



Psychosocial support interventions in the context of forced displacement: A systematic review and meta-analysis

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ABSTRACT

Background: Forced displacement is associated with elevated risk for poor psychosocial wellbeing, yet there remains a lack of clarity around the effectiveness of commonly implemented psychosocial support interventions focused on preventing disorder and promoting wellbeing. This study aimed to synthesize the literature on evaluations of psychosocial support interventions for populations affected by forced displacement.

Methods: We searched for peer reviewed and gray literature in seven databases (PubMed, Embase, Global Health, CINAHL, SocIndex, PsychInfo, PILOTS), fifteen organizational websites, and via solicitation through multiple networks. Various study designs were included, with the criteria that they report an evaluation of a psychosocial intervention delivered to populations affected by forced displacement, and included quantitative or qualitative data on psychosocial outcomes. Records were screened independently by two reviewers at both title/abstract and full-text review; data was double-extracted and study quality assessed, with discrepancies resolved by consensus. Meta-analyses for seven outcomes were conducted on a subset of 33 studies.

Results: We identified 162 reports. Over half (55%) used a single-group study design, with fewer using non-random (19%) or randomized (21%) comparisons. Study designs incorporating comparison conditions were less likely to report positive findings than single-group studies. In the meta-analyses, a moderately strong overall effect was found for psychosocial wellbeing (ES: -0.534, 95% CI: [-0.870, -0.197], $p=.005$); small effects on both internalizing (ES: -0.152, 95% CI: [-0.310, 0.005], $p=.057$) and externalizing (ES: -0.249, 95% CI: [-0.515, 0.016], $p=.064$) problems were promising but not conclusive. Subgroup analysis suggested differential impacts on internalizing problems for adults (improvement; ES: -0.289, 95% CI: [-0.435, -0.143], $p=.001$) and children (worsening; ES: 0.129, 95% CI: [0.054, 0.204], $p=.002$). Other subgroup analyses showed little meaningful variation by context, population, or intervention characteristics.

Conclusion: Pragmatic, field-driven program evaluations are dominated by single-group designs with significant risk of bias. Findings from controlled studies are promising but highlight a need for more rigorous research to support causal inference, align outcomes with theories of change, improve measurement of more positive or wellbeing-focused outcomes, examine subgroup differences, and report potentially negative impacts.

1. Background

The health and safety of forcibly displaced persons, including internally displaced people (IDPs), refugees, and asylum seekers, is an increasingly recognized global health crisis. Over the past decade, at

least 100 million people have been forcibly displaced due to events such as armed conflict, persecution, disaster, or a breakdown in social order (UNHCR, 2020). Only a minority have been able to safely return home or be permanently resettled; as a result, there are currently nearly 80 million people living in insecurity (UNHCR, 2020).

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Forcibly displaced people experience a wide range of stressors, such as traumatic experiences, poverty, and breakdown of social supports (Miller and Rasmussen, 2010). These stressors can contribute to mental distress, poorer interpersonal relationships, and difficulty coping, or taken together, poor psychosocial wellbeing (Steel et al., 2009; Sirwardhana and Stewart, 2012). As such, psychosocial interventions to address daily stressors and promote positive wellbeing are an important first step in addressing the mental health of populations affected by humanitarian crises such as forced displacement (Miller and Rasmussen, 2010). This recognition is reflected in growing efforts to address mental health and psychosocial support (MHPSS) needs in contexts of displacement.

The Interagency Standing Committee (IASC) Reference Group on MHPSS in Emergency Settings defines MHPSS as “any type of local or outside support that aims to protect or promote psychosocial wellbeing and/or prevent or treat mental disorder” (Inter-Agency Standing Committee (IASC), 2007). MHPSS interventions operate on a continuum ranging from integrating MHPSS principles in the delivery of basic services; to widely implemented social and psychological activities that seek to improve wellbeing, such as social groups, family strengthening, or training in coping skills; to more targeted clinical treatments such as psychotherapy or medication for mental disorders. Most commonly implemented MHPSS interventions fall within the range of social and psychological activities (i.e., “psychosocial”) that are not focused on people with mental disorders, but rather seek to improve wellbeing and reduce the likelihood of developing mental health problems by strengthening resilience and protective factors. Compared to mental health treatment interventions, psychosocial interventions are typically more inclusive and intended to meet the support needs of a larger proportion of the affected population.

Evidence is growing for the effectiveness of MHPSS interventions overall (Purgato et al., 2018; Tol et al., 2011) and for specific sub-populations (Brown et al., 2017; Jordans et al., 2016; Purgato et al., 2018). However, many of the most rigorously evaluated interventions are mental health treatments available to and appropriate for relatively few individuals, rather than the less focused but more widely implemented preventive or promotive psychosocial support (PSS) interventions (Tol et al., 2011; Haroz et al., 2020). Because of this, the extent to which overall findings from prior systematic reviews and meta-analyses of MHPSS are relevant to PSS interventions remains unclear. For example, a 2019 review that included only RCTs provided substantial information about MHPSS impacts on various outcomes, but was dominated by studies of cognitive behavioral therapy, narrative exposure therapy, and other psychotherapeutic treatment modalities (Bangpan et al., 2019). A 2020 review seeking to address this limitation by focusing solely on PSS but broadly inclusive of context, population, and study designs provided a more comprehensive description of research in the field but stopped short of synthesizing evidence for intervention impact (Haroz et al., 2020).

Given these gaps, the purpose of this systematic review and meta-analysis was to review and synthesize the literature regarding the observed impact of PSS interventions for populations affected by forced displacement worldwide. Specifically, we aimed to: (1) examine the observed impacts of psychosocial interventions in the context of displacement; and, (2) explore population, intervention, and contextual characteristics that might moderate observed impacts. Building on the strengths of previous reviews, we sought to focus specifically on evaluations of PSS interventions inclusive of a wide range of contexts and study designs, and also to synthesize findings for intervention impact where possible. This dual approach enables us to situate meta-analytic findings within the broader body of research, toward helping to bridge gaps in perceptions of evidence between researchers and practitioners.

2. Methods

The review protocol was registered on the International Prospective

Register of Systematic Reviews (PROSPERO), number CRD42020178972 and follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher et al., 2015). Further, an 8-member steering committee (see acknowledgements) comprised of expert MHPSS practitioners, researchers, and policy makers was established and engaged at each stage of the review.

2.1. Search strategy and selection criteria

We searched peer reviewed literature in seven databases, including PubMed, Embase, Global Health, CINAHL, SocIndex, PsychInfo, PILOTS. Additionally, a number of gray literature sources and organizational websites were searched for published or unpublished program evaluation reports (GODORTS, UNHCR, WHO, Save the Children, USAID, IMC, ICRC, IFRC, IOM, MSF, UNICEF, Mercy Corps, mhps.net, MHIN, IDRAAC). The searches were conducted through April 2020. Search strings were tailored to each database and contained terms describing three key aspects of the search: *forced displacement* (e.g. ‘displaced’, ‘forced migration’, ‘refugee’), *psychosocial interventions* (e.g. ‘psychosocial’, ‘psychological’, ‘intervention’), and *evaluation* (e.g. ‘evaluation’, ‘outcome’) (See Supplemental File 1 for PubMed search strategy). Additional literature was sourced through email solicitation to 238 MHPSS practitioners, researchers, and policy makers, as well as distributing the solicitation via networks including the IASC MHPSS Reference Group; MHPSS.net; Mental Health Innovation Network; Professionals in Humanitarian Assistance and Protection; Violence, Abuse, and Mental Health Network; Refugee Work Rights; and Institute for Development, Research, Advocacy, and Applied Care. Lastly, reference lists of previous systematic reviews (Jordans et al., 2016; Purgato et al., 2018; Haroz et al., 2020; Bangpan et al., 2019; Turrini et al., 2019) and included reports were hand searched.

Eligible articles (1) included people or communities in any country who had been affected by forced displacement (e.g., internal displacement, refugees, asylum seekers, irregular migration, resettlement); (2) evaluated interventions designed to be psychosocial (following a prior PSS review (Haroz et al., 2020), these were operationalized as social or psychological activities aimed at protection and promotion of wellbeing, or prevention of disorder,); and (3) reported outcomes that were psychosocial in nature, as measured by a wide range of indicators of functioning, subjective wellbeing, coping, social behavior, social connectedness, and symptoms of distress (i.e., the IASC MHPSS Common Framework for M&E impact indicators) (Inter-Agency Standing Committee (IASC), 2017). We sought to be as inclusive as possible; evaluations utilized a range of study designs (e.g. randomized or non-randomized comparative studies, single-group pre-post or cross-sectional evaluations, descriptive pilots, etc.) and reported either quantitative or qualitative data. The protocol originally specified psychosocial outcomes must be identified as primary or secondary; however, this requirement was relaxed as few papers distinguished primary vs. secondary vs. other outcomes, nor was this distinction relevant for qualitative studies.

Articles were excluded if they (1) did not include people affected by forced displacement; (2) evaluated mental health *treatment* interventions (i.e., structured psychotherapies or other interventions that were focused on treatment of a diagnosable mental illness); (3) did not report on a psychosocial outcome (e.g., studies that reported only physical health outcomes); or (4) used small-sample study designs that did not provide any sort of general evaluation of intervention impact (e.g. case study).

2.2. Screening

Titles and abstracts for all records were screened with eligible references undergoing subsequent full-text review. At each stage all records were screened independently by two of five reviewers, using Covidence Systematic Review Software. Disagreements were reviewed by AN or

ML, who made a final inclusion/exclusion decision. Where there was uncertainty, decisions were made by author consensus.

2.3. Data extraction and risk of bias assessment

Each record was independently extracted by two of eight reviewers who had participated in codebook development. Reviewer pairs resolved discrepancies by consensus, consulting with AN and ML when uncertain. Data extraction included information about forced displacement context, study design, sample characteristics, intervention characteristics, implementation factors, and impact indicators.

Each record with quantitative data underwent quality assessment (QA) by one of three study members (AN, ML, CL); QA ratings were reviewed by a second member with discrepancies reconciled by consensus. We used an adapted QA tool combining items from the National Institutes of Health Quality Assessment Tool (National Institutes of Health, 2023) and the Jadad Scale for reporting RCTs (Jadad et al., 1996). This approach was a change from the registered protocol, which originally proposed QA only for the meta-analytic subset using a tool specific to RCTs. The change was based on a recommendation from members of the steering committee to provide a comparable QA score for all included studies, requiring a tool that could be universally applied; however, in this paper we restrict QA reporting to the meta-analytic subset per protocol. The adapted 16-item tool included one item that assigned one point for inclusion of a comparison condition and a second point for use of randomization, thereby incorporating a consideration of study design into the tool itself.

2.4. Selection for meta-analysis

A subset of quantitative studies were further considered for meta-analysis to quantify impact on priority outcomes. In evaluating studies for meta-analytic inclusion, the goal was to balance inclusiveness, given challenges to research inherent in this field, with adherence to appropriate rigor for the meta-analytic approach. Criteria for meta-analysis included use of a controlled (two-group) study design with either random allocation or non-random allocation of similar participants conducted by researchers (e.g., matching); studies leveraging non-random allocation of similar participants for reasons unattributed to researcher manipulation but outside participant preference (e.g., phased intervention rollout resulting in eligible sites receiving and not yet receiving intervention) were also included, subject to sensitivity analysis. Papers were excluded from meta-analysis if the study design did not include a comparison group, non-random allocation to a comparison group was based on either participant self-selection (e.g. help-seekers compared to non-help-seekers) or significant population differences (e.g., population eligible for the intervention compared to other convenience population), or only cross-sectional data was collected.

After identifying eligible studies, we reviewed the outcomes that were evaluated in those studies to select outcomes for meta-analysis. Of critical consideration was not only having a sufficient number of studies reporting each outcome to support overall and subgroup analyses, but also the relative homogeneity of how the outcomes were assessed and the priority interest of the outcome. For example, post-traumatic stress was consistently measured in a large number of studies but was not selected because these symptoms fall well outside theoretical impact of psychosocial interventions. On the other hand, coping and family processes were both of substantial interest to the steering committee, but were assessed with such heterogeneity in terms of constructs and measures that meta-analyses were determined to be unfeasible.

2.5. Data analysis

Articles for the narrative synthesis were descriptively analyzed, calculating variable frequencies, means and standard deviations, as well as cross tabulations. Because the quality assessment had a different

number of items for quantitative and qualitative studies, we calculated separate qualitative, quantitative, and total QA scores as a percentage of total possible.

For descriptive analyses of outcome data, findings were first extracted based on the direction of change (improvement, no change, worsening), and when reported, statistical significance. This raw extraction was then recoded into a binary variable of positive or null/no impact to quantify the proportion of positive reports of change. This approach does not support causal inference or quantify effect sizes, but rather was used as a preliminary data reduction approach to describe general patterns by study design and related features.

For the meta-analysis to be as inclusive as possible, for some outcomes subscale scores were statistically pooled to generate a comparable total score if a total score was not provided in the paper (e.g., pooling depression and anxiety scores to generate a total internalizing score). For comparability across studies, when multiple time points were reported only the first time point was used. Some child studies included multiple reporters for the same outcomes; in these cases only one report was used, with priority for child self-report if available, followed by caregiver or teacher rating.

Each outcome meta-analysis included checks for asymmetry of effects (funnel plot and Begg's and Egger's tests), overall meta-analysis (forest plot), heterogeneity tests (Cochran's Q and the I^2 statistic) and a cumulative meta-analysis. For each outcome, standardized effects sizes were computed using Cohen's d . For studies that reported results as means and standard deviations at pre- and post-test for each of the two groups rather than a calculated effect size, Cohen's d_{rm} was calculated using the standard deviation from both pre- and post- with an assumed correlation, r (Cohen, 1988). The primary analysis for each outcome assumed $r = 0.5$, with sensitivity analyses performed varying r . Depending on outcome, a number of stratified (subgroup) analyses or sensitivity analyses were performed. Secondary & sensitivity analyses looked at results under the independent assumption and stratified by a variety of factors. The meta-analyses were conducted using a random effects model with the Hartung-Knapp adjustment (Jackson et al., 2017). Analyses were conducted using Stata SE 15 (StataCorp, 2017).

3. Results

The search process is shown in Fig. 1. The academic database searches produced 7386 unique records. Following title and abstract screening, 6889 records were excluded, leaving 497 records assessed for eligibility based on full texts. Of these, 124 reports were included in the review. An additional 38 reports were included through other sources; this includes 11 reports identified in the gray literature search, 12 reports identified through reference lists, and 15 reports provided by stakeholders. In total, 162 unique documents were included (see Supplemental File 2), and from these, 170 intervention evaluation records extracted. This includes, for example, descriptions of evaluations that included two active PSS interventions within a single study, or papers that reported findings from two or more separate intervention evaluations. Some interventions had either been evaluated multiple times (for example, through studies conducted in different settings or through a pilot and then larger scale study in a single setting), or alternatively reported findings from a single evaluation in multiple papers. Because of this, the 170 extracted records represented 131 unique interventions.

3.1. Evaluation characteristics

Study characteristics are summarized in Table 1. Evaluations were most often conducted in North America (30%), the Middle East and North Africa (MENA; 23%), and Europe and Central Asia (15%). The origin of participants was most commonly the MENA region (41%), Sub-Saharan Africa (36%) and South Asia (21%). This distinction between study location and population origin reflects the large number of studies conducted in resettlement contexts relative to externally (32%) or

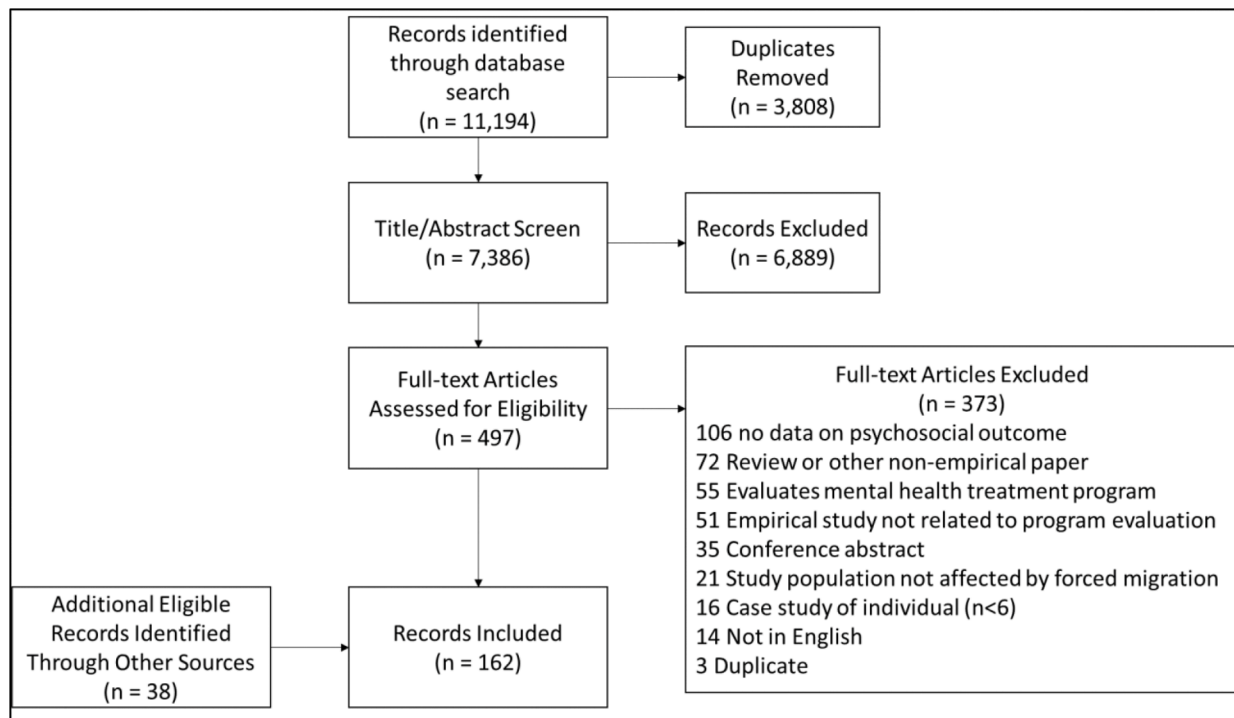


Fig. 1. PRISMA diagram.

internally (20%) displaced. More than half of the evaluations reported the population had been displaced due to armed conflict (64%) and held formal recognition of their displacement status (62%), although in many cases this information was not clearly assessed or reported.

Nearly 40% of interventions focused on general adult populations, 14% on youth and young adults, 21% on children, and 7% on young children. About 11% focused specifically on supports for parents or families and only about 2% on the elderly. Most interventions (80%) were not gender-specific, while 18% targeted women or girls and only 2% targeted men and boys.

The most frequently evaluated intervention approaches featured predominantly social approaches to improving wellbeing (64%), such as facilitating peer connections or supports, engagement in recreation or creative expression activities, and connecting to resources. Fewer featured a primarily psychological approach (25%, e.g., changing patterns of thinking, processing experiences and memories, building coping skills). Interventions within basic services were very limited (8%, e.g., nutrition or financial support, health services, shelter management). The distribution of intervention approaches following a more granular qualitative coding scheme are reported in Table 2. There is some overlap in activities across approaches; for example, interventions coded as “coping/resiliency” typically contained elements derived from evidence-based treatments but often also involved creative expression and positive development activities, just not as a sole focus.

The majority (90%) of interventions were offered broadly to the target group without distress-related selection criteria. Most were also offered in a group or other collective format (family, classroom); only 20% were offered individually.

Over half (59%) of the studies used a single-group study design, with fewer using a non-random comparative design (19%) or randomized controlled trial (RCT; 21%). More than half (54%) of studies collected pre-post data, with fewer (20%) involving repeat measures. About a quarter (24%) collected only cross-sectional data post-intervention; these were often qualitative studies (25%), whereas a majority of studies collected quantitative (49%) or mixed methods (26%) data. Using a binary classification (i.e., statistically significant at the 5% level or positive qualitative reports), the proportion of positive findings was

highly associated with study design features. For example, qualitative feedback was almost entirely positive (98%), whereas findings from quantitative measurements were more mixed (44% positive). Restricting only to quantitative data, percent positive findings for single group, quasi-experimental and RCT designs were 66%, 37%, and 29%, respectively.

Studies typically evaluated impacts on several psychosocial outcomes (e.g., symptoms of distress, perceptions of wellbeing, social support). Across all the included studies, there were 909 reported outcomes – an average of nearly six outcomes per study. The most commonly evaluated outcome indicators were related to distress, such as symptoms of post-traumatic stress, depression, anxiety and somatic complaints (25%). These outcomes were also the most uniformly measured using standardized, well-validated instruments. Indicators of subjective wellbeing (21%; e.g., mental wellness, happiness, hope, positive self-concept, etc.) and social connectedness (19%; e.g., connectedness, cohesion, social support, acculturation, etc.) were also commonly measured, but with less consistency in conceptualization and measurement.

Several studies compared subgroups within a single study and reported differential impacts according to key subgroup characteristics. Across studies reporting trauma exposure or symptom level most focused on children, finding that children responded differently to interventions based on how severely they had been impacted by their experiences. In some cases, children with fewer symptoms benefited, while children with more symptoms did not (Tol et al., 2014, 2012); in other cases the opposite was true (Diab et al., 2015). Some studies of classroom-based and child friendly spaces programs reported stronger impacts for younger children compared to older children/youth (Eyber et al., 2014; Lilley et al., 2014; Metzler et al., 2014, 2015, 2013). Some child-focused interventions also revealed greater impacts for girls compared to boys for the same outcomes, or significant impacts on different outcomes for girls and boys (Tol et al., 2012, 2008, Loughry et al., 2006). Some adult focused studies reported either impacts for women but not men on some outcomes, or lower perceived intervention fit for men than women (Miller et al., 2020; Peltonen et al., 2012; Bass et al., 2009). Lastly, a few studies reported differential impacts across

Table 1
Description of Studies (N = 170).

	n	%
World Bank Region		
East Asia & the Pacific	16	9.41
Europe & Central Asia	25	14.71
Latin America & the Caribbean	11	6.47
Middle East & North Africa	39	22.94
North America	52	30.59
South Asia	7	4.12
Sub-Saharan Africa	20	11.76
Current Displacement Status		
Externally Displaced	55	32.35
Internally Displaced	34	20.0
Resettled to a New Country	65	38.24
Returned home	4	7.06
Occupied Palestinian Territory ¹	12	2.35
Motivating Crisis ²		
War/Armed Conflict	108	63.53
Political Persecution	31	18.24
Natural Disaster	18	10.59
Other	4	2.35
Unclear/Not Reported	36	21.18
Length of Displacement		
Less than 1 year	20	11.76
1–5 years	25	14.71
5–10 years	3	1.76
More than 10 years	18	10.59
Mixed	23	13.53
Unclear/Not Reported	81	47.65
Legal Status		
Formal/Registered	105	61.76
Informal/Unregistered	1	0.59
Mixed Formal/Informal	18	10.59
Unclear/Not Reported	46	27.06
Living Situation		
Camp Setting	33	19.41
Independent Living	62	36.47
Informal Settlement	3	1.76
Short-term Transitional Shelter	5	2.94
Mixed	18	10.59
Other	5	2.94
Unclear/Not Reported	44	25.88
Gender		
Mixed/Unspecified	135	79.41
Girls/Women Only	31	18.24
Boys/Men Only	4	2.35
Developmental Target		
Early Childhood	12	7.06
Children	36	21.18
Youth/Young Adults	24	14.12
Predominantly Adult	67	39.41
Older Adults	2	1.18
Parents/Families	19	11.18
Households	4	2.35
All	6	3.53

factors such as ethnicity (Goodkind et al., 2020; Betancourt et al., 2020), level of acculturation (e.g. first vs. second generation immigrant) (Rousseau et al., 2014), or motivation for displacement (e.g. economic vs. persecution) (Valli et al., 2019).

3.2. Meta-analysis

Of the 69 intervention records that included a comparison condition, 51 were identified as eligible for meta-analysis based on study design and reporting features. Ten were excluded because the intervention group was a help-seeking group compared to a non-help-seeking group, seven because of disqualifying differences in comparison groups (e.g., differences in eligibility, need, or ability led to one condition vs. another), and one because there was insufficient information provided to make a determination about eligibility. Of the 51 that were eligible, eight were subsequently not included because they did not report on shared, priority outcomes, while ten were excluded due to insufficient

Table 2
Qualitatively derived intervention approaches.

Approach Code	Approach Description	n	%
1. Financial Capacity	Provision of financial support, financial training	11	6.47
2. Coping/Resiliency	“Treatment-like” activities focused on addressing impacts of trauma, decreasing distress, improving coping	20	11.76
3. Creative Expression	Activities focused on processing experiences through expression (e.g., sand play, theater)	26	15.29
4. Health Promotion	Programs focused on health literacy, health service delivery, nutrition	13	7.65
5. Integrated MHPSS	Focus on integrating tiered MHPSS services into community resources	7	4.12
6. Parent/Family	Improvement of parent wellbeing or skills, or provision of direct family-level supports	25	14.71
7. Psychoed & Referral	Psychoeducation, assessment, referral	5	2.94
8. Relaxation	Mind-body focused approaches (e.g., listening to music, yoga)	6	3.53
9. Social Integration	Increasing social supports or community integration (e.g., reconciliation workshops, mentor programs)	30	17.65
10. Child Protection	Safe spaces, community-focused child protection services	11	6.47
11. Positive Development	Education, life skills, prosocial activities (rather than focusing on trauma recovery)	16	9.41

statistical reporting (excluded papers are indicated in Supplemental File 2). This resulted in 33 papers being included for meta-analysis. The majority of included studies (n = 24; 72.73%) were RCTs while 9 were quasi-experimental designs. Quantitative QA scores ranged from 50% to 94% for included studies (mean: 74.4%, SD = 11.7%).

A description of included studies is provided in Table 3. The majority of interventions included in the meta-analysis did not utilize a symptom inclusion criteria (64%), while 24% relied on a symptom cut off for elevated distress and 12% relied on reports of general distress. The primary PSS approaches of the interventions were mostly social in nature (52%), followed by psychological (45%), with very few general humanitarian approaches (3%). Relative to the full set, these distributions indicate that studies that were included in the meta-analyses were more likely to have some sort of symptom-related inclusion criteria (p < .001) and take a psychological approach to intervention (p=.014).

Seven outcomes were examined in meta-analyses, described in Table 4. Results revealed small changes across outcomes that trended positive but mostly not statistically significant. Across these outcomes, a moderately strong overall effect was found for psychosocial wellbeing (ES: -0.534, 95% CI: [-0.870, -0.197], p=.005; Fig. 2); there was no evidence of asymmetry (Begg’s test: p = .10; Egger’s test: p = .11) . A small impact on both internalizing (ES: -0.152, 95% CI: [-0.310, 0.005], p = .057) and externalizing (ES: -0.249, 95% CI: [-0.515, 0.016], p = .064) problems was also observed, although results were not conclusive. Comparing adult-focused vs. child-focused impacts in the meta-analysis, we found a small but significant improvement for adult internalizing problems (ES: -0.289, 95% CI: [-0.435, -0.143], p=.001) and a small but significant worsening for children (ES: 0.129, 95% CI: [.054, 0.204], p=.002; Fig. 3). Other subgroup analyses showed little meaningful variation by features of interest, although it is unclear if this is due to a lack of variation or simply insufficient power due to a limited number of studies. Sensitivity analyses showed no substantial changes in interpretation, though in one case removal of three more “indicated” intervention papers tempers the effect size for subjective wellbeing (ES: -0.363, p = .049) (Supplemental File 3).

Table 3
Papers contributing to meta-analysis.

Author	Country	Intervention	Approach	Population	Outcome Target	Internalizing	Subjective Wellbeing	Externalizing	Total Difficulties	Prosocial Behavior	Social Support	Functioning
Ager (2011)	Uganda	Psychosocial Structured Activities	Coping / resiliency strengthening	Children attending primary schools in Northern Uganda that had been significantly impacted by displacement after the conflict	Children		X					
Annan (2017)	Thailand	Strengthening Families Program	Parent / family strengthening	Burmese caregivers and their children age 8–12 living in Thailand	Children	X		X	X			
Baker (2006)	Australia	Music Group	Creative expression	Refugee youth attending participating high school	Children	X		X	X	X		
Bass (2009)	Jordan	Home-based Psychosocial Program	Parent / family strengthening	Iraqi families living in Jordan with at least one child between age 10 and 20	Adults Children	X X	X X				X X	X X
Betancourt (2020)	US	Family Strengthening Intervention	Parent / family strengthening	Somali Bantu and Bhutanese refugee families with at least 1 school-age child (7–17)	Parents Children	X X		X	X			X
Diab (2014)	OPT	Teaching Recovery Techniques	Coping / resiliency strengthening	Palestinian children age 10–13 attending school in a participating classroom	Children		X			X		
Dybdahl (2001)	Bosnia	Mother-child psychosocial intervention	Parent / family strengthening	Internally displaced mothers with children age 5–6	Adults Children		X X	X	X	X		X
El-Khani (2019)	OPT	Caring for Children Through Conflict and Displacement	Parent / family strengthening	Primary caregiver (nearly all female) of a child aged 8 to 14 years and had experienced conflict in the past 5 years in the West Bank.	Children	X		X	X	X		X
Goodkind (2020)	US	Refugee Well-being Project	Social connectedness / integration	Resettled refugees from the Great Lakes Region of Africa, Iraq, and Syria who had arrived in the US within the past 3 years	Adults	X					X	
Green (2016)	Uganda	Women's Income Generating Support	Building financial / economic capacity	Poor and vulnerable IDP women and girls who were either returned or in transition camps	Adults	X						
Hilado (2019)	US	Baby TALK Home Visiting	Parent / family strengthening	Pregnant mothers and families with children less than 3 years old who are refugees (from a number of countries) or undocumented immigrants	Adults	X						
Jespersen (2012)	Denmark	Music relaxation	Relaxation	Adult refugees with trauma symptoms and sleep problems	Adults		X					
Jordans (2010)	Nepal	Classroom Based Intervention	Coping / resiliency strengthening	Children age 11–14 in participating schools who were screened as having elevated psychosocial distress; over 95% reported no longer living in original village	Children	X		X		X		X
Lange-Nielsen (2012)	OPT	Writing for Recovery	Coping / resiliency strengthening	Adolescents age 12–17 attending schools in a refugee camp in Gaza	Children	X						
Loughry (2006)	OPT	Structured Psychosocial Activities	Positive youth development	Children age 6–17 in the West Bank and Gaza	Children	X		X	X			
Miller (2020)	Lebanon	Caregiver Support Intervention	Parent / family strengthening	Syrian refugees in Lebanon with a child between the ages of 3 and 12	Adults Children	X	X					

(continued on next page)

Table 3 (continued)

Author	Country	Intervention	Approach	Population	Outcome Target	Internalizing	Subjective Wellbeing	Externalizing	Total Difficulties	Prosocial Behavior	Social Support	Functioning
Mitschke (2013)	US	Financial Literacy Group	Building financial / economic capacity	Bhutanese refugee women resettled in the US	Adults	X					X	
Morris (2012)	Uganda	Mother-Baby Group	Parent / family strengthening	IDP mothers with malnourished child age 6–30 months	Adults	X						
Panter-Brick (2018)	Jordan	Advancing Adolescents	Positive youth development	Syrian and Jordanian youth age 12–18; eligibility involved screening for mental health difficulties and poor access to services	Children	X		X	X	X		
Peltonen (2012)	OPT	School Mediation Intervention	Social connectedness / integration	Children age 10–14 attending participating schools	Children	X		X		X		
Ponguta (2020)	Lebanon	Mother child education program	Parent / family strengthening	Refugee and marginalized mothers in Lebanon with a child age 2–7	Adults Children	X	X		X	X	X	
Qouta (2012)	OPT	Teaching Recovery Techniques	Coping / resiliency strengthening	Palestinian children age 10–13 attending school in a participating classroom	Children	X			X			
Robertson (2019)	US	Somali Health Realization	Coping / resiliency strengthening	Resettled Somali women with self-reported stress symptoms	Adults	X						
Smyth (2002)	US	Structured Writing About Disaster	Creative expression	Adults in the Eastern US displaced by a hurricane and subsequent flooding who had recently been able to return home	Adults	X						
Tol (2008)	Indonesia	Classroom Based Intervention	Coping / resiliency strengthening	Displaced and non-displaced 4th and 5th grade children attending participating schools and manifesting symptoms of post-traumatic stress or anxiety	Children	X		X				X
Tol (2010)	Indonesia	Classroom-based intervention	Coping / resiliency strengthening	Displaced and non-displaced 4th and 5th grade children attending participating schools and manifesting symptoms of post-traumatic stress or anxiety	Children						X	
Tol (2012)	Sri Lanka	Classroom Based Intervention	Coping / resiliency strengthening	Displaced and non-displaced children age 9–12 attending participating schools and manifesting symptoms of distress	Children	X		X	X	X		X
Tol (2014)	Burundi	Classroom Based Intervention	Coping / resiliency strengthening	Displaced and non-displaced children age 8–17 attending participating schools and manifesting symptoms of distress	Children	X					X	X
Tol (2018)	Uganda	Self Help +	Coping / resiliency strengthening	Female South Sudanese refugees with at least moderate psychological distress	Adults	X	X					X
Tol (2020)	Uganda	Self Help +	Coping / Resiliency Strengthening	Female South Sudanese refugees with at least moderate psychological distress	Adults	X	X					X
Widmann (2017)	Kenya	Screening and Brief Intervention	Psychoeducation & referral	Male Somali khat users living in an urban settlement in Nairobi	Adults	X						
Yeomans (2010)	Burundi	Reconciliation Workshop WITH Psycho-education	Social connectedness / integration	IDPs referred by church elders as experiencing psychological distress	Adults	X						
Yeomans (2010)	Burundi	Reconciliation Workshop	Social connectedness / integration	IDPs referred by church elders as experiencing psychological distress	Adults	X						

4. Discussion

This review sought to synthesize the literature on effectiveness of PSS interventions for populations affected by forced displacement. Findings showcase positive stakeholder *perceptions* of intervention effectiveness, particularly when examined qualitatively. However, positive findings were highly associated with study design, not as consistent when examined quantitatively, and often not retained when evaluated against a comparison condition. Further, we found positive impact to be more common in more positive or wellbeing-focused outcome categories; these are often a better fit to intervention theories of change, but have historically been less frequently or consistently assessed than distress indicators such as symptoms of depression and post-traumatic stress. Finally, we found limited support for differences in effectiveness by context, intervention, or population characteristics across studies, although subgroup differences were sometimes reported within the minority of studies that examined these.

In the narrative review, we found considerably less support for positive intervention impacts when comparing changes in outcomes between intervention and control groups, relative to single-group designs. In humanitarian settings, rapidly changing situational dynamics could contribute to changes in MHPSS indicators over time even in the absence of intervention. Yet of all studies reviewed, less than half included a comparison condition, and about a quarter collected only cross-sectional data. While leveraging a range of study designs can be useful to gain valuable information about intervention implementation and participant perceptions, many of these designs are not appropriate to support causal inference. Although the challenges of implementing complex study designs in humanitarian settings are well noted, these findings highlight the importance of maximizing rigor in intervention evaluation research, such as by incorporating experimental or quasi-experimental design features (e.g., comparison condition, interrupted time series data), whenever possible.

Very few studies explored negative impacts, or even distinguished between anticipated and unanticipated impacts. Studies that did report these findings tended to be based on quantitative measures in which change or movement in a negative direction could be observed, but potentially without rich qualitative information to help provide explanation. In contrast, most qualitative studies overwhelmingly reported positive impacts and did not seek to explore unanticipated or harmful impacts. Therefore, it is unclear whether the mostly positive findings of this review are due to a true lack of negative impacts or simply a gap in research. A necessary, but often absent component for interpreting intervention impacts is a clearly state theory of change, which is critical to help guide decisions such as who the intervention should be offered to, how the intervention should be delivered, what types of outcomes should be evaluated, what unexpected outcomes could happen, and what components of the intervention can or should be adapted (Miller et al., 2021). Moreover, increased qualitative exploration is needed to help contextualize and make sense of negative and/or unexpected quantitative findings. Doing so will not only help avoid doing harm, but also help refine intervention targets and theories of change.

Indicators of distress were more commonly measured than indicators of other outcome domains, even though non-distress outcomes often map on better to the underlying frameworks of psychosocial interventions (IASC, 2007). There also appears to be more consensus around measurement for mental distress and disorder; we found that indicators for outcomes such as coping, subjective wellbeing, and social connectedness were not only less commonly assessed but also less consistently measured. As a result, the meta-analysis of psychosocial wellbeing included fewer studies. We were likewise unable to group a sufficient number of studies for a meta-analysis on outcomes such as coping skills, social connectedness and family processes due to too much variation in how the outcomes was conceptualized and measured. Along with developing clearer theories of change to guide selection of appropriate outcome indicators, it is critical for future research to address

Table 4

Overall results of conservative meta-analyses.

Outcome Category	Outcome Description	n ¹	Effect Size	95% CI	p-value	(I ²)%
Internalizing	Combined symptoms of depression, anxiety, or general distress, such as sadness, social withdrawal, worry	39	-0.152	[-0.310, 0.005]	.057	73.5%
Externalizing ²	Behavior/conduct problems such as anger, fighting, being disruptive	14	-0.249	[-0.515, 0.016]	.064	50.5
Total Difficulties ²	Combined internalizing and externalizing	16	-0.062	[-0.168, 0.044]	.229	0.0
Psychosocial Wellbeing	Positive, subjective feelings of mental health, feeling well	13	-0.534	[-0.870, -0.197]	.005	13.7%
Functional Impairment	Loss of ability to fully engage in tasks of daily living	12	-0.034	[-0.305, 0.237]	.791	0.0
Prosocial Behavior ²	Positive social behavior such as being kind, helpful, considerate	10	.011	[-0.130, 0.151]	.869	0.0
Social Support	Perceptions of having access to tangible or emotional support from others, people one can turn to for help	9	-0.113	[-0.354, 0.128]	.310	0.0

¹ Comparisons reporting on multiple independent populations with non-overlapping interventions were included separately in the meta-analyses.

² Specific to children.

measurement challenges and produce valid, consensus-based, user-friendly tools and approaches to measuring a more diverse range of outcomes, and to test these measures across multiple settings. This will likely need to include framework tools or approaches with guidance for local adaptation and testing. For example, the Bolton approach (Bolton and Tang, 2002) to developing locally relevant functioning assessments was leveraged in many of the papers that included functioning as an outcome. A similar approach may be helpful for measuring constructs such as happiness, subjective wellbeing, and coping across contexts.

In comparing adult-focused vs. child-focused impacts in the meta-analyses, we found a small but significant improvement for adult internalizing problems (e.g., symptoms of depression and anxiety) and a small but significant worsening for children. Barbui et al. (2020) reported similar trends in a separate review (Barbui et al., 2020). One possible explanation for this difference is that the child-focused interventions were often delivered in schools where children received the intervention regardless of their level of distress or trauma exposure, whereas adults had more choice about whether to participate in interventions. Therefore, among adults the interventions may better align with actual MHPSS needs. Additionally, as symptoms of depression and anxiety are well documented to increase in adolescence (WHO, 2020), interventions addressing these types of problems may be more

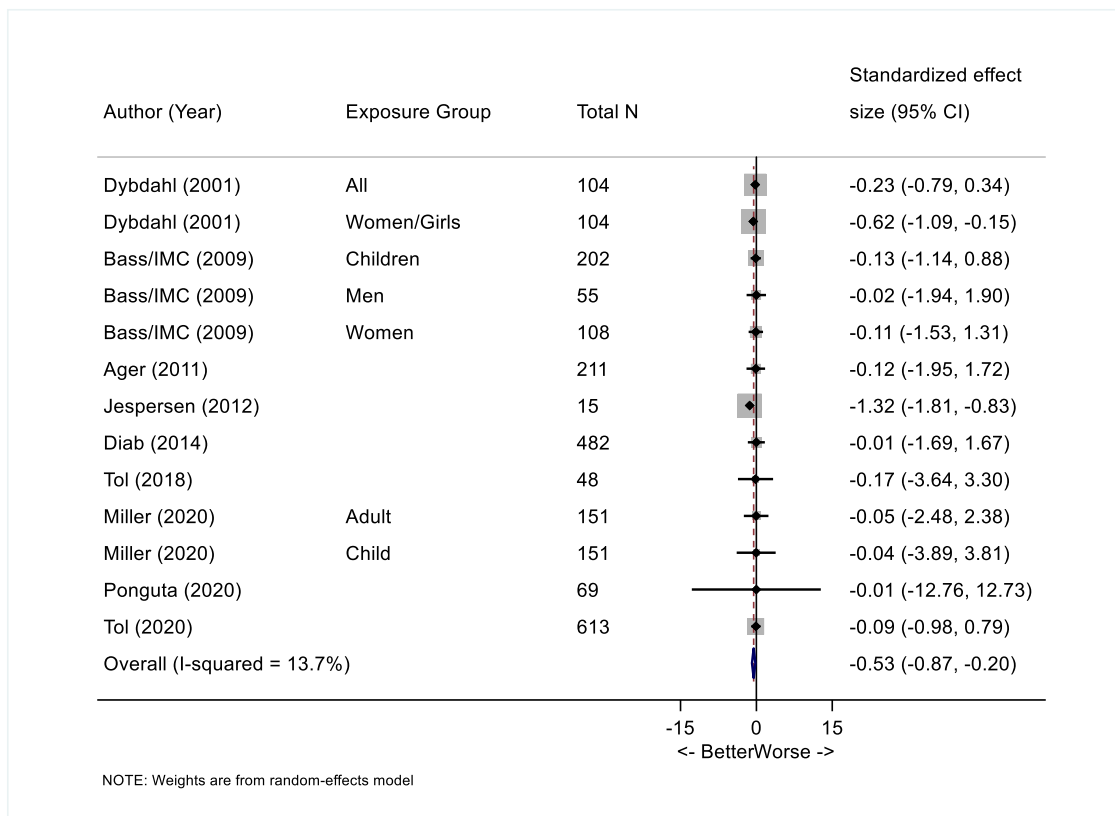


Fig. 2. Forest plot for subjective wellbeing meta-analysis.

appropriate for older youth and adults.

Moderation analyses were less clear in terms of identifying meaningful differences in impact across context, intervention, and population characteristics of interest. It is unclear if this was due to a lack of actual differences, or simply limited power to detect differences across subgroups due to small group sizes. However, findings from the narrative synthesis that studies including subgroup analyses often did report differences by age, gender, level of distress, or other characteristics suggest that when interventions are intended to serve too broad a group, they may not end up being helpful for everyone. This highlights a need for further research and intervention development to clarify the target and focus of many interventions.

4.1. Limitations

Findings from this review should be interpreted in light of several limitations. First, our search was limited only to English language articles, which may have resulted in exclusion of relevant evaluations, particularly those conducted by smaller community-based organizations or published in local journals.

Second, mental health and PSS exist on a continuum. While this review focused on PSS rather than treatment studies, the distinction between treatment and prevention/promotion is not always clear (Tol et al., 2015). For example, there are structured interventions that are based on or take components from structured psychotherapies, but are provided to people experiencing moderate distress and so may or may not be considered treatment (e.g.: Self Help Plus (Tol et al., 2018)). In these cases the study was discussed by the research team, with decision made by consensus, erring on the side of inclusion and examined through sensitivity analyses.

We also sought to balance decisions regarding study quality with a recognition of the pragmatic nature of research in many humanitarian settings. To this end we erred toward inclusion of quasi-experimental

studies in the meta-analysis, again exploring this further in sensitivity analysis. We also note that the quality assessment approach we used may to some extent conflate clarity of writing with actual study rigor, as we relied on the information reported in the publications to make the assessment.

Lastly, given the focus of this review on populations affected by forced displacement, the included articles represent studies in active humanitarian response contexts, along with a set of studies in stable resettlement contexts. While this is a unique focus, it has important implications and challenges that limit our findings. We found that the way interventions are delivered, and even the way studies are reported, varies between humanitarian and resettlement settings. As such, many of the variables we initially sought to extract did not always fit well, resulting in many entries of “not reported”. For example, living situation is often not reported in HIC resettlement contexts, where the population is generally assumed to be living independently, compared to a displacement setting where some description of the camp or external circumstances in which the study has been conducted is provided. The populations in resettlement settings are also more diverse, often comprising multiple countries of origin. Because of this, often information such as length of time displaced or resettled, motivating crisis, etc., are not clearly reported, and not homogenous as is the case in acute or current displacement. These and similar experiences have impacted the utility of some of our data extraction variables. Finally, in some studies internal to the country of conflict it is not clear whether the study population is/has been displaced; for consistent application of the inclusion criteria, we required a clear indication in the paper that at least a portion of the sample had been affected by forced migration.

5. Conclusions

This systematic review and meta-analysis summarizes the evidence for PSS interventions in the context of forced displacement. Meta-

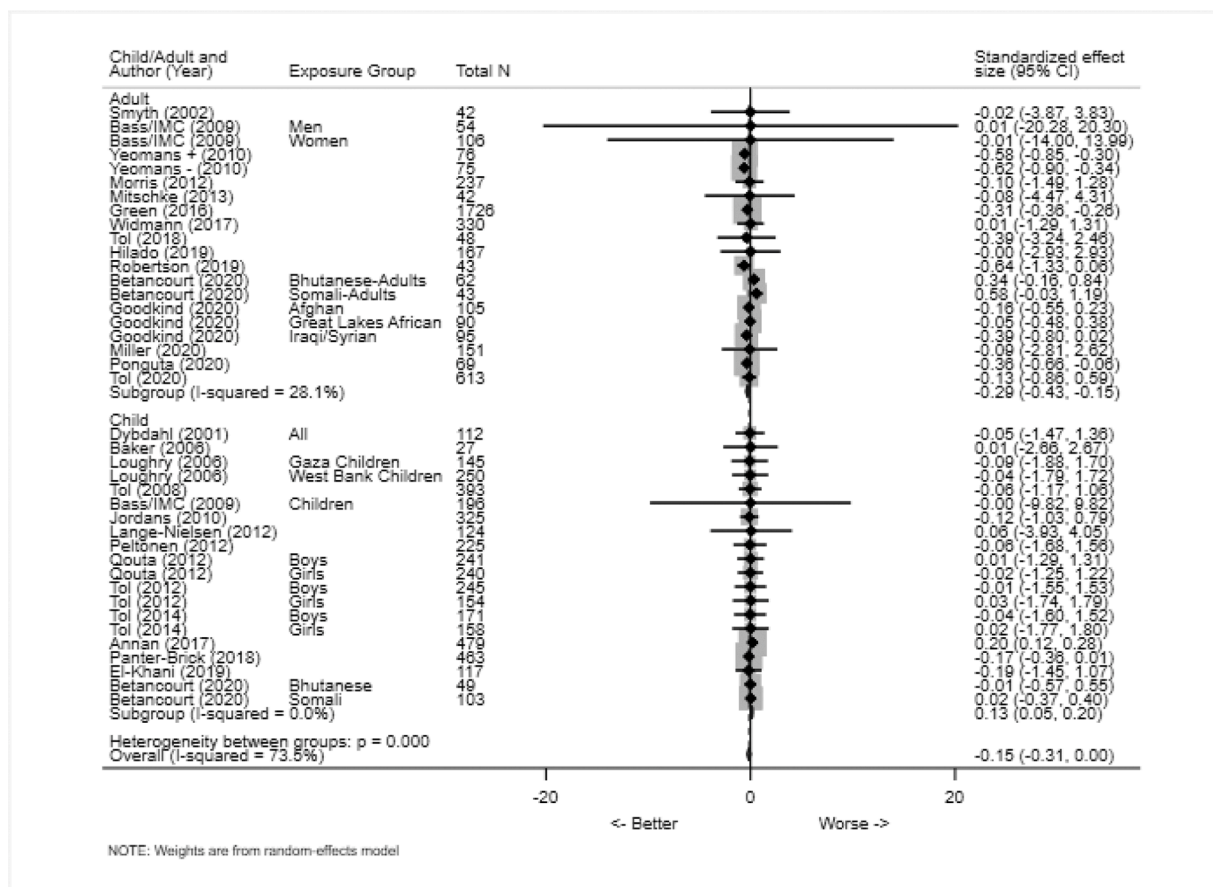


Fig. 3. Forest plot for internalizing meta-analysis with age subgrouping.

analytic findings indicated small but positive impacts of psychosocial interventions across a range of outcomes. Rather than definitively answering questions of effectiveness, however, perhaps the most valuable contribution of this study is the rich groundwork laid for next steps and future directions. Specifically, more rigorous research is needed to support causal inference, better align assessed outcomes with intervention theories of change, improve measurement of more positive or wellbeing-focused outcomes, examine subgroup differences and explore intervention tailoring for diverse needs, and report the potential for negative impacts.

CRedit authorship contribution statement

All authors contributed to protocol development and implementation. KJ implemented the academic literature search. AN and ML oversaw record screening, data extraction, and gray literature search. CL led stakeholder outreach and steering committee engagement. AN, CL, and ML assessed study quality and contributed to qualitative coding. IM conducted the meta-analysis. All authors participated in drafting the manuscript and approved the final draft.

Statement of ethical approval

N/A.

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Supplementary materials

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