.26 to −0.38). Participants in the intervention groups had a higher chance of responding (odds ratio, 2.11; 95% CI, 1.60 to 2.80) and remitting (odds ratio, 1.87; 95% CI, 1.20 to 1.99). The presence of psychomotor symptoms was significantly associated with the outcomes of task-shared psychological interventions (β [SE], −1.21 [0.39]; *P* = .002). No other significant associations were identified. Heterogeneity among the trials with IPD was 74% (95% CI, 53%-86%).

CONCLUSIONS AND RELEVANCE In this meta-analysis of IPD, task-shared psychological interventions were associated with a larger reduction in depressive symptom severity and a greater chance of response and remission than control conditions. These findings show potential for the use of task-sharing of psychological interventions across different groups of patients with depression. Further research would help identify which people are most likely to benefit and strengthen larger-scale implementation of this strategy to address the burden of depression in LMICs.

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Supplemental content

Author Affiliations: Author affiliations are listed at the end of this article.

Corresponding Author: Eirini Karyotaki, PhD, Department of Clinical Neuro- and Developmental Psychology, Vrije Universiteit Amsterdam, van der Boechorststraat 7, 1081 BT Amsterdam, the Netherlands (e.karyotaki@vu.nl).

Depression is a leading cause of the global burden of disease.[1] Although psychological interventions effectively promote remission and are recommended as first-line treatment for depression by the World Health Organization, most affected persons in low- and middle-income countries (LMICs) do not have access to them.[2,3] A major barrier to improving access to psychological interventions is the lack of skilled mental health practitioners.[4,5] Task sharing to the front line, ie, delegating care tasks to community or primary care–based nonspecialist workers, has been advocated to address this barrier.[6,7] Several studies have examined the effects of psychological interventions delivered by such workers.[8] Recent trials in this field have demonstrated a range of effects in treating depression[9-12] from moderate or large[10,11,13] to no effect.[12,14] Given the mixed evidence, there is still reluctance to scale up task sharing as a mental health care strategy.[15]

Moreover, critical outcomes for clinical decision making, such as intervention response and remission, are underreported by randomized clinical trials (RCTs). It also remains unclear whether patient-level factors may influence the responsiveness to task sharing. Notable examples of such factors include clinical and sociodemographic characteristics. Identifying patients who are more or less likely to benefit from these interventions could inform efforts to reach these individuals more efficiently and improve larger-scale implementation of task sharing.

The individual patient data meta-analytic approach, which uses raw data from RCTs, has been increasingly used to synthesize evidence across trials, improve the precision of overall estimates, and maximize the power to identify patient characteristics that moderate intervention outcomes.[16] In the present study, we conducted a systematic review and individual patient data meta-analysis (IPD-MA) to examine the outcomes of task-shared psychological interventions (ie, reducing symptom severity, improving response and remission rates) compared with control conditions in adults with depression in LMICs. We also evaluated participant- and study-level characteristics as moderators of treatment outcomes.

Key Points

Question What are the depression outcomes and moderators associated with task-shared psychological interventions, ie, those delivered by nonspecialist workers, in low- and middle-income countries (LMICs)?

Findings This systematic review and individual patient data meta-analysis showed that task-shared psychological interventions were associated with significantly larger reduction in depression severity and enhanced response and remission rates compared with control conditions. These outcomes were associated with the presence of psychomotor symptoms, while no other significant associations were identified.

Meaning The present findings underscore the need for scaling up interventions that use task sharing to reduce the burden of depression in LMICs.

Methods

This study was considered exempt from review by the Harvard Longwood Campus institutional review board (IRB). The study was registered with Open Science Framework (https://osf.io/h4kf3) and reported according to Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) reporting guidelines for IPD-MA.[17]

Eligibility Criteria

We included RCTs that were conducted in LMICs on (1) task-shared psychological interventions that were (2) compared with controls such as treatment as usual (3) for adults (≥18 years old) with depression as established by either a diagnostic interview or cutoff scores on self-report measures (eg, 9-item Patient Health Questionnaire [PHQ-9][18]). Psychological interventions were included if they were delivered by nonspecialists (eg, lay counselors, health workers, peers) who were not mental health experts (ie, psychiatrists, psychologists, or psychiatric nurses).

We excluded studies about collaborative care, defined as coordinated multidisciplinary teams with assigned roles and tasks working together to draw individualized plans for patients according to World Health Organization definition.[19] Further, self-help and telephone-administered interventions were not eligible for inclusion because they have a different format. We also excluded prevention trials because we focused on treatment. Trials focusing on comorbid depression with other mental health disorders (eg, alcohol misuse) were not excluded by the present study.

Identification of Studies

To identify eligible studies, we searched an existing generic meta-analytic database that includes all RCTs on psychotherapy for depression. This database has been developed based on comprehensive searches in PubMed, Embase, PsycINFO, and Cochrane Library from database inception to January 1, 2021. The full search string for PubMed is provided in the eMethods in the Supplement. In these searches, 2 reviewers (P.C. and E.K.) independently screened the titles, abstracts, and full text of retrieved articles. In case of disagreement, consensus was reached through discussion. A detailed description of this database can be found elsewhere (https://osf.io/825c6/). This generic meta-analytic database was searched by 2 independent reviewers (E.K. and Y.A.) using the eligibility criteria of the present study. Disagreements between the reviewers were resolved through discussion. In addition, we screened meta-analyses of psychological interventions in LMICs[20-24] ("reference tracking") and invited the primary authors of the identified RCTs to indicate any other relevant study they were aware of. Neither reference tracking nor primary author queries resulted in additional RCTs that were not previously identified through our searches.

Data Extraction and Acquisition

We extracted a range of study-level data from the published reports of the trials, including type of psychological intervention, type of control, trial setting, target group, country where the study was conducted, World Bank classification of the country, and data related to the risk-of-bias assessment. We

gathered and synthesized all available sociodemographic and clinical characteristics (see the list of moderators with respective definitions in eTable 1 in the Supplement). Individual patient-level variables were chosen based on their availability in the included studies.[25] To gather these variables, we contacted the corresponding author of each eligible study to request access to the raw trial data. If there was no response after 1 month, the trial was excluded as unavailable. After checking each data set (no issues identified), we merged the data into the IPD-MA data set.

Quality Assessment

To assess risk of bias in the included studies, we used the revised risk-of-bias tool of the Cochrane Collaboration.[26] This tool examines bias arising from (1) the randomization process, (2) deviations from intended interventions, (3) missing outcome data, (4) measurement of the outcome, and (5) selection of reported results. Because the present study is an IPD-MA, we did not evaluate criteria 3 and 5. Incomplete outcome data were addressed by the IPD-MA, and selective reporting was not relevant for our study because we had access to the full data sets. Risk of bias was evaluated based on the information provided in the published articles. If items were unclear, we consulted the authors. Thus, each aspect of the assessment tool was evaluated as low or high risk of bias. The risk of bias was determined by 2 reviewers independently (E.K. and C.M.).

Statistical Analysis

All analyses were conducted with Stata (version 16.0) and R (version 4.0.3) using the "meta" package.[27] Our primary outcome was reduction in depressive symptom severity on PHQ-9[18] postintervention because PHQ-9 was the most commonly used scale across the trials (8/11). Other depression scales were converted into PHQ-9 using conversion algorithms.[28,29] To test the effect of the conversion on outcomes, we performed a sensitivity analysis including only the studies that used the PHQ-9 scale. We also examined response rates (50% reduction of baseline depression symptoms) and remission (score less than cutoff that indicated mild depressive symptoms, eg, PHQ-9 < 5) postintervention. Response and remission rates were calculated based on the original depression scales used by the trials.

To examine whether there is a difference between the effects of the studies that provided IPD and those that did not, we performed a conventional meta-analysis using data from the published articles. Regarding the IPD-MA, all analyses were conducted according to the intention-to-treat (ITT) principle. We used multiple imputation to handle incomplete outcome data postintervention (missing-at-random assumption, 20 imputations). We conducted a sensitivity analysis using complete cases to test the robustness of our findings. To calculate the outcomes of task-shared psychological interventions, we merged the IPD from all available studies using the 1-stage IPD-MA with participants nested within trials while adjusting for baseline depression symptom severity.[30,31] Under the random-effects model, we performed a mixed-effect linear or logistic regression (depending on whether the outcome was continuous or dichotomous) using the Stata functions xtmixed and meqrlogit, respectively. Symptom severity, response, and remission were the dependent variables; treatment group was the independent variable. The resulting outcome of the mixed effect linear and logistic regressions is a β coefficient, which shows how many SD the dependent variable changes per each SD change in the independent variable. The higher the β value is, the greater the effect. To test the robustness of the findings of the 1-stage IPD-MA, we replicated all outcomes using a 2-stage IPD-MA in which the outcomes per each trial are calculated separately and then pooled together using the random-effects model.[16] We also calculated the Hedges g[32] for continuous outcomes and number needed to treat (NNT)[33] and odds ratio (OR) for binary outcomes to allow a better understanding of the current findings in comparison with previous literature. We converted the main β coefficient to Hedges g based on the procedures described by Lipsey and Wilson.[34]

We tested whether sociodemographic and clinical variables moderate intervention outcomes postintervention. To examine potential moderators, we added the interaction term between each moderator variable and depression severity, response, and remission rates into the mixed-effects linear or logistic regression model. Each potential moderator variable was added into separate bivariate models. To adjust for multiple testing, we performed the Bonferroni correction,[35] and the new P value was .0026 (P = .05 divided by 19, maximum number of moderator analyses = .0026). To examine study-level variables, we ran a series of subgroup analyses, including type of psychological intervention, type of control condition, target group, type of outcome measure, depression diagnosis, income of country, and region.

We measured heterogeneity across the included studies using the I^2 statistic with values of 0% indicating no observed heterogeneity and values of 25%, 50%, and 75% indicating low, moderate, and high heterogeneity, respectively. Using the noncentral χ^2-based approach,[36] we calculated 95% CIs around I^2 to give the full magnitude of heterogeneity. We also calculated 95% prediction intervals (PIs) around the pooled effect sizes, showing the range within which the effect of a future study would fall.[37] We examined possible publication bias by inspecting the funnel plot on primary outcome measures (also known as a test for small study effects[38]). If asymmetry due to publication bias was suspected, we tested whether the observed asymmetry was significant by performing an Egger test[39] and adjusted the effect for possible publication bias using the Duval and Tweedie trim-and-fill procedure.[40]

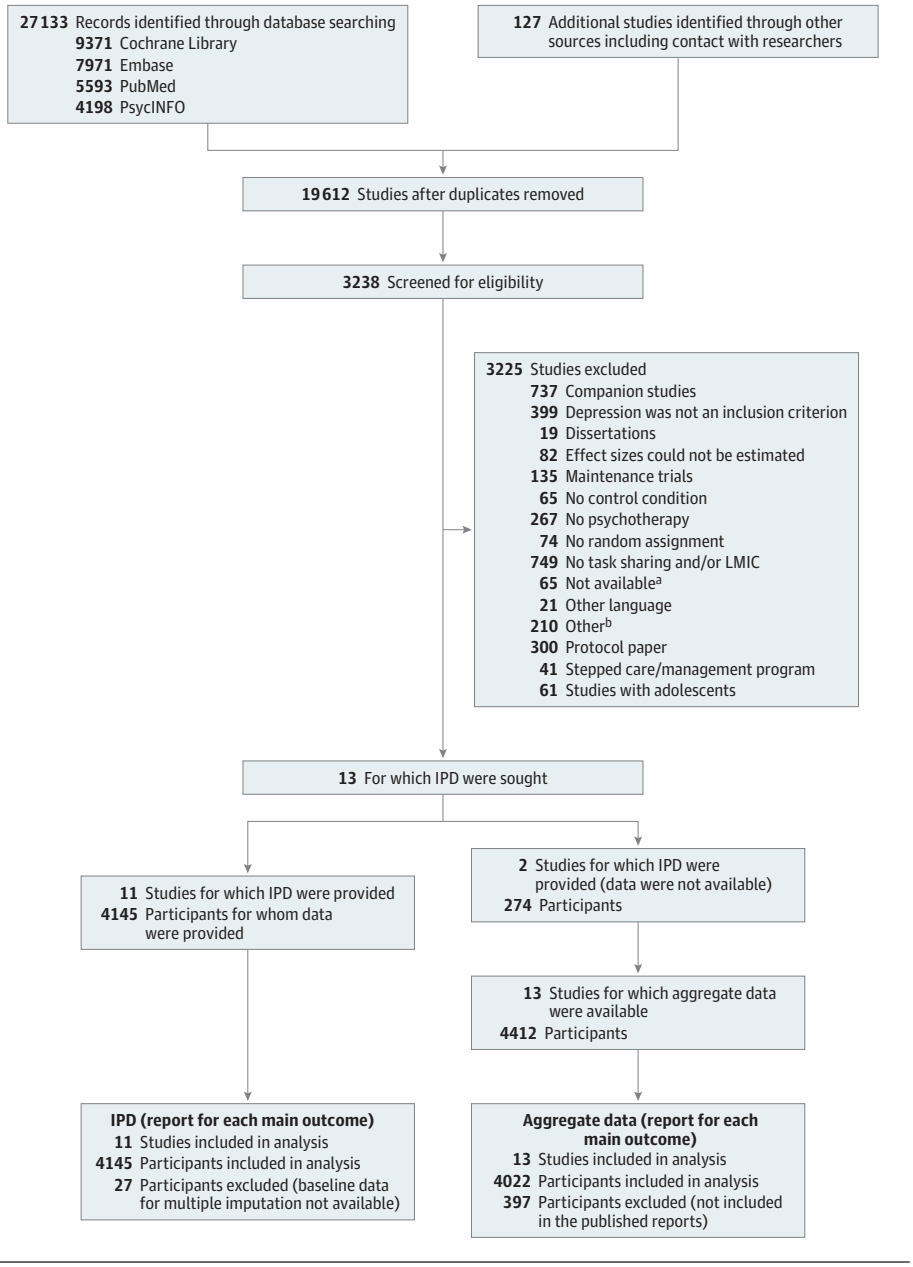
To evaluate the certainty of our main results, we performed the GRADE methodology (eTable 6 in the Supplement).

Results

Study Selection

The systematic literature search resulted in 13 eligible RCTs[9-14,41-47] of the 3238 full-text articles screened. We obtained IPD from most of the eligible trials (11/13) and were able to synthesize approximately 94% of all existing IPD (4145/4419 patients). Two data sets[9,47] were not available because of data loss[9] and no response[47] (**Figure 1**).

Figure 1. PRISMA Individual Patient Data (IPD) Diagram of Study Selection Process



[a] Documents that could not be retrieved from the university library, which were mainly abstracts published for conferences.

[b] Documents that did not match the description of the other exclusion categories (eg, trial registrations, replies to letters to the editor).

Study Characteristics

Table 1 shows the characteristics of the included studies. Most of the included studies (10/11) recruited participants through clinical samples, while 1 trial[12] recruited participants through the community. Six studies included participants based on elevated depressive symptoms on a self-report measure,[10-12,14,41,42] and 5 used a diagnostic interview.[13,43-46] Most of the included studies examined mainly the effects of cognitive behavioral therapy-based interventions[10,12,14,41-43] against enhanced treatment as usual[10-12,14,41,42,44] in 3 target groups, ie, adults with depression in general,[10,42-44] women with perinatal depression,[11-14] and people living with HIV and depression.[41,45,46] (eTable 2 in the Supplement shows the interventions' content.) The interventions were delivered by lay counselors,[10,41,42,45,46] nonspecialist health workers,[14,43,44] or peers.[11-13] The studies were conducted in 4 low-income countries,[41] 1 lower-middle income country,[10,11,42] and 2 upper-middle income countries.[14,44,46]

Participant Characteristics

Among the 4145 participants, the mean (SD) age was 33 (9.8) years, 3438 (83%) were female, 1750 completed primary education, 3546 (85.5%) were in a relationship, and 1669 (46.8%) were unemployed. Across the included studies, 11.5% of values (479/4145) were missing postintervention, indicating a small study dropout rate (13% in the intervention groups and 10% in the control groups). Mean (SD) score on PHQ-9 was 14.3

Table 1. Characteristics of Included Studies

Study	Inclusion criteria[a]	Target group	Setting	Intervention (No. of participants)	Control (No. of participants)	Country	Region	Income[b]
Abas et al,[41] 2018	PHQ-9 ≥ 5	Adults with HIV	HIV clinics	PST (14)	eTAU (18)	Zimbabwe	Sub-Saharan Africa	Low
Chowdhary et al,[42] 2016	PHQ-9 > 14	Adults in general	Primary care	BA&PST (24)	eTAU (31)	India	South Asia	Lower-middle
Fuhr et al,[11] 2019	PHQ-9 > 9	Perinatal depression	Antenatal clinics	BA&PST (140)	eTAU (140)	India	South Asia	Lower-middle
Jordans et al,[43] 2019	Depression diagnosis[c]	Adults in general	Primary care	BA (60)	TAU (60)	Nepal	South Asia	Low
Lund et al,[14] 2020	EPDS >12	Perinatal depression	Antenatal clinics	BA&PST (216)	eTAU (209)	South Africa	Sub-Saharan Africa	Upper-middle
Matsuzaka et al,[44] 2017	MDD, dysthymia (MINI)	Adults in general	Primary care	IPT (43)	eTAU (43)	Brazil	Latin America	Upper-middle
Nakimuli-Mpungu et al,[45] 2020	Depression (MINI)	Adults with HIV	HIV clinics	SUP (578)	HIV-c (562)	Uganda	Sub-Saharan Africa	Low
Patel et al,[10] 2017	PHQ-9 > 14	Adults in general	Primary care	BA&PST (245)	eTAU (248)	India	South Asia	Lower-middle
Petersen et al,[46] 2014	MDD (SCID)[d]	Adults with HIV	HIV clinics	IPT (41)	HIV-c (35)	South Africa	Sub-Saharan Africa	Upper-middle
Rahman et al,[13] 2008	MDD (SCID)[e]	Perinatal depression	Primary care	CBT (463)	TAU (440)	Pakistan	South Asia	Low
Sikander et al,[12] 2019	PHQ-9 > 9	Perinatal depression	Villages	BA&PST (283)	eTAU (287)	Pakistan	South Asia	Low

Abbreviations: BA, behavioral activation; CBT, cognitive behavioral therapy; EPDS, Edinburgh Postnatal Depression Scale; eTAU, enhanced treatment as usual; HIV-c, HIV counseling; IPT, interpersonal psychotherapy; MDD, major depressive disorder; MINI, Mini-International Neuropsychiatric Interview; PHQ-9, 9-item Patient Health Questionnaire; PST, problem-solving therapy; SCID, Structural Clinical Interview; SUP, supportive psychotherapy; TAU, treatment as usual.

[a] This is based on the eligibility criteria of the studies and does not include all depressive measures assessed by these studies (eg, 3 studies used PHQ-9 to measure depressive symptoms but did not use it as an inclusion criterion).

[b] Income level of the country at the time of the study publication was based on the World Bank classification.

[c] Inclusion was determined by health worker diagnosis using the Mental Health Gap Action Program (mhGAP) guidelines of the World Health Organization for assessment and clinical decision making.

[d] The SCID was conducted by a clinical psychologist.

[e] The SCID was conducted by a psychiatrist.

(6.5) at baseline and 5.3 (6.2) at the primary end point (mean [SD], 3.7 [1.8] months; range, 2-6 months). Overall, at the primary end point, 67% (2453/3661) of participants showed response and 61.6% (2254/3661) remission. Response rates were 75.4% (1361/1806) for the intervention and 59% (1092/1855) for the control condition whereas remission rates were 69% (1246/1806) for the intervention and 54.3% (1008/1855) for the control condition.

Risk of Bias

Overall, all included studies were at low risk of bias across most domains, except for bias in measurement of the outcome. All trials were at low risk of bias arising from the randomization process and deviation from the intended intervention. (Descriptions of training and supervision of nonspecialists appear in eTable 3 in the Supplement.) Missing data were handled by the present IPD-MA using multiple imputation, while the percentage of missing values was small across the studies (up to 20.7%) and acceptably balanced between the intervention and control conditions. Most of the studies used measures administered by a blind assessor, while 2 did not perform blinding (eTable 3 in the Supplement).

Results of Conventional Meta-analysis

The conventional meta-analysis of the 13 eligible trials showed that task-shared psychological interventions resulted in a significantly larger reduction in depressive symptom severity compared with control conditions postintervention (Hedges *g*, 0.48; 95% CI, 0.26-0.68; $P < .001$). Heterogeneity was high $I^2 = 86\%$ (95% CI, 78%-91%). We found no evidence of a difference between studies providing IPD and those that did not (between subgroups $P = .52$).

Results of the IPD-MA

Table 2 presents the findings of the 1-stage IPD-MA on depressive symptom severity. Task-shared psychological interventions were significantly associated with greater reduction in depressive symptom severity compared with control conditions (β [SE], -2.11 [0.51]; *g*, 0.32; 95% CI, 0.26-0.38; $P < .001$). Complete case and sensitivity analyses including only the studies that originally used PHQ-9 showed similar outcomes. Of the individual participant-level factors, only the presence of psychomotor symptoms at baseline (n = 2628 participants experienced either agitation or retardation) was associated with intervention outcome (β [SE], -1.21 [0.39]; $P = .002$), suggesting that the outcomes of intervention are more pronounced when individuals experience psychomotor symptoms at baseline. This association was confirmed in both complete case analysis and sensitivity analysis including only the studies that originally used PHQ-9. No other significant associations were identified.

The 2-stage IPD-MA resulted in a *g* of 0.32 (95% CI, 0.18-0.46; $P < .001$) in favor of task-shared psychological interventions. The PIs ranged from $g = -0.12$ to 0.76. Heterogeneity was 74% (95% CI, 53%-86%), and there was no indication of publication bias. Similar outcomes were observed in complete case and sensitivity analyses. Subgroup analyses showed no evi-

Table 2. Mixed-Effects Restricted Maximum Likelihood Model Outcomes on Depressive Symptom Severity, 1-Stage IPD-MA[a]

	Full sample			Complete case analysis[b]		
	Nobs (Ns)	β coefficient (SE)	*P* value	Nobs (Ns)	β coefficient (SE)	*P* value
Main effects: depression severity						
Baseline severity	4118	0.13 (0.02)	<.001	3660	0.13 (0.02)	<.001
Group	(11)	-2.11 (0.51)	<.001	(11)	-2.37 (0.53)	<.001
Sensitivity analysis (PHQ-9 studies only)						
Baseline severity		0.35 (0.05)	<.001	1469	0.34 (0.04)	<.001
Group		-2.29 (0.65)	<.001	(8)	-2.54 (0.65)	<.001
Moderators						
Age						
Baseline severity	4118	0.13 (0.02)	<.001	3660	0.13 (0.02)	
Group	(11)	-1.64 (0.84)	.005	(11)	-2.14 (0.83)	.01
Age (continuous)		0.03 (0.01)	.03		0.02 (0.01)	.07
Age × group		-0.01 (0.02)	.50		-0.01 (0.02)	.72
Sex						
Baseline severity	4118	0.13 (0.02)	<.001	3660	0.13 (0.02)	<.001
Group	(11)	-2.09 (0.52)	<.001	(11)	-2.15 (0.83)	.01
Men		0.24 (0.38)	.53		0.02 (0.13)	.07
Sex × treatment group		-0.10 (0.54)	.85		-0.01 (0.02)	.72
Educational level[c]						
Baseline severity	4118	0.13 (0.02)	<.001	3660	0.13 (0.02)	<.001
Group	(11)	-2.33 (0.66)	<.001	(11)	-2.54 (0.68)	<.001
Primary		-0.65 (0.36)	.07		-0.75 (0.34)	.03
Secondary		-0.87 (0.40)	.03		-0.90 (0.37)	.01
Tertiary		-1.54 (0.76)	.04		-1.51 (0.70)	.03
Other		0.47 (1.27)	.71		1.02 (1.22)	.41
Primary × group		0.74 (0.49)	.13		0.83 (0.48)	.08
Secondary × group		-0.06 (0.54)	.92		-0.20 (0.52)	.70
Tertiary × group		-0.27 (1.05)	.79		-0.65 (1.03)	.53
Other × group		-1.16 (1.81)	.52		-1.73 (1.75)	.32
P value of educational level × group			.43			.19
Relationship status						
Baseline severity	4118	0.13 (0.02)	<.001	3660	0.13 (0.02)	<.001
Group	(11)	-2.42 (0.67)	<.001	(11)	-2.64 (0.67)	<.001
In a relationship		0.067 (0.37)	.86		0.02 (0.37)	.96
Relationship × group		0.38 (0.54)	.48		0.33 (0.52)	.53
Employment status[d]						
Baseline severity	3537	0.12 (0.02)	<.001	3194	0.12 (0.02)	<.001
Group	(10)	-2.35 (0.65)	<.001	(10)	-2.56 (0.67)	<.001
Employed		0.09 (0.42)	.82		0.20 (0.39)	.62
Student		-0.76 (0.97)	.44		-0.75 (0.93)	.42
Other		0.65 (0.40)	.10		0.77 (0.38)	.04
Employed × group		0.39 (0.58)	.50		0.32 (0.57)	.57
Student × group		0.95 (1.47)	.52		0.81 (1.38)	.56
Other × group		-0.57 (0.55)	.30		-0.70 (0.53)	.18
P value of employment status × group			.28			.17
Baseline severity of depression						
Baseline severity	4118	0.16 (0.03)	<.001	3660	0.16 (0.02)	<.001
Group	(11)	-1.35 (0.73)	.06	(11)	-1.52 (0.73)	.04
Baseline severity × group		-0.05 (0.04)	.15		-0.06 (0.03)	.10
Depression duration						
Baseline severity	1645	0.29 (0.04)	<.001	1405	0.31 (0.04)	<.001
Group	(4)	-2.02 (0.86)	.02	(4)	-2.47 (0.90)	.01
Duration in months		0.003 (0.003)	.35		0.003 (0.003)	.33
Duration × group		0.001 (0.01)	.72		0.002 (0.005)	.66

(continued)

Table 2. Mixed-Effects Restricted Maximum Likelihood Model Outcomes on Depressive Symptom Severity, 1-Stage IPD-MA[a] (continued)

	Full sample			Complete case analysis[b]		
	Nobs (Ns)	β coefficient (SE)	*P* value	Nobs (Ns)	β coefficient (SE)	*P* value
Loss of interest in daily activities						
Baseline severity	4113	0.13 (0.02)	<.001	3655	0.13 (0.02)	<.001
Group	(11)	-2.16 (0.73)	.003	(11)	-2.40 (0.72)	.001
Loss of interest (yes)	0	0.07 (0.41)	.87		0.08 (0.39)	.84
Loss of interest × group		0.06 (0.59)	.92		0.03 (0.55)	.92
Depressed mood						
Baseline severity	4113	0.13 (0.02)	<.001	3655	0.13 (0.02)	<.001
Group	(11)	-1.78 (0.76)	.02	(11)	-1.93 (0.76)	.01
Depressed mood (yes)		0.17 (0.44)	.70		0.22 (0.43)	.60
Depressed mood × group		-0.35 (0.62)	.56		-0.48 (0.61)	.43
Sleep problems						
Baseline severity	4111	0.13 (0.02)	<.001	3653	0.13 (0.02)	<.001
Group	(11)	-1.61 (0.63)	.01	(11)	-1.66 (0.64)	.009
Sleep problems (yes)		0.64 (0.32)	.05		0.79 (0.31)	.01
Sleep problems × group		-0.61 (0.45)	.17		-0.86 (0.43)	.05
Tiredness						
Baseline severity	4026	0.11 (0.02)	<.001	3652	0.11 (0.02)	<.001
Group	(11)	-1.53 (0.62)	.01	(11)	-1.65 (0.62)	.008
Tiredness (yes)		1.60 (0.32)	<.001		1.75 (0.31)	<.001
Tiredness × group		-0.71 (0.44)	.11		-0.83 (0.43)	.05
Concentration problems						
Baseline severity	4112	0.13 (0.02)	<.001	3654	0.13 (0.02)	<.001
Group	(11)	-1.87 (0.63)	.003	(11)	-2.13 (0.64)	.001
Concentration (yes)		0.50 (0.34)	.14		0.54 (0.32)	.09
Concentration × group		-0.29 (0.47)	.54		-0.31 (0.46)	.51
Appetite change						
Baseline severity	4113	0.13 (0.02)	<.001	3655	0.13 (0.02)	<.001
Group	(11)	-2.31 (0.61)	<.001	(11)	-2.57 (0.62)	<.001
Appetite change (yes)		0.19 (0.31)	.54		0.19 (0.29)	.53
Appetite change × group		-0.26 (0.43)	.61		0.25 (0.41)	.54
Sense of worthlessness/ guilt						
Baseline severity	4112	0.13 (0.02)	<.001	3654	0.13 (0.02)	<.001
Group	(11)	-1.68 (0.60)	.005	(11)	-1.91 (0.62)	.002
Sense of worthlessness/ guilt (yes)		0.18 (0.31)	.56		0.24 (0.29)	.41
Sense of worthlessness/ guilt × group		-0.57 (0.42)	.16		-0.64 (0.40)	.11
Psychomotor symptoms						
Baseline severity	4111	0.13 (0.02)	<.001	3653	0.14 (0.02)	<.001
Group	(11)	-1.36 (0.54)	.001	(11)	-1.49 (0.55)	.007
Psychomotor symptoms (yes)		0.56 (0.28)	.05		0.68 (0.26)	.01
Psychomotor × group		-1.21 (0.39)	.002[e]		-1.45 (0.37)	<.001[e]
Suicidal ideation						
Baseline severity	4111	0.12 (0.02)	<.001	3653	0.11 (0.02)	<.001
Group	(11)	-1.85 (0.53)	<.001	(11)	-2.12 (0.26)	.001
Suicidal ideation (yes)		0.83 (0.28)	.003		0.89 (0.26)	.001
Suicidal ideation × group		-0.63 (0.37)	.09		-0.63 (0.36)	.08
Domestic violence						
Baseline severity	1560	0.04 (0.02)	.06	1401	0.03 (0.02)	.04
Group	(2)	-0.48 (0.29)	.09	(2)	-0.67 (0.24)	.005
Domestic violence (yes)		0.79 (0.27)	.004		0.90 (0.26)	.001
Domestic violence × group		-0.16 (0.47)	.73		-0.07 (0.41)	.86

(continued)

Table 2. Mixed-Effects Restricted Maximum Likelihood Model Outcomes on Depressive Symptom Severity, 1-Stage IPD-MA[a] (continued)

	Full sample			Complete case analysis[b]		
	Nobs (Ns)	β coefficient (SE)	*P* value	Nobs (Ns)	β coefficient (SE)	*P* value
Problematic alcohol drinking						
Baseline severity	2509	0.08 (0.02)	<.001	2278	0.07 (0.02)	<.001
Group	(8)	−1.69 (0.55)	.002	(8)	−1.89 (0.55)	.001
Problematic alcohol drinking (yes)		0.64 (0.40)	.11		0.76 (0.37)	.04
Alcohol × group		−0.09 (0.58)	.88		−0.25 (0.53)	.64
Comorbid physical disorder						
Baseline severity	1327	0.01 (0.01)	.45	1259	0.01 (0.01)	.27
Group	(5)	−1.64 (1.34)	.22	(5)	−1.45 (1.26)	.25
Comorbid physical disorder (yes)		0.11 (0.92)	.91		0.38 (0.79)	.63
Comorbid physical disorder × group		−1.11 (1.38)	.42		−1.65 (1.19)	.16

Abbreviations: Nobs, number of observations; Ns, number of studies; PHQ-9, 9-item Patient Health Questionnaire.

[a] Parameters are standardized β weights of the composite of PHQ-9 scores; 2-tailed *P* values are presented.

[b] This sensitivity analysis was conducted only with participants who completed a postintervention depression questionnaire.

[c] Reference group was illiteracy.

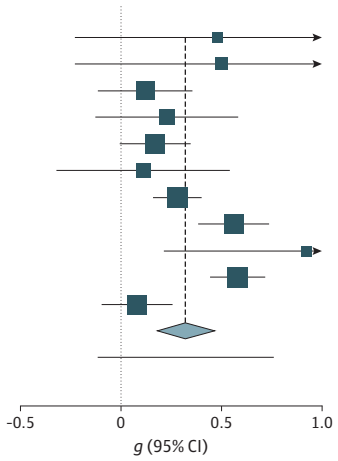
[d] Reference group was unemployment.

[e] Significant association.

Figure 2. Effects of Task-Shared Psychological Interventions Compared With Controls on Depression Symptom Severity at Postintervention Assessment

Source	*g* (95% CI)
Abas et al,[41] 2018	0.48 (−0.23 to 1.19)
Chowdhary et al,[42] 2016	0.50 (−0.01 to 1.01)
Fuhr et al,[11] 2019	0.12 (−0.12 to 0.36)
Jordans et al,[43] 2019	0.23 (−0.12 to 0.58)
Lund et al,[14] 2020	0.17 (−0.01 to 0.35)
Matsuzaka et al,[44] 2017	0.11 (−0.32 to 0.54)
Nakimuli-Mpungu et al,[45] 2020	0.28 (0.16 to 0.40)
Patel et al,[10] 2017	0.56 (0.38 to 0.74)
Petersen et al,[46] 2014	0.92 (0.21 to 1.63)
Rahman et al,[13] 2008	0.58 (0.44 to 0.72)
Sikander et al,[12] 2019	0.08 (−0.10 to 0.26)
Total	0.32 (0.18 to 0.46)
95% CI	(−0.12 to 0.76)

Heterogeneity: $\chi^2_{10} = 38.51$ ($P < .001$); $I^2 = 74\%$



dence of a difference between target patient groups, studies that originally used PHQ-9 and those that did not, types of interventions, control conditions, income of country, and region. Results of the 2-stage IPD-MA are presented in **Figure 2** and in eTable 4 and eFigure 1 in the Supplement.

Table 3 presents the findings of the 1-stage IPD-MA on response and remission. Overall, the likelihood of response and remission was significantly higher in the intervention compared with control groups (response: β [SE], 0.75 [0.14]; OR, 2.11, 95% CI, 1.60-2.80; remission: β [SE], 0.63 [0.15]; OR, 1.87; 95% CI, 1.20-1.99; $P < .001$) with broad PIs (eFigures 2 through 5 in the Supplement). Complete case analyses resulted in comparable outcomes. Moderator analysis showed that the chance of remission and response after task-shared psychological interventions was significantly higher among individuals with psychomotor symptoms. Moreover, the 2-stage IPD-MA resulted in identical findings with the 1-stage IPD-MA for both response and remission. Similar results were observed in complete case and sensitivity analyses. No evidence of a difference was observed between the examined subgroups. Furthermore, we found no evidence of publication bias (eTable 5 and eFigures 2 through 5 in the Supplement).

The GRADE assessment of main outcomes (Grading of Recommendations, Assessment, Development and Evaluations) showed moderate strength of the resulting evidence (eTable 6 in the Supplement).

Discussion

In this study, we analyzed individual patient data from 11 RCTs to study the depression outcomes of task-shared psychological interventions for adults with depression in LMICs and to identify moderators of these outcomes. Task-shared psychological interventions were associated with a larger reduction in depressive symptom severity and a greater chance of response and remission than control measures (moderate strength of evidence). We also found that the presence of psy-

Table 3. Mixed-Effects Maximum Likelihood Model Outcomes on Response and Remission, 1-Stage IPD-MA[a]

	Response						Remission					
	Full sample			Complete case analysis[b]			Full sample			Complete case analysis[b]		
	Nobs (Ns)	β coefficient (SE)	*P* value	Nobs (Ns)	β (SE)	*P* value	Nobs (Ns)	β (SE)	*P* value	Nobs (Ns)	β (SE)	*P* value
Main effects	4118			3661			4118			3661		
Group	(11)	0.75 (0.14)	<.001	(11)	0.89 (0.16)	<.001	(11)	0.63 (0.15)	<.001	(11)	0.79 (0.17)	<.001
Moderators												
Age												
Group	4118	-0.02 (.001)	.01	3661	-0.01 (0.01)	.01	4118	0.31 (0.34)	.37	3661	0.53 (0.36)	.14
Age	(11)	0.44 (0.32)	.17	(11)	0.71 (0.35)	.04	(11)	-0.02 (0.01)	.003	(11)	-0.02 (0.01)	.001
Age × group		0.01 (0.01)	.28		0.01 (0.01)	.55		0.01 (0.01)	.30		0.01 (0.01)	.42
Sex												
Group	4118	0.70 (0.14)	<.001	3661	0.84 (0.16)	<.001	4118	0.61 (0.15)	<.001	3661	0.76 (0.17)	<.001
Men	(11)	-0.25 (0.20)	.21	(11)	-0.18 (0.20)	.37	(11)	-0.16 (0.25)	.52	(11)	-0.01 (0.26)	.96
Sex × group		0.34 (0.31)	.27		0.44 (0.32)	.17		0.15 (0.32)	.64		0.28 (0.37)	.44
Educational level[c]												
Group	4118	0.84 (0.23)	<.001	3661	0.97 (0.25)	<.001	4118	0.65 (0.24)	.006	3661	0.77 (0.27)	.004
Primary	(11)	0.17 (0.15)	.26	(11)	0.24 (0.15)	.13	(11)	0.16 (0.17)	.33	(11)	0.22 (0.17)	.20
Secondary		0.16 (0.16)	.30		0.21 (0.16)	.21		0.21 (0.17)	.20		0.24 (0.17)	.16
Tertiary		0.30 (0.28)	.29		0.31 (0.30)	.30		0.25 (0.29)	.40		0.18 (0.31)	.55
Other		-0.07 (0.50)	.88		-0.13 (0.51)	.78		0.10 (0.49)	.83		0.10 (0.51)	.85
Primary × group		-0.28 (0.22)	.20		-0.33 (0.23)	.15		-0.23 (0.23)	.32		-0.25 (0.24)	.29
Secondary × group		-0.001 (0.23)	.99		0.07 (0.24)	.77		0.17 (0.23)	.45		0.31 (0.25)	.20
Tertiary × group		0.37 (0 .47)	.42		0.63 (0.49)	.20		0.50 (0.43)	.25		0.80 (0.47)	.09
Other × group		0.21 (0.74)	.77		0.28 (0.75)	.71		-0.62 (0.71)	.38		-0.62 (0.74)	.40
P value of educational level × group			.48			.24						
Relationship status												
Group	4118	0.97 (0.27)	<.001	3661	1.12 (0.29)	<.001	4118	0.73 (0.29)	.01	3661	0.87 (0.31)	.006
In a relationship	(11)	0.01 (0.18)	.05	(11)	0.04 (0.18)	.20	(11)	-0.01 (0.22)	.94	(11)	-0.01 (0.23)	.95
Relationship × group		-0.27 (0.27)	.27		-0.27 (-0.95)	.34		-0.12 (0.30)	.68		-0.09 (0.31)	.79
Employment status[d]												
Group	3537	0.90 (0.18)	<.001	3195	1.03 (0.20)	<.001	3537	0.82 (0.20)	<.001	3195	0.95 (0.21)	<.001
Employed	(10)	0.08 (0.18)	.64	(10)	0.08 (0.18)	.68	(10)	-0.14 (0.19)	.46	(10)	-0.24 (0.20)	.24
Student		0.38 (0.37)	.30		0.44 (0.38)	.26		0.46 (0.38)	.22		0.55 (0.38)	.15
Other		-0.13 (0.20)	.51		-0.22 (0.21)	.30		-0.22 (0.23)	.34		-0.41 (0.25)	.11
Employed × group		-0.19 (0.26)	.47		-0.18 (0.27)	.51		-0.15 (0.26)	.56		-0.09 (0.28)	.74
Student × group		-.058 (0.54)	.28		-0.66 (0.57)	.25		-1.06 (0.54)	.05		-1.17 (0.57)	.04
Other × group		0.07 (0.27)	.78		0.17 (0.29)	.55		-0.03 (0.29)	.92		-0.09 (0.32)	.76

(continued)

Table 3. Mixed-Effects Maximum Likelihood Model Outcomes on Response and Remission, 1-Stage IPD-MA[a] (continued)

	Response						Remission					
	Full sample			Complete case analysis[b]			Full sample			Complete case analysis[b]		
	Nobs (Ns)	β coefficient (SE)	*P* value	Nobs (Ns)	β (SE)	*P* value	Nobs (Ns)	β (SE)	*P* value	Nobs (Ns)	β (SE)	*P* value
P value of employment status × group			.85			.50			.28			.08
Baseline severity of depression												
Group	4118	0.57 (0.29)	.05	3661	0.65 (0.32)	.04	4118	0.62 (0.31)	.05	3661	0.79 (0.35)	.02
Baseline severity	(11)	0.03 (0.01)	<.001	(11)	0.03 (0.01)	.01	(11)	−0.07 (0.01)	<.001	(11)	−0.08 (0.01)	<.001
Baseline severity × group		0.01 (0.02)	.55		0.01 (0.02)	.42		0.004 (0.02)	.83		0.005 (0.20)	.81
Depression duration												
Group	1645	0.79 (0.20)	<.001	1405	0.98 (0.20)	<.001	1645	0.58 (0.24)	.01	1405	0.69 (0.25)	.006
Duration in months	(4)	−0.001 (0.001)	.64	(4)	−0.001 (0.001)	.56	(4)	−0.001 (0.001)	.43	(4)	−0.001 (0.001)	.48
Duration × group		−0.002 (0.002)	.35		−0.002 (0.002)	.26		0.001 (0.002)	.66		0.001 (0.002)	.67
Loss of interest												
Group	4113	0.72 (0.30)	.02	3656	0.80 (0.31)	.01	4113	0.55 (0.30)	.06	3656	0.70 (0.33)	.03
Loss of interest (yes)	(11)	0.02 (0.20)	.92	(11)	0.001 (0.20)	.99	(11)	−0.35 (0.21)	.10	(11)	−0.42 (0.22)	.06
Loss of interest × group		0.03 (0.29)	.92		0.10 (0.29)	.73		0.08 (0.28)	.78		0.10 (0.31)	.76
Depressed mood												
Group	4113	0.52 (0.30)	.08	3656	0.64 (0.31)	.04	4113	0.70 (0.30)	.02	3656	0.90 (0.33)	.006
Depressed mood (yes)	(11)	−0.09 (0.20)	.66	(11)	−0.14 (0.20)	.50	(11)	−0.29 (0.20)	.14	(11)	−0.36 (0.21)	.09
Depressed mood × group		0.25 (0.29)	.40		0.28 (0.30)	.34		−0.078 (0.29)	.79		−0.12 (0.30)	.70
Sleep problems												
Group	4111	0.57 (0.21)	.008	3654	0.64 (0.23)	.005	4111	0.69 (0.22)	.002	3654	0.81 (0.24)	.001
Sleep problems (yes)	(11)	−0.01 (0.13)	.94	(11)	−0.07 (0.13)	.60	(11)	−0.31 (0.14)	.03	(11)	−0.40 (0.14)	.004
Sleep problems × group		0.22 (0.19)	.26		0.31 (0.19)	.12		−0.07 (0.20)	.74		−0.01 (0.20)	.96
Tiredness												
Group	4026	0.59 (0.22)	.01	3653	0.67 (0.24)	.005	4026	0.50 (0.22)	.03	3653	0.61 (0.24)	.01
Tiredness (yes)	(11)	−0.56 (0.14)	<.001	(11)	−0.65 (0.15)	<.001	(11)	−0.76 (0.14)	<.001	(11)	−0.86 (0.15)	<.001
Tiredness × group		0.20 (0.21)	.35		0.26 (0.21)	.22		0.17 (0.20)	.39		0.22 (0.21)	.29
Concentration problems												
Group	4112	0.88 (0.24)	<.001	3655	1.11 (0.25)	<.001	4112	0.59 (0.25)	.02	3655	0.72 (0.26)	.007
Concentration (yes)	(11)	0.18 (0.15)	.24	(11)	0.20 (0.15)	.20	(11)	−0.38 (0.16)	.02	(11)	−0.46 (0.16)	.005
Concentration × group		−0.17(0.24)	.47		−0.27 (0.24)	.26		0.05 (0.23)	.81		0.10 (0.24)	.68
Appetite change												
Group	4113	0.99 (0.21)	<.001	3656	1.15 (0.23)	<.001	4113	0.80 (0.22)	<.001	3656	1.00 (0.23)	<.001
Appetite change (yes)	(11)	0.13 (0.13)	.29	(11)	0.13 (0.13)	.31	(11)	−0.05 (0.13)	.73	(11)	−0.03 (0.14)	.84
Appetite change × group		−0.31 (0.19)	.11		−0.33 (0.20)	.10		−0.21 (0.19)	.26		−0.26 (0.20)	.19

(continued)

Table 3. Mixed-Effects Maximum Likelihood Model Outcomes on Response and Remission, 1-Stage IPD-MA[a] (continued)

	Response					Remission				
	Full sample			Complete case analysis[b]		Full sample			Complete case analysis[b]	
	Nobs (Ns)	β coefficient (SE)	*P* value	Nobs (Ns)	β (SE)	*P* value	Nobs (Ns)	β (SE)	*P* value	Nobs (Ns)	β (SE)	*P* value
Sense of worthlessness/guilt												
Group	4112	0.67 (0.20)	.001	3655	0.80 (0.22)	<.001	4112	0.47 (0.21)	.03	3655	0.57 (0.23)	.01
Worthlessness/guilt (yes)	(11)	0.17 (0.13)	.18	(11)	0.17 (0.13)	.18	(11)	-0.26 (0.13)	.05	(11)	-0.34 (0.14)	.01
Worthlessness/guilt × group		0.11 (0.19)	.57		0.14 (0.19)	.46		0.22 (0.19)	.25		0.30 (0.20)	.12
Psychomotor symptoms												
Group	4111	0.41 (0.16)	.01	3654	0.46 (0.18)	.01	4111	0.31 (0.17)	.07	3654	0.36 (0.18)	.05
Psychomotor symptoms (yes)	(11)	-0.20 (0.11)	.09	(11)	-0.28 (0.12)	.01	(11)	-0.39 (0.12)	.002	(11)	-0.51 (0.12)	<.001
Psychomotor symptoms × group		0.56 (0.16)	.001[e]		0.72 (0.17)	<.001[e]		0.55 (0.17)	.002[e]		0.74 (0.17)	<.001[e]
Suicidal ideation												
Group	4111	0.69 (0.16)	<.001	3654	0.84 (0.18)	<.001	4111	0.62 (0.16)	<.001	3654	0.77 (0.19)	<.001
Suicidal ideation (yes)	(11)	-0.04 (0.11)	.70	(11)	-0.07 (0.12)	.57	(11)	-0.32 (0.12)	.008	(11)	-0.40 (0.13)	.002
Suicidal ideation × group		0.12 (0.17)	.45		0.1 (0.17)	.49		0.07 (0.17)	.66		0.10 (0.17)	.56
Domestic violence												
Group	1560	0.47 (0.32)	.14	1401	0.90 (0.51)	.08	1560	0.11 (0.19)	.56	1401	0.20 (0.20)	.31
Domestic violence (yes)	(2)	0.002 (0.29)	.99	(2)	0.05 (0.30)	.86	(2)	-0.23 (0.31)	.46	(2)	-0.31 (0.36)	.39
Domestic violence × group		-0.12 (0.48)	.81		-0.44 (0.48)	.36		-0.004 (0.47)	.99		0.01 (0.53)	.98
Problematic alcohol drinking												
Group	2509	0.75 (0.18)	<.001	2279	0.92 (0.21)	<.001	2509	0.64 (0.17)	<.001	2279	0.80 (0.19)	<.001
Problematic alcohol drinking (yes)	(8)	-0.35 (0.22)	.11	(8)	-0.45 (0.23)	.04	(8)	-0.38 (0.26)	.14	(8)	-0.62 (0.27)	.02
Alcohol × group		.014 (0.37)	.97		-0.03 (0.38)	.94		-0.17 (0.36)	.63		0.02 (0.41)	.95

Abbreviations: Nobs, number of observations; Ns, number of studies.

[a] Parameters are standardized β weights of the composite of 9-item Patient Health Questionnaire scores; 2-tailed *P* values are presented.

[b] This sensitivity analysis was conducted only with participants who completed a postintervention depression questionnaire.

[c] Reference group was illiteracy.

[d] Reference group was unemployment.

[e] Significant association.

chomotor symptoms was associated with more pronounced effects of task-shared psychological interventions. None of the other participant- or study-level factors were associated with the intervention outcomes.

The present findings are in line with previous reviews on interventions delivered by nonspecialists for common mental disorders in LMICs.[7,8,23,24] However, our novel methodological approach provides more robust estimates of the diverse outcomes of task-shared psychological interventions associated with depression, including response, remission, NNTs, and participant- and study-level moderators, which to our knowledge have not been reported earlier. We found that 7 individuals need to be treated to expect 1 individual with a 50% reduction in baseline depressive symptoms, while the NNT for remission was 8. Although these NNTs are relatively large, their magnitude should be interpreted considering that the delivery model of these interventions is through the lowest-cost human resource in the community, and control participants often received enhanced treatment as usual. Such NNTs are still promising because task-shared psychological interventions may have a significant effect when scaled up and delivered to large populations. Notably, the NNTs found by the present IPD-MA are comparable with those of 2 of the most common antidepressant medications, based on previous research mainly conducted in high-income countries, ie, paroxetine (NNT = 5.6 based on standardized mean difference [SMD] = -0.32) and fluoxetine (NNT = 7.7 based on SMD = -0.23), when compared with pill placebo.[48]

To our knowledge, the association of psychomotor symptoms with intervention outcomes has not been identified by previous literature on task sharing for depression. However, previous research has suggested that presence of psychomotor retardation is associated with functional impairment, depression severity, and treatment prognosis.[25,49] The higher response in patients with psychomotor symptoms may be partly associated with the type of intervention. Most of the included studies evaluated a cognitive behavioral therapy intervention that involved behavioral activation, a skill that may be particularly relevant to patients with psychomotor symptoms. Nevertheless, future studies are needed to replicate this finding to draw robust conclusions on the association of psychomotor symptoms with the response to task-shared psychological interventions.

Limitations

The present findings should be interpreted considering several limitations. First, the included studies were conducted across 7 LMICs, suggesting that our findings cannot be generalized to all LMICs. Second, although we could test the association of a wide range of participant characteristics with the intervention outcomes, our analysis was limited to variables examined by the included studies. Thus, we could not investigate the role of some clinically important variables associated with depression prognosis[50] (eg, number of previous episodes, existence of other psychiatric conditions such as anxiety, substance use disorders, neurocognitive impairments, etc). Third, some of the examined moderators (eg, domestic violence) were available only in a small number of trials, limiting our conclusions for the respective associations. Nevertheless, the number of participants was large in all moderator analyses (>1300), suggesting that the statistical power was adequate. Fourth, similar to previous meta-analyses on studies in LMICs,[21] we found moderate to large heterogeneity and broad prediction intervals across most of our analyses, which might be associated with various reasons, including the differences between the examined settings (ie, primary care, antenatal clinics, HIV clinics, and community), comorbidities, type of care worker and the quality of their training, and contextual determinants. However, we did not confirm such differences in subgroup analyses (eg, target group). Thus, the present findings should be interpreted cautiously because of the unexplained heterogeneity.

Fifth, most of the examined interventions involved cognitive behavioral therapy techniques. Still, in some of the included studies, these techniques had to be simplified and adapted for use in settings where participants and care workers have limited general or health literacy or training. Nevertheless, this is a commonly done practice in these and other settings,[51] as adaptation to local contexts is an essential step in the design of intervention studies. Sixth, we observed high response and remission rates among participants in the control groups. Such rates are possibly associated with the active control groups used by most of the included trials (ie, enhanced usual care and HIV counseling). It is therefore possible that participants in the control groups received more substantial care than they would typically receive in these low-resource settings. This hypothesis needs further investigation in future research. Further, although we excluded collaborative care studies, some collaborative care strategies may have been implicit in both groups of the trials we included, for example, because of trial procedures requiring certain types of participants to be reviewed by a physician (eg, in case of suicidal risk). These strategies would have been equally applicable in both groups. Further, in this analysis, we focused only on depression, but patients in these settings may concurrently experience other common mental health problems such as anxiety and posttraumatic stress. Future research should examine the effects of task-shared psychological interventions in patients with common mental disorders in LMICs.

Conclusions

Despite these limitations, our results showed that task-shared psychological interventions were associated with promising depression outcomes and may be particularly well-suited to patients with psychomotor symptoms. Moreover, these outcomes were not associated with several other patient- and study-level factors that were assessed in the examined trials, suggesting the generalizability of the findings to diverse populations.

Considering the limited availability of mental health professionals in all countries of the world, and particularly so in LMICs,[7,8] our study shows that it is possible and beneficial to use nonspecialist workers in the delivery of psychological interventions for most patients with depression. Scaling up this delivery model is probably a unique, low-cost, and widely accessible approach to reducing the burden of depression in LMICs.

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Author Affiliations: Department of Clinical Neuro- and Developmental Psychology, Vrije Universiteit Amsterdam, the Netherlands (Karyotaki, Miguel, Amanvermez, Cuijpers); Center for Global Mental Health and Primary Care Research, Health Service and Population Research, Institute of Psychiatry, Psychology and Neuroscience, King's College London, London, United Kingdom (Araya, Lund); Department of Health Care Policy, Harvard Medical School, Boston, Massachusetts (Kessler); Institute of Population Health Sciences, University of Liverpool, Liverpool, United Kingdom (Waqas); Centre for Rural Health, School of Nursing and Public Health, University of KwaZulu-Natal, Durban, South Africa (Bhana, Petersen); Health Systems Research Unit, South African Medical Research Council, Cape Town, South Africa (Bhana); Institute of Psychology, Health and Society, University of Liverpool, Liverpool, United Kingdom (Rahman); Department of Psychiatry, Federal University of São Paulo, São Paulo, Brazil (Matsuzaka); Alan J Flisher Centre for Public Mental Health, Department of Psychiatry and Mental Health, University of Cape Town, Cape Town, South Africa (Lund, Garman, Schneider); Makerere University College of Health Sciences, Kampala, Uganda (Nakimuli-Mpungu); Department of Global Health and Social Medicine, Harvard Medical School, Boston, Massachusetts (Naslund, Patel); Human Development Research Foundation, Islamabad, Pakistan (Sikander); Health Services Academy, Islamabad, Pakistan (Sikander); Institute of Psychiatry, Psychology and Neuroscience, King's College London, London, United Kingdom (Jordans, Abas); Faculty of Health and Life Sciences, University of Liverpool, Liverpool, United Kingdom (Slade); School of Health and Related Research (ScHARR), University of Sheffield, Sheffield, United Kingdom (Walters); Department of Health Sciences, University of Leicester, Leicester, United Kingdom (Brugha); Departments of Health Promotion and Human Behaviour and of Clinical Epidemiology, Kyoto University Graduate School of Medicine, School of Public Health, Kyoto, Japan (Furukawa); Department of Psychiatry, Federal University of São Paulo, São Paulo, Brazil (Mello); Albert Einstein Israelite Hospital, Medicine School, São Paulo, Brazil (Mello); Department of Psychiatry, Columbia University, New York State Psychiatric Institute, New York (Wainberg); Department of Global Health and Population, Harvard T.H. Chan School of Public Health, Harvard University, Boston, Massachusetts (Patel).

Author Contributions: Dr Karyotaki had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis. Drs Cuijpers and Patel share last authorship.
Concept and design: Karyotaki, Araya, Bhana, Jordans, Walters, Brugha, Mello, Wainberg, Cuijpers, Patel.
Acquisition, analysis, or interpretation of data: Karyotaki, Araya, Kessler, Waqas, Rahman, Matsuzaka, Miguel, Lund, Garman, Nakimuli-Mpungu, Petersen, Naslund, Schneider, Sikander, Jordans, Abas, Slade, Furukawa, Amanvermez, Mello, Wainberg, Cuijpers, Patel.
Drafting of the manuscript: Karyotaki, Waqas, Jordans, Mello, Wainberg.
Critical revision of the manuscript for important intellectual content: Araya, Kessler, Waqas, Bhana, Rahman, Matsuzaka, Miguel, Lund, Garman, Nakimuli-Mpungu, Petersen, Naslund, Schneider, Sikander, Jordans, Abas, Slade, Walters, Brugha, Furukawa, Amanvermez, Mello, Wainberg, Cuijpers, Patel.
Statistical analysis: Karyotaki, Kessler, Matsuzaka, Garman, Walters.
Obtained funding: Karyotaki, Jordans, Abas, Wainberg.
Administrative, technical, or material support: Araya, Matsuzaka, Miguel, Lund, Nakimuli-Mpungu, Petersen, Sikander, Jordans, Brugha, Amanvermez, Cuijpers.
Supervision: Araya, Rahman, Mello, Wainberg, Cuijpers, Patel.

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