

Original Article

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The effectiveness of peer support for individuals with mental illness: systematic review and meta-analysis

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Abstract

Background. The benefits of peer support interventions (PSIs) for individuals with mental illness are not well known. The aim of this systematic review and meta-analysis was to assess the effectiveness of PSIs for individuals with mental illness for clinical, personal, and functional recovery outcomes.

Methods. Searches were conducted in PubMed, Embase, and PsycINFO (December 18, 2020). Included were randomized controlled trials (RCTs) comparing peer-delivered PSIs to control conditions. The quality of records was assessed using the Cochrane Collaboration Risk of Bias tool. Data were pooled for each outcome, using random-effects models.

Results. After screening 3455 records, 30 RCTs were included in the systematic review and 28 were meta-analyzed (4152 individuals). Compared to control conditions, peer support was associated with small but significant post-test effect sizes for *clinical recovery*, $g = 0.19$, 95% CI (0.11–0.27), $I^2 = 10\%$, 95% CI (0–44), and *personal recovery*, $g = 0.15$, 95% CI (0.04–0.27), $I^2 = 43\%$, 95% CI (1–67), but not for *functional recovery*, $g = 0.08$, 95% CI (–0.02 to 0.18), $I^2 = 36\%$, 95% CI (0–61). Our findings should be considered with caution due to the modest quality of the included studies.

Conclusions. PSIs may be effective for the clinical and personal recovery of mental illness. Effects are modest, though consistent, suggesting potential efficacy for PSI across a wide range of mental disorders and intervention types.

Introduction

In recent years mental health care services and social organizations increased their focus on implementing peer support initiatives to promote recovery and expand the availability of support for individuals coping with mental illness (Stratford et al., 2017). This growing interest in peer support is stimulated by the World Health Organization (WHO), as they consider it a feasible tool which adds a person-centered, recovery, and rights-based approach to biomedical practices in mental health services (WHO, 2021). Also, the (coronavirus disease 2019) COVID-19 pandemic increases the need for community-based interventions such as peer support (Suresh, Alam, & Karkossa, 2021), since mental health problems may have exacerbated and mental health services may be less accessible (Salari et al., 2020).

Peer support involves a mutual exchange of practical and emotional support, based on ‘shared understanding, respect, and mutual empowerment between people in similar situations’ (Mead, Hilton, & Curtis, 2001) with critical ingredients such as shared responsibility (Mead, 2003; Mead & MacNeil, 2006), hope, self-determination over one’s life, and the use of lived experience knowledge (Repper & Carter, 2011; Slade et al., 2014; Solomon, 2004). These aspects are embedded within the varying peer support programs implementing different structures, content, duration, and delivery formats, targeting different populations, and evaluating a wide range of outcomes (Chien, Clifton, Zhao, & Lui, 2019; Lloyd-Evans et al., 2014).

Previous meta-analyses examining the effects of peer support interventions (PSIs) were focused on specific target groups, such as patients with (perinatal) (Huang et al., 2020) depression (Bryan & Arkowitz, 2015; Pfeiffer, Heisler, Piette, Rogers, & Valenstein, 2011) or serious mental illness (SMI) (Chien et al., 2019; Fuhr et al., 2014; Lloyd-Evans et al., 2014), or only analyze specific outcomes (e.g. cost-effectiveness; Chien et al., 2019; Huang et al., 2020) and empowerment (Burke, Pyle, Machin, Varese, & Morrison, 2019) or included either one-to-one (White et al., 2020) or group interventions (Lyons, Cooper, & Lloyd-Evans, 2021).

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To the best of our knowledge, no previous meta-analysis has examined the effects of peer support across all patient groups and intervention types. We conducted a comprehensive systematic review and meta-analysis of randomized controlled trials (RCTs) comparing the effects of any peer support intervention with control conditions. We focused on 3 pre-specified main outcomes – clinical, personal, and functional recovery – and, when possible, we also examined specific outcomes within these main categories (e.g. depressive symptoms, empowerment, and quality of life).

Methods

Protocol registration

This study adheres to the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) reporting guideline (Moher, Liberati, Tetzlaff, Altman, & The, 2009), and focuses on the effect of peer support for individuals with mental health disorders, corresponding to the main part of our protocol (<https://osf.io/58urb>). This protocol also includes our search for RCTs on peer support for relatives and caregivers of individuals with mental illness, which will not be reported here.

Search strategy

We searched PubMed, Embase, and PsycINFO up to December 18th 2020, without language restriction. We used index terms from database-specific thesauruses as well as free text words indicative of mental illness and peer support (search strings are available in Appendix A). References of included trials and previous systematic reviews were reviewed for eligibility.

Identification and selection of studies

Two authors (DS and CM) independently screened titles and abstracts to identify eligible papers for inclusion. To determine final inclusions, full texts of the selected papers were examined. We included studies: (a) that were RCTs; (b) comparing any PSI format; (c) for adults with a clinical or self-reported mental disorder diagnosis, or a score above a cut-off on a standardized mental disorder symptom measure; (d) with care-as-usual (CAU), waiting list (WL), or other active (e.g. clinician-led therapies) or inactive comparators (e.g. an attention control website) (Griffiths et al., 2012); and (e) outcomes focusing on at least one of 3 categories: *clinical* (i.e. symptomatic) recovery (Slade et al., 2014; van Eck, Burger, Vellinga, Schirmbeck, & de Haan, 2018); *personal* recovery (e.g. empowerment; Mueser et al., 2006; van Weeghel, van Zelst, Boertien, & Hasson-Ohayon, 2019); *functional* recovery (e.g. quality of life; Mueser et al., 2006). For a definition of the categories, see Appendix B. Peers are defined as individuals recovered or in recovery from a mental illness. We excluded trials when the intervention was partially or co-delivered by a non-peer (e.g. a lay health worker), targeting substance use, somatic disorder self-management, or including (ex-)employees with mental illness due to their job (e.g. veterans). Any disagreement was resolved with a third author (PC), and central issues were discussed in meetings with all authors.

Data extraction and risk of bias assessment

A standardized form was used by 2 authors (DS and CM) to extract data regarding study context, participants' and

intervention characteristics, including diagnoses, intervention format, control condition, and outcome data. When multiple measurements or control groups were available, we followed our developed decision tool (see Appendix C).

Study authors DS and CM independently assessed included trials using the Cochrane Collaboration Risk of Bias (RoB) tool 2.0 (Higgins et al., 2011), resolving any discrepancy with a third researcher (PC). Each of the following RoB-domains was rated as high risk, some concerns, or low risk: (a) the randomization process; (b) deviations from the intended interventions; (c) missing outcome data (up to 10% drop out was rated as low risk); (d) inappropriate measurement of the outcome; (e) selection of the reported result. An overall RoB score was calculated for each study, following our approach as presented in Appendix C.

Outcome measures

Outcomes included three pre-specified recovery categories: (1) *clinical recovery*, indicating the degree of psychiatric symptomatology (Slade et al., 2014), with measures including the Brief Symptom Inventory (BSI), and Brief Psychiatric Rating Scale (BPRS); (2) *personal recovery*, concerning the extents of perceived recovery, sense of purpose, and personal agency [Mueser et al., 2006; e.g., Recovery Assessment Schedule (RAS), Empowerment Scale (ES)]; (3) *functional recovery*, referring to the quality of life and the degree of vocational and social functioning [Robinson, Woerner, McMeniman, Mendelowitz, & Bilder, 2004; e.g., World Health Organization Quality of Life (WHOQOL), EuroQoL 5D (EQ-5D)].

Also, we examined subcategories within the main categories of outcomes: *clinical recovery* (*depressive symptoms*), *personal recovery* (*empowerment*, *RAS*, *hope*), and *functional recovery* (*quality of life*, *social support*, and *loneliness*). These subcategories of specific outcomes were pooled when a minimum of five trials were available. In Appendix B, a comprehensive definition for each outcome category is provided, with details on data extraction per category described in Appendix C, and corresponding instruments in Appendix D.

Statistical analysis

We conducted separate meta-analyses comparing PSIs and control conditions for each main group of outcomes (clinical, functional, and personal recovery) as well as subcategories of outcomes within the main groups (e.g. hope, quality of life). Effects were estimated at post-test, and when possible, at long-term follow-ups (≥ 6 months after randomization).

We calculated between-group effect sizes (Hedges' g) by using means, standard deviations and N . When these were not reported, we used dichotomous outcomes or other statistics (e.g. p value, t value) for calculating effect sizes. Intention-to-treat data were used. Effect sizes were pooled with a random-effects model, using the Hartung-Knapp-Sidik-Jonkman method (IntHout, Ioannidis, & Borm, 2014). Heterogeneity was estimated with the I^2 statistic and its 95% confidence interval (CI). In addition, we included prediction intervals (PI), which represent 95% CI of the predictive distribution of effects in future comparable trials.

Categorical moderators of effects were explored in subgroup analyses by using a mixed-effects model. We conducted subgroup analyses when a minimum of three studies were available per subgroup.

We estimated publication bias through visual funnel plot inspection, Egger's test (Egger, Smith, Schneider, & Minder, 1997), and with Duval and Tweedie trim-and-fill procedure (Duval & Tweedie, 2000). We conducted sensitivity analyses by: (a) excluding outliers (defined as studies whose 95% CI effect size did not overlap with the 95% CI of the pooled effect), and (b) exploring the influence of RoB in the results.

All meta-analyses were conducted in version 4.1.1 of R, using the packages *meta* (Balduzzi, Rucker, & Schwarzer, 2019), *metafor* (Viechtbauer, 2010), and *dmetar* (Harrer, Cuijpers, Furukawa, & Ebert, 2019).

Results

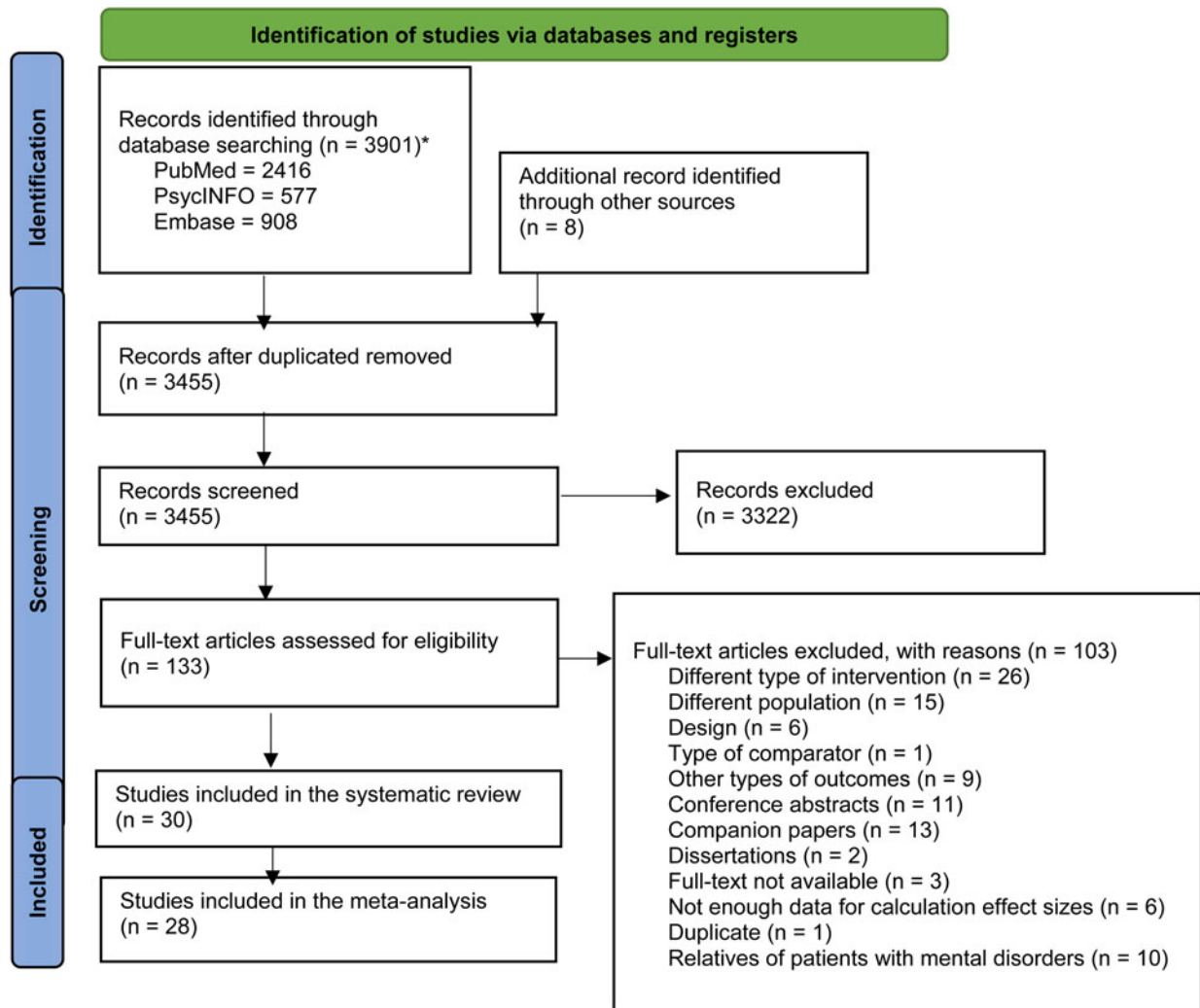
Inclusion of studies

The PRISMA flowchart is presented in Fig. 1. We screened 3455 hits, and we examined the full-text of 133 studies. A total of 30 studies (for references, see Appendix E) were included, of which 28 trials and 4152 participants, were included in the

meta-analysis. Three studies (Field, Diego, Delgado, & Medina, 2013; Ludman et al., 2007; Mathews et al., 2018) included a clinician-led group as comparator [e.g. Interpersonal Psychotherapy (IPT) or Cognitive Behavioral Therapy (CBT)], including one overlapping trial (Ludman et al., 2007) which examined a control condition and a clinician-led comparator. Due to the limited number of studies, we did not pool trials with clinician-led comparators. A narrative description of these studies is presented in Appendix F.

Study characteristics

Selected characteristics of 30 included studies are presented in Appendix D. Two main subgroups were identified across the included trials: patients with SMI (20 trials) and individuals with depression (7 trials). SMI studies included a heterogeneous group of patients including but not limited to psychosis, depressive disorders, anxiety disorders, or bipolar disorders. The majority of depression studies (5 trials) focused on perinatal depression



From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al., The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71. doi: 10.1136/bmj.n71.

Fig. 1. Flowchart of Selection and Inclusion Process, Following the PRISMA Statement

(Dennis, 2003; Dennis et al., 2009; Gjerdingen, McGovern, Pratt, Johnson, & Crow, 2013; Letourneau et al., 2011; Shorey et al., 2019), with participants scoring above a cut-off on a questionnaire. One study focused on women with eating disorders (Ranzenhofer et al., 2020). Most studies had CAU (16 trials) or WL (9 trials) as a control condition.

In 12 trials the PSI consisted of group meetings, 17 evaluated one-to-one peer support, and one trial implemented a mixed format. Face-to-face delivery was most common (16 trials), three trials evaluated telephone-based support, two trials examined internet support groups, and nine trials examined a mixed intervention, bringing together the latter formats. Intervention duration and frequency were heterogeneous and reported inconsistently, ranging from three weeks to six months with weekly meetings or a more flexible frequency.

Risk of bias

Overall, there is a high RoB in the majority of included studies: 21 trials were rated at high risk (21/30, 70%), six studies were judged as having some concerns for risk of bias (6/30, 20%), and only three studies met criteria for low risk of bias (3/30, 10%). Focusing on the separate RoB domains, twelve studies (12/30, 40%) were rated at low risk of bias for domain 1, due to reporting an adequate randomization process. Due to the unstructured naturalistic approach of peer support, 23 studies (23/30, 77%) were

rated at low risk in domain 2 (deviations from the intended interventions). Ten trials (10/30, 33%) were rated as low RoB in domain 3 due to missing outcome data. Thirteen trials (13/30, 43%) were judged at low risk in domain 4 due to measurement of the outcome, using self-report measures only. For domain 5, only five studies (5/30, 17%) were prospectively registered and were rated at low risk (see Figures G1 and G2 in Appendix G, and Appendix H for RoB rating per domain and study).

Clinical recovery

The pooled effect size at post-test across 22 PSI studies measuring *clinical recovery* was significant, with $g = 0.19$, 95% CI (0.11–0.27) (see Table 1 and Fig. 2). Heterogeneity was low, $I^2 = 10\%$, 95% CI (0–44). The PI was consistent with benefit, overlapping completely with the 95% CI.

For the subgroup of patients with SMI (Boevink, Kroon, van Vugt, Delespaul, & van Os, 2016; Cook et al., 2012a; Corrigan et al., 2017; Davidson et al., 2004; Johnson et al., 2018; Kaplan, Salzer, Solomon, Brusilovskiy, & Cousounis, 2011; Mahlke et al., 2017; O'Connell et al., 2018; Pfeiffer et al., 2019; Rivera, Sullivan, & Valenti, 2007; Rogers et al., 2016; Russinova et al., 2014; Solomon & Draine, 1995), the effect size was significant, $g = 0.18$, 95% CI (0.10–0.26) (14 trials). However, for the subgroup of patients with depression (Dennis, 2003; Dennis et al., 2009; Gjerdingen et al., 2013; Griffiths et al., 2012; Letourneau

Table 1. Effects for clinical recovery of peer support interventions compared with CAU, WL or other control conditions: Hedges g^a

Clinical recovery	No. of trials	g (95% CI)	I^2 (95% CI)	p	PI
Main effect					
All studies pooled	22	0.19 (0.11–0.27)	10 (0–44)	<0.001	0.11–0.27
Subgroup of patients					
Individuals clinically diagnosed with SMI	14	0.18 (0.10–0.26)	0 (0–55)	<0.001	0.10–0.26
Individuals with depressive symptoms ($k = 6$ cut-off, $k = 1$ diagnosis) ^b	7	0.19 (–0.20 to 0.58)	57 (0–81)	0.27	–0.67 to 1.05
Specific outcomes					
Depressive symptoms	12	0.14 (–0.02 to 0.30)	41 (0–70)	0.09	–0.13 to 0.41
Publication bias					
Adjusting for publication bias ^c	23	0.18 (0.10–0.27)	18 (0–50)	<0.001	0.10–0.27
Sensitivity analyses					
Outlier excluded	21	0.20 (0.14–0.27)	0 (0–47)	<0.001	0.14–0.27
Risk of bias^d					
High risk	15	0.15 (0.06–0.25)	11 (0–49)	0.001	NA
Some concerns	4	0.20 (0.14–0.27)	0 (0–85)	<0.001	NA
Low risk	3	0.52 (0.29–0.76)	0 (0–90)	<0.001	NA
Long-term					
6 to 9 months	13	0.17 (0.08–0.26)	0 (0–57)	0.002	0.08–0.26
12 to 18 months ^e	8	0.10 (–0.21 to 0.40)	63 (20–83)	0.48	–0.65 to 0.84

CAU, care-as-usual; CI, confidence interval; NA, not applicable; PI, prediction interval; WL, waiting list.

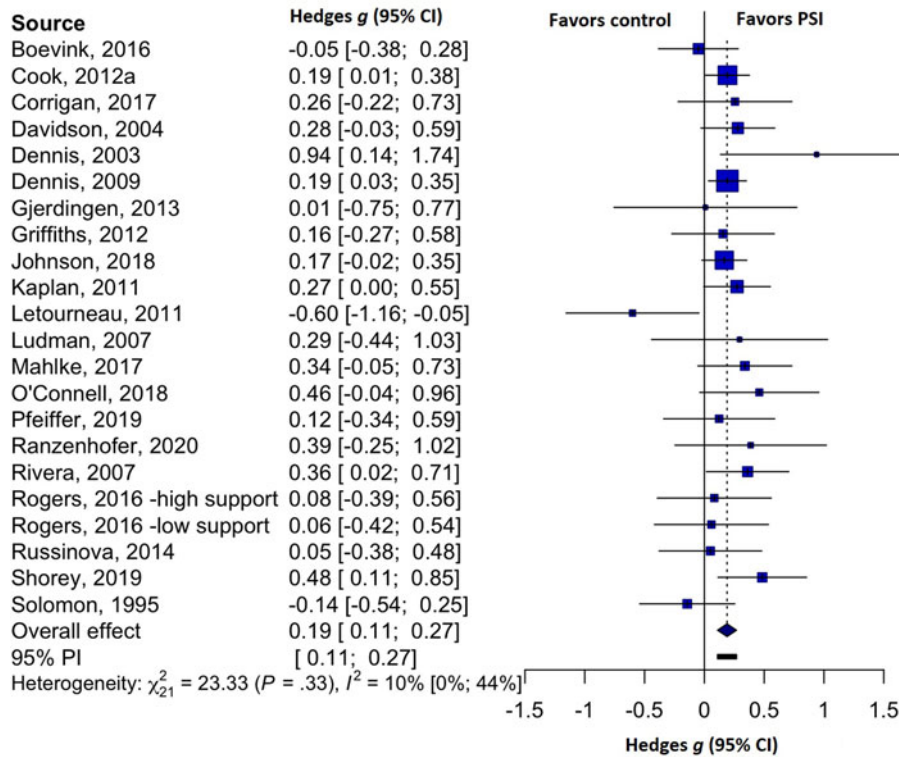
^aAccording to the random-effects model.

^b $k = 6$ studies included individuals with depressive symptoms scoring above a cut-off on a standardized mental disorder symptom measure (of which $k = 5$ are on perinatal depression), and $k = 1$ study included adults with a clinical diagnosis.

^cEgger's test was not significant ($p = 0.99$) and the number of imputed studies using Duvall and Tweedie trim-and-fill procedure was 23.

^dThe p value for the between-group effect sizes is significant ($p = 0.02$).

^eOf the $k = 8$ studies only one study included 18 months follow-up data, the remaining studies reported 12 months follow-up data.



Abbreviations: CI, confidence interval; PSI, Peer support intervention. Shown are standardized post-test effect sizes (Hedges *g*) of comparisons between PSIs and control conditions for clinical recovery relevant outcomes (overall (transdiagnostic) clinical symptoms or depression symptoms).

Fig. 2. Effect sizes of clinical recovery outcomes.

et al., 2011; Ludman et al., 2007; Shorey et al., 2019), no significant effects were detected, $g = 0.19$, 95% CI (-0.20 to 0.58) (7 trials). In the same line, no significant effects were found when pooling 12 trials that specifically reported *depression* outcomes. Subgroup analyses to examine potential moderators of intervention effects showed no significant differences between subgroups (see Appendix I). There were significant differences in effects based on RoB levels, $p = 0.016$; $Q_2 = 8.30$, with the three studies rated at low risk showing a significant effect of $g = 0.52$, 95% CI (0.29–0.76).

Inspection of funnel plots, Egger's test, $p = 0.99$, and the trim-and-fill procedure did not indicate significant publication bias (see Figure J1 in Appendix J). Removing one outlier (Letourneau et al., 2011) did not have a substantial impact on the effect, $g = 0.20$, 95% CI (0.14–0.27).

Long-term effects for all clinical recovery outcomes indicated that the effect remained significant at six to nine months follow-up, $g = 0.17$, 95% CI (0.08–0.26), but not at 12 to 18 months follow-up, $g = 0.10$, 95% CI (-0.21 to 0.40).

Personal recovery

The pooled effect size at post-test across 19 PSI studies measuring *personal recovery* was significant, $g = 0.15$, 95% CI (0.04–0.27) (see Table 2 and Figure K1 in Appendix K). Heterogeneity was moderate, $I^2 = 43\%$, 95% CI (1–67), although the PI (-0.16–0.47) was wide and contained the null effect.

For the subgroup of individuals with SMI (Boevink et al., 2016; Castelein et al., 2008; Cook et al., 2012a, 2012b; Corrigan et al., 2017, 2018; Davidson et al., 2004; Johnson et al., 2018; Kaplan

et al., 2011; Mahlke et al., 2017; Pfeiffer et al., 2019; Rogers et al., 2016; Russinova et al., 2014; Rüscher et al., 2014; Salzer et al., 2016; van Gestel-Timmermans, Brouwers, van Assen, & van Nieuwenhuizen, 2012), the effect size was significant, $g = 0.15$, 95% CI (0.02–0.28) (17 trials). For individuals with depressive symptoms, the number of trials (Dennis, 2003; Griffiths et al., 2012) was too small to reliably detect effects. Pooling specific outcomes within personal recovery resulted in significant effects for *hope* outcomes, $g = 0.13$, 95% CI (0.03–0.22), but not for *empowerment* or the *Recovery Assessment Scale*. In subgroup analyses, we found no differences in the effect of PSIs among potential moderators (see Appendix I).

No indications of publication bias were observed, Egger's test, $p = 0.66$, see Figure J2 in Appendix J. The effect size did not substantially change when excluding one outlier (Salzer et al., 2016), $g = 0.13$, 95% CI (0.05–0.21). Subgroup analyses did not detect differences in effects between RoB levels, although only one trial was rated at low risk and the impact of RoB is uncertain due to lack of power.

Long-term effects for all personal recovery outcomes showed nonsignificant results for both periods, six to nine months: $g = 0.10$, 95% CI (-0.10 to 0.30), and 12 to 18 months follow-up: $g = 0.54$, 95% CI (-0.33 to 1.41).

Functional recovery

The pooled effect size at post-test across 25 PSI studies measuring *functional recovery* was nonsignificant, $g = 0.08$, 95% CI (-0.02 to 0.18), with low heterogeneity, $I^2 = 36\%$, 95% CI (0–61) (see

Table 2. Effects for personal recovery of peer support interventions compared with CAU, WL or other control conditions: Hedges g^a

Personal recovery	No. of trials	g (95% CI)	I^2 (95% CI)	p	PI
Main effect					
All studies pooled	19	0.15 (0.04–0.27)	43 (1–67)	0.01	–0.16 to 0.47
Subgroup of patients					
Individuals clinically diagnosed with SMI	17	0.15 (0.02–0.28)	48 (9–71)	0.02	–0.21 to 0.51
Individuals with depressive symptoms (both cut-off) ^b	2	0.18 (–1.11 to 1.46)	NA	0.33	NA
Specific outcomes					
Empowerment	13	0.25 (–0.10 to 0.60)	84 (74–90)	0.15	–0.97 to 1.47
Recovery (RAS)	8	0.21 (–0.05 to 0.47)	58 (9–81)	0.09	–0.39 to 0.81
Hope	5	0.13 (0.03–0.22)	0 (0–79)	0.02	0.02–0.23
Publication bias					
Adjusting for publication bias ^c	24	0.23 (0.12–0.35)	56 (31–72)	<0.001	–0.21 to 0.68
Sensitivity analyses					
Outlier excluded	18	0.13 (0.05–0.21)	1 (0–50)	0.003	–0.01 to 0.27
Risk of bias ^d					
High risk	14	0.15 (0.01–0.29)	56 (21–76)	0.003	NA
Some concerns	4	0.14 (0.03–0.24)	0 (0–85)	0.01	NA
Low risk	1	0.35 (–0.26 to 0.95)	NA (NA)	0.26	NA
Long-term					
6 to 9 months	12	0.10 (–0.10 to 0.30)	64 (32–81)	0.28	–0.48 to 0.68
12 to 18 months ^e	7	0.54 (–0.33 to 1.41)	93 (89–96)	0.18	–1.96 to 3.04

CAU, care-as-usual; CI, confidence interval; NA, not applicable; PI, prediction interval; WL, waiting list.

^aAccording to the random-effects model.

^bBoth studies ($k=2$) included individuals with perinatal depressive symptoms scoring above a cut-off on a standardized mental disorder symptom measure.

^cEgger's test was not significant ($p=0.66$) and the number of imputed studies using Duvall and Tweedie trim-and-fill procedure was 24.

^dThe p value for the between-group effect sizes is not significant ($p=0.79$).

^eOf the $k=7$ studies, only one study included 18 months follow-up data, the remaining studies reported 12 months follow-up data.

Table 3 and Figure K2 in Appendix K). The PI was wide and contained the null effect (–0.16 to 0.32).

For the subgroup of patients with SMI (Boevink et al., 2016; Cook et al., 2012a; Corrigan et al., 2017; Davidson et al., 2004; Johnson et al., 2018; Kaplan et al., 2011; Mahlke et al., 2017; O'Connell et al., 2018; Pfeiffer et al., 2019; Rivera et al., 2007; Rogers et al., 2016; Russinova et al., 2014; Solomon & Draine, 1995), the effect size was significant, $g=0.18$, 95% CI (0.10–0.26) (14 trials), but not for the six trials targeting individuals with depressive symptoms (Dennis, 2003; Dennis et al., 2009; Gjerdingen et al., 2013; Griffiths et al., 2012; Letourneau et al., 2011; Shorey et al., 2019), $g=0.02$, 95% CI (–0.34 to 0.37). No significant effect sizes were observed in any of the examined specific outcomes: for *quality of life*, $g=0.08$, 95% CI (–0.04 to 0.19), *social functioning*, $g=0.07$, 95% CI (–0.05 to 0.18), and *loneliness*, $g=0.09$, 95% CI (–0.05 to 0.23). Conducting subgroup analyses, we found no differences in the effect of PSIs among potential moderators (see Appendix I).

No indications of publication bias were observed, Egger's test, $p=0.74$, see Figure J3 in Appendix J. When one outlier was removed (Salzer et al., 2016), the effect size remained significant, $g=0.06$, 95% CI (–0.01 to 0.13). Subgroup analyses showed no differences in effects between RoB levels. Pooling the three trials rated at low risk resulted in a nonsignificant effect of $g=0.19$, 95% CI (–0.37 to 0.76).

Long-term effects for all functional recovery outcomes demonstrated a significant effect size at six to nine months follow-up, $g=0.14$, 95% CI (0.01–0.27) (17 trials). At 12 to 18 months follow-up, effects were nonsignificant, $g=0.38$, 95% CI (–0.21 to 0.98).

Discussion

In this comprehensive meta-analysis of 28 RCTs ($n=4152$), PSIs for patients covering a broad spectrum of mental illnesses were associated with superior outcomes compared with control conditions regarding: (a) *clinical* recovery at post-test, and six to nine months follow-up; (b) *personal* recovery at post-test; and (c) *functional* recovery limited to six to nine months follow-up. When examining specific groups, we saw that specifically in the SMI patients – individuals with serious mental disorders – peer support was associated with significant superiority to control conditions at post-intervention across all three recovery categories. For the subgroup of individuals with elevated depressive symptoms – most of them being perinatal women – no significant effects were found in any of the recovery categories. Nonetheless, the number of trials targeting this group was small and nonsignificant results could be due to a lack of power. Also, the analyses for more category-specific outcomes within each main outcome category were exploratory due to the small number of studies.

Table 3. Effects for functional recovery of peer support interventions compared with CAU, WL or other control conditions: Hedges g^a

Functional recovery	No. of trials	g (95% CI)	I^2 (95% CI)	p	PI
Main effect					
All studies pooled	25	0.08 (−0.02 to 0.18)	36 (0–61)	0.11	−0.16 to 0.32
Subgroup of patients					
Individuals clinically diagnosed with SMI	14	0.18 (0.10–0.26)	0 (0–55)	<0.001	0.10–0.26
Individuals with depressive symptoms ($k = 6$ cut-off, $k = 1$ diagnosis) ^b	6	0.02 (−0.34 to 0.37)	47 (0–79)	0.90	−0.66 to 0.70
Specific outcomes					
Quality of life	18	0.08 (−0.04 to 0.19)	32 (0–61)	0.18	−0.15 to 0.30
Social support	15	0.07 (−0.05 to 0.18)	13 (0–51)	0.25	−0.07 to 0.20
Loneliness	7	0.09 (−0.05 to 0.23)	25 (0–67)	0.17	−0.06 to 0.24
Publication bias					
Adjusting for publication bias ^c	26	0.09 (−0.01 to 0.19)	39 (3–62)	0.08	0.18–0.37
Sensitivity analyses					
Outlier excluded	24	0.06 (−0.01 to 0.13)	7 (0–40)	0.09	−0.01 to 0.13
Risk of bias^d					
High risk	17	0.04 (−0.09 to 0.17)	47 (7–70)	0.52	NA
Some concerns	5	0.13 (0.08–0.18)	0 (0–79)	<0.001	NA
Low risk	3	0.19 (−0.37 to 0.76)	64 (0–90)	0.50	NA
Long-term					
6 to 9 months	17	0.14 (0.01–0.27)	39 (0–66)	0.03	−0.18 to 0.46
12 to 18 months ^e	10	0.38 (−0.21 to 0.98)	91 (85–94)	0.18	−1.54 to 2.30

CAU, care-as-usual; CI, confidence interval; NA, not applicable; PI, prediction interval; WL, waiting list.

^aAccording to the random-effects model.

^b $k = 6$ studies included individuals with depressive symptoms scoring above a cut-off on a standardized mental disorder symptom measure (of which $k = 5$ are on perinatal depression), and $k = 1$ study included adults with a clinical diagnosis.

^cEgger's test was not significant ($p = 0.74$) and the number of imputed studies using Duval and Tweedie trim-and-fill procedure was 26.

^dThe p value for the between-group effect sizes is not significant ($p = 0.45$).

^eOf the $k = 10$ studies, only one study included 18 months follow-up data, the remaining studies reported 12 months follow-up data.

Only the effect size for *hope*, considered part of personal recovery, was significant.

We found no significant differences in the effect of PSIs among potential moderators (e.g. intervention delivery) for any of the outcomes, which could suggest that common values of peer support exceed disorder-specific needs and the intervention type. However, subgroup analyses should be considered with caution, since the number of trials for some categories was small and these analyses are likely underpowered. Accordingly, we could not analyze differences in effects between internet-based PSIs (2 trials) and traditional face-to-face interventions (16 trials; see Appendix I). Since the evidence-base for eHealth is increasing (Chan et al., 2022; Deady et al., 2017; Massoudi, Holvast, Bockting, Burger, & Blanker, 2019) and digital PSIs for individuals with SMI seem to be associated with positive changes for both clinical and psychosocial outcomes (Fortuna et al., 2020), the effectiveness for technology-based PSIs should be further investigated.

The pooled effect sizes, that were confirmed in sensitivity analyses, were small ranging from $g = 0.15$ for overall personal recovery to $g = 0.19$ for overall clinical recovery at post-test. A surprising finding was low to moderate heterogeneity, suggesting that the effects were consistent across wide-varying studies. However, due to the relatively large width of the 95% CIs, caution must be applied. Moreover, although the effect size for clinical

recovery appeared to be more robust, the prediction intervals for personal and functional recovery suggested that the effects are considerably uncertain. In addition, the risk of bias was high for the majority of included studies and we could not reliably estimate its impact on the results of the meta-analysis.

Operating with a broad scope, including the largest number of trials on peer support to date, we found a significant though small effect size for *clinical* recovery. This was not detected in previous meta-analyses (Burke et al., 2019; Chien et al., 2019; Fuhr et al., 2014; Huang et al., 2020; Lloyd-Evans et al., 2014; Lyons et al., 2021; White et al., 2020), possibly due to lack power. Considering the efficacy of peer support for *personal* recovery, we confirmed and extended the results of previous meta-analyses (Bryan & Arkowitz, 2015; Burke et al., 2019; Fuhr et al., 2014; Lloyd-Evans et al., 2014; Lyons et al., 2021; White et al., 2020). So far, outcomes for *functional* recovery are scarcely addressed in peer support meta-analyses (Fuhr et al., 2014; Lyons et al., 2021). Whilst only valid for the subgroup SMI and long-term analysis, we found significant effect sizes for functional recovery, with *quality of life* as the most important outcome parameter. Overall, results indicate that peer support is of clinical relevance for individuals with mental illness, and not limited to reinforcing personal recovery following the generally accepted recovery-oriented approach (Leamy, Bird, Le Boutillier, Williams, & Slade, 2011; van Weeghel et al., 2019).

Limitations

The results of this study should be considered with caution because of several important limitations. First, measures for clinical, personal, and functional recovery differed considerably across studies. Second, long-term effects were limited to smaller samples of trials up to 12 months follow-up. Third, a major limitation of this study is the high risk of bias for the majority of trials, with limited reporting for many of the risk of bias items. Since peer support has an informal nature, it is difficult to quantitatively analyze these interventions. An established protocol would help to quantify variables that could be evaluated in trials, but this would restrict the open nature of PSIs. Still, since peer support has been increasingly considered an essential element for recovery there have been attempts to structure and professionalize PSIs (Chinman et al., 2016; SAMHSA, 2015). However, doubts remain because the core of peer support is its naturalistic approach (Fortuna, Solomon, & Rivera, 2022). The feasibility, acceptability, and benefits of structuring and professionalizing PSIs need further investigation. To improve the quality of studies, future research should implement clinician-rated instruments and prospective registration in clinical trial registries. Finally, though comparing the efficacy of PSIs with clinical psychotherapies seems relevant for implementing or referring to PSIs in mental health care, the number of trials was too small to conduct a meta-analysis for RCTs with a clinician-led comparator.

Conclusions

Engaging in a peer support intervention may be effective for reducing clinical mental illness symptoms, improving overall personal recovery, and more specifically hope. In particular for individuals with SMI, peer support demonstrated probable efficacy across the three recovery categories. Although the effects were small, peer support is a potentially cost-effective and relatively easy-to-implement intervention, and may complement professional treatment. Therapists, general practitioners, and employees of recovery-oriented services may refer their clients to peer support initiatives to expand the individuals' context to work on recovery when coping with mental illness.

Supplementary material. The supplementary material for this article can be found at <https://doi.org/10.1017/S0033291722002422>.

Author contributions. Dr Groeneweg, Dr Cuijpers, and Dr Spijker conceptualized and developed the study design. Smit (MSc) and Miguel (MSc) analyzed and interpreted the data and drafted the manuscript. Smit (MSc) and Miguel (MSc) had full access to all of the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis. Dr Cuijpers, Dr Spijker, Dr Vrijnsen, and Dr Groeneweg supervised the study by providing intellectual content, reviewing data analysis and interpretation and critical revision of the manuscript.

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Conflicts of interest. Dr Groeneweg reports having a management function of the Research Committee of the Dutch Depression Association. Dr Cuijpers

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The effectiveness of support groups: a literature review

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The effectiveness of support groups: a literature review

Abstract

Purpose: Support groups are a common feature of the mental health support engaged by carers and consumers. The purpose of this paper is to update and consolidate the knowledge and the evidence for the effectiveness of mental health support groups.

Design/methodology/approach: This paper is based on a systematic literature review of relevant databases around support groups for mental health. Support groups are defined as meetings of people with similar experiences, such as those defined as carers of a person living with a mental illness or a person living with a mental illness. These meetings aim to provide support and companionship to one another.

Findings: The results show that there is a consistent pattern of evidence, over a long period of time, which confirms the effectiveness of mental health support groups for carers and people living with mental illness. There is strong, scientifically rigorous evidence which shows the effectiveness of professionally facilitated, family-led support groups, psychoeducation carers support groups, and professionally facilitated, program-based support groups for people living with mental illness.

Research limitations/implications: This research implies the use of support groups is an important adjunct to the support of carers and people with mental illness, including severe mental illness.

Originality/value: This research brings together a range of studies indicating the usefulness of support groups as an adjunct to mental health therapy.

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The Effectiveness of Support Groups: A Literature Review

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Abstract

Purpose: Support groups are a common feature of the mental health support engaged by carers and consumers. This paper updates and consolidates the knowledge and the evidence for the effectiveness of mental health support groups.

Design/Methodology/Approach: This paper is based on a systematic literature review of relevant databases around support groups for mental health.

Findings: The results show that there is a consistent pattern of evidence, over a long period of time, which confirms the effectiveness of mental health support groups for carers and people living with mental illness. There is strong, scientifically-rigorous evidence which shows the effectiveness of professionally facilitated, family-led support groups, psycho-education carers support groups, and professionally facilitated, program-based support groups for people living with mental illness.

Research Limitations/Implications: This research implies the use of support groups is an important adjunct to the support of carers and people with mental illness, including severe mental illness.

Originality/Value: This research brings together a range of studies indicating the usefulness of support groups as an adjunct to mental health therapy.

Keywords: Support groups, carers, consumers, mental illness

Paper Type: Literature review

Introduction

Support groups have been used in mental health for many decades as a means of providing a forum to discuss problems and share experiences and information (Heller *et al.*, 1997). Support groups offered assistance at times when fewer services were available for people with mental illness and the satisfaction that people expressed with those services was low. The move to deinstitutionalise people from psychiatric hospitals into the community, from the 1970s until now, also played a role in the popularity of support groups, whereby families were reimagined as participants in support and recovery rather than the cause of mental illness (Heller *et al.*, 1997; MacFarlane, 2004).

Many support groups were set up absent a scientific evidence-base. This literature review aims to investigate current research regarding the effectiveness of support groups for families and carers of people living with mental illness and people who have experienced mental illness themselves.

While online support is mentioned, this is not a thorough study of online support groups or forums.

Method

Literature searches were conducted using Ovid Medline(R), PsychInfo and Proquest Central databases. The subject headings 'mutual support', 'self-help groups' and 'support groups' were filtered using various combinations of the subject headings psychotic disorders, schizophrenia, bipolar disorder, Community Mental Health Services, Social support, Grow program, hearing voices, anxiety, caregivers, carer, family, depression. These searches resulted in a harvest of 57 relevant articles.

Findings

Support groups can also be known as mutual-aid groups, self-help groups, peer-led support groups, consumer-led support groups, multi-family groups or family-led support groups. There is a diversity in the way in which support groups are organised and the content of their meetings (Seebohm 2013; MacFarlane 2004; Ahmed *et al.* 2012). Throughout the literature there is a variety in the definition of what constitutes a support group. This makes a study of the effectiveness of support groups challenging.

Peer-led, self-help, mutual-help or mutual-aid groups

Peer work in the mental health sector is becoming more recognised and professionalised (NSW Mental Health Commission, 2014). The concept of 'peer-led' usually means that a group is led by people who have had the experience of a mental illness. Peer-led, however can also be applied to carers and family members who lead support groups as 'peers' for other carers and family members. Provision of peer led services has been emphasised as critical to integrating consumers' perspectives in recovery based mental health services (Fukui *et al.*, 2010).

'Mutual support', or 'mutual aid' groups operate to support people across a whole range of health and welfare issues. Mutual support and mutual aid are the names more likely to refer to volunteer-based groups. In the mental health sector these groups tend to be organised and run by carers and family members of people living with a mental illness or people who have experienced mental health problems, not by mental health professionals.

Sometimes these distinctions are hard to maintain when support groups have mixed membership or are supported by employees of organisations who may, or may not, be carers or people with lived experience themselves.

A qualitative study by Seebohm *et al.* (2013) explores the contribution of self-help/mutual-aid groups to mental wellbeing using the UK National Mental Health Development Unit (NMHDU) indicators. Whilst five of the groups in their study are mental health specific groups, most of the groups in their study are interested in other health and social issues; for example, cancer. Using thematic analysis they compared the experiences and mental wellbeing of participants before and after they began participating in their group. They note that the core protective factors for mental wellbeing are:

- Enhancing control;
- Increasing resilience and community assets;
- Facilitating participation and promoting inclusion (NMHDU, 2011; Seebohm *et al.*, 2013).

They found that prior to joining their groups many participants felt isolated, lacked hope and were at risk of mental ill-health. They conclude that self-help/mutual-aid groups can be measured against the NMHDU mental wellbeing protective factors and that these factors do correspond with people's experience of improved mental wellbeing.

Support groups for people with the lived experience of mental illness

The literature demonstrates that support groups for people with lived experience of mental illness are effective and have positive outcomes (Corrigan *et al.*, 2002; Knight, 2006; Mancini *et al.*, 2013). Mutual help programs such as GROW have been extensively studied. GROW is an international organisation which supports a network of mental health support groups using the GROW model. The support groups use standardised meeting procedures developed from the 12-step format of AA and standardised literature as references to be read by "Growers" individually and at meetings.

GROW was attributed with significant improvement in the quality of life and related factors of members who have serious mental illness (Corrigan *et al.*, 2002), significantly reduced number of days hospitalised compared with similar people in an Illinois psychiatric facility (49 for GROW members compared to 123 in controls), improvements to self-esteem, self-efficacy, social support, spiritual well-being, and psychiatric symptoms. Growers identified self-reliance, industriousness and self-esteem as key ingredients of recovery.

The success of GROW has also been evaluated in the Australian context. A study by Finn *et al.* (2009) found that the group community plays a vital role in supporting, encouraging and holding group members during times of crisis and difficulty.

A survey conducted in 2013 by the Australian GROW organization (GROW, 2017) found that:

- 85% felt an improved sense of personal value;
- 77% experienced an improved sense of belonging and connection with the community;
- 81% reported an improved network of friends and personal supports;
- 67% said that GROW had directly contributed to their recovery from mental illness.

Mancini *et al.* (2013) conducted a validated evaluation questionnaire of the Procovery program in the US. Procovery is a voluntary program focused on consumer choice and respect delivering discussion on a variety of topics from hope and insight to addressing practical matters such as managing medications, developing support networks, engaging in meaningful activities, self-care and getting a job. Facilitators were either peer facilitators or mental health workers who were trained to be neutral coordinators, allowing for other members of the group to participate as equals.

Participants in the Procovery treatment group displayed an increased positive perception of psychiatric staff and overall quality of life measures. However, no effects were found for social relationships, consumer recovery attitudes or quality of life subscales. Almost all Procovery facilitators believed that Procovery improved consumers' recovery attributes such as motivation, problem solving, hope, socialization, communication, self-esteem, and confidence.

An extensive review of six 2-point-in-time studies conducted by Knight (2006) examined the effectiveness of self-help groups for people with a serious mental illness. Knight concluded these studies demonstrated reduced symptoms and substance abuse over time; concomitant reduction in crises, hospitalisations and use of services; improved social competence and social networks; and increased healthy behaviours and perceptions of well-being. These healthy behaviours and perception of wellbeing included: medication compliance, acceptance of illness, better coping skills, quality of life, greater sense of security and self-esteem, creation of one's own meaningful structure, and changes in what healthcare consumers wanted from time spent with their family.

It is worth noting that all of the studies included in the Knight review, with the exception of the study of the GROW program (Kennedy, 1990) are closely associated with mental health services, and staff from those services organise and facilitate or co-facilitate the programs. Knight attributes the success of these programs to increased social networks, the role of the facilitator acting as a support for participants, peer-to-peer learning and role modelling, and the creation of group-led meaningful structures.

Support groups for people living with a psychotic illness have a normative function as members compare themselves to each other, learn from each other and incorporate the culture of the group. Referent power, which is the identification with group leaders and members, is a distinguishing factor of mutual help from professional assistance, but is not necessary for people to identify the group as helpful. Expert power refers to valuing the knowledge of group members, leaders and support workers.

The social influence that expert power affords has been identified as a major factor in determining the perception of the helpfulness of a group (Salem *et al.*, 2000). Outcome variations exist within groups which may be attributed to the strength of the social network. For example, people who attend support groups more often attain a better quality of life score and lower use levels of healthcare resources than people that attend less frequently (Terzian *et al.*, 2013). The activation of social networks should be considered a mandatory component of the care and rehabilitation of patients with schizophrenia (Terzian *et al.*, 2013).

The internet provides an alternative medium for mutual support and support groups. However, studies evaluating unmoderated, unstructured internet peer support by Kaplan *et al.* (2011) and Bauer *et al.* (2013) suggest that the internet cannot replace health professionals and other traditional psychoeducational approaches. Rather, the use of the internet may be a useful adjunct to traditional self-help groups.

Support groups for people with lived experience of bi-polar disorder

A number of different support group models have been demonstrated to be effective for people living with bi-polar disorder. For example, Castle *et al.* (2010) demonstrated that manualised, group-based therapy can be an effective adjunct to treatment as usual for people. A randomised controlled trial in Victoria, Australia, was used to evaluate a group program based on the “Collaborative Therapy Framework”. This program was designed to help participants with their coping strategies, to address their vulnerabilities and manage stress. Participants received a workbook, information book and collaborative therapy journal. People in the treatment groups had fewer relapses of any type (manic, depressive or mixed) and spent less time unwell than those in the control group. There was, however, no significant difference detected in the severity of symptoms between the treatment and control groups (Castle *et al.*, 2010)

Psychoeducation programs for people living with bipolar have also been shown to be effective for a number of measures (Castle *et al.*, 2010; Poole *et al.*, 2012). A randomised controlled trial evaluating the “Beating Bipolar” online psychoeducation program demonstrated that the program was easy to deliver, engaging for the participants and provided a modest effect on psychological quality of life (Poole *et al.*, 2004). Half the participants in this study reported that they would prefer a face-to-face group rather than online, while the other half prefer the online environment. Similarly, Bipolar Education Program Cymru (BEP-Cymru), which is a 10 session program facilitated by two mental health workers, enabled people to therapeutically share their experiences with their illness, care, treating professionals and hospital treatment. Participants gained insight into ways of coping, particularly with stigma associated with the illness through the program (Poole *et al.*, 2015).

Groups for substance abuse or dual diagnosis

The 12 step approach adopted by Alcoholics Anonymous (AA) is established as one of the leading, empirically validated treatments for drug and alcohol dependence (Borganschutz, 2005). However, only a minority of people with a dual diagnosis attend self-help groups despite sustained encouragement by health services personnel to attend.

Specially designed groups for dual diagnosis have an advantage (e.g. Double Trouble for Recovery) (Noordsy *et al.*, 1996). A number of factors influence attendance including social ability and diagnosis, with attendance particularly low for those whose dual diagnosis includes a psychotic illness. Furthermore, forceful referral of people to 12 step self-help groups without respecting their own explanatory models of understanding their addictions and illness was counter-productive.

Support groups for carers

The diagnosis of a severe mental illness in a family member can have a major impact not only on the individual but on the family as well. Mutual support groups have been used as an effective modality of family intervention to improve care, family and patient functioning (Chien *et al.*, 2005). The objectives of caregiver support groups include:

- To provide education and information in order to increase knowledge and understanding of the disorder;
- To encourage an atmosphere of mutual trust in which to explore strategies for coping;
- To provide emotional support conducive to open, honest sharing of feelings (Chou *et al.*, 2002).

Monking (1994) is one of the earliest studies to attempt to provide rigorous measures for the effect of mutual support groups on both the participant living with a mental illness and their families who joined the carer mutual support groups set up for their study. Monking concluded that participation in self-help groups is effective in helping relatives. Although not statistically significant, Monking found that decreased levels of emotion and physical complaints were concurrent with the increased contact frequency between the person they care for and their contact with other group members. In this paper, Monking put weight on the social (community) impact of a successful self-help group.

Heller *et al.* (1997) conducted a statistical analysis of 14 family mental health support groups from Chicago and Illinois. Of these groups, 4 were led by professionals and the other 10 were led by family members. Heller *et al.* described an increase in two outcome factors for support group participants. Firstly, information benefit increased, which involved knowing how to advocate for the person they care for more effectively, increased ability to cope emotionally and having more knowledge about mental illness, the services available and the latest interventions. Secondly, relationship benefit was increased, which involved an improved ability to cope with

social stigma, less anger toward the person they care for and better relationships with both their person living with mental illness and other members of the family.

It is worth noting that negative factors were also reported by up to 30% of participants as a result of participation in the group including an increase in the feeling of being overwhelmed and less able to meet the needs of the person with mental illness (Heller *et al.*, 1997). It's also worth noting that this study did not distinguish the outcomes between the groups facilitated by professionals or family members.

A number of other studies have also demonstrated the benefits of caregiver support groups (Chou *et al.*, 2002; Chiu *et al.*, 2013; Chien and Norman, 2009). In one study in Taiwan (Chou *et al.*, 2002), members of the support group demonstrated less depression and less of a sense of burden than controls by creating a sense of commonality, validation of the caregiver's experiences and opportunities to give and receive help. Similarly, family psycho-education programs were found to be effective in reducing worry and displeasure, significantly improving intra-psychic strain, depression and empowerment (Chiu *et al.*, 2013).

Support groups have also been shown to be more effective than standard care alone in some settings (Chien *et al.*, 2004; Chien *et al.*, 2006). A randomised control trial of family-led mutual support groups for Chinese caregivers demonstrated that support group participants experienced significantly greater improvement in families' burden, functioning and number of support persons than those receiving standard psychiatric care alone (Chien *et al.*, 2008; Chien and Chen, 2004). Multivariate analyses have also shown that, in conjunction with routine psychiatric care, family-led mutual support groups are more effective than family psychoeducation groups in improving the psychosocial health conditions of patients and their family members (Chien *et al.*, 2004; Chien and Thomson, 2013).

Multifamily support groups

Multifamily groups include people living with a mental illness, the people who are their carers and other people in their family group.

McFarlane (2001) reviewed a unique model of multifamily groups for the treatment of severe psychiatric disorders. These were long-term closed groups, in which new members are unable to join the group once it starts. The group leaders were 2 clinicians who aimed to keep the group members attending. Rather than viewed as a support group, they are referred to as "therapeutic social networks" or a "healing community".

The therapeutic effectiveness of multifamily groups resembles those described in other support group studies and includes increased social networks, improved coping and problem-solving capacities, increased ability to absorb anxiety and a shift in identity from stigma to mastery (McFarlane, 2011).

McFarlane also describes how senior people in families begin to pay attention to the person living with mental illness in other families. It is this multifamily aspect, particularly the increased social network, which forms a multilevel intervention that is linked to better long-term outcomes.

Support groups for families of people with lived experience of psychotic illness

There is consistent evidence of the immediate or short-term positive effects of mutual support groups on the physical and psychosocial health conditions of patients and their families (Chien and Norman, 2009; Chien and Chan, 2004).

Chien *et al.* (2008) and Chien and Chan (2004) undertook a long-term program of study including a randomised controlled trial with 106 families over a 3 year period. They conclude that family-led mutual support groups are an effective intervention for Chinese people with schizophrenia, resulting in long-term effects of improving patient and family functioning and reducing rehospitalisations. Family mutual support was shown to be more effective in improving self-maintenance, social functioning and community living skills of patients with schizophrenia than either psycho-education or standard care alone.

These effects were not limited to the people living with schizophrenia. The families caring for the relative with schizophrenia also showed improved measures for mutual support, acceptance of the caregiver role, increased knowledge of the illness, adoption of new coping skills, perceived social climate of the group, informational support, empowerment and psychosocial functioning (Chien *et al.*, 2014). Chien *et al.* (2006) noted that poorer group outcomes were experienced with low group attendance, negative pressure from dominant members, and over-expression of intense and negative feelings.

Discussion

Across many types of support groups, there is a strong, scientifically rigorous evidence base for the effectiveness of support groups in providing positive improvements to wellbeing and the recovery of participants. Outcomes include reduced symptoms, substance abuse, number of crises, hospitalisations and use of services, as well as improved social competence and social networks, increased healthy behaviours and perceptions of wellbeing.

Regardless of the type of support group, participants report many of the same perceived benefits from participation:

- Fostering hope;
- Learning about the issue that brings them to the support group;
- Learning coping strategies;
- Overcoming isolation;
- Building social and support networks;
- Learning from successful role models;
- Feeling more in control over the situation
- Overcoming stigma;
- Learning about the services available and being able to advocate more effectively.

The exact mechanisms by which support groups achieve these perceived benefits are, however, not always clear. For most mental health support groups there is professional mental health worker involvement in the development and facilitation of the group. Commonly, workers provide assistance to set up groups, to support the group leaders and maintain their contacts with, and knowledge of, the mental health system.

There are a range of matters that affect the success of the use of a support group program and the involvement of professionals health workers. These include:

- The value placed on, and the techniques used, to promote the involvement of participants and peer-leaders;
- Professional worker rigidity or flexibility with the program and willingness to let participants contribute to the process rather than being 'lectured';
- Co-facilitation of a group by a professional mental health worker with a group participant (peer leader) can contribute to the effectiveness of support groups. Peer leadership has been identified as an important component by participants.

This doesn't mean that support groups without professional leadership and programmed materials are not effective. Studies aiming to reach rigorous standards of scientific evidence usually require controlled variables and professionally-led, programmed-based groups to enable this kind of study. It is less likely that community-based, unfunded programs are going to be suitable for rigorous scientific study or attract the funding that is required to confirm a program as evidence-based.

Barriers to achieving positive outcomes include the person's diagnosis, irregular group attendance, negative pressure from dominant, experienced members, and the overexpression of intense and negative feelings during group meetings.

Regardless of the model of support group, there are some consistent challenges to the functioning of the groups. These include the management of disagreements between participants, having to repeatedly talk about your problems, the idea of spending a lot of time with other people living with mental illness, resources, the personal energy required to maintain the group and the difficulties of getting people to attend and maintain attendance at the groups. Training professional workers, peer leaders and volunteer group leaders is crucial for overcoming these challenges.

Conclusions

The results show that there is a consistent pattern of evidence, over a long period of time, which confirms the effectiveness of mental health support groups for carers and people living with mental illness. There is strong, scientifically-rigorous evidence which shows the effectiveness of professionally facilitated, family-led support groups, psycho-education carers support groups, and professionally facilitated, program-based support groups for people living with mental illness.

This review has identified a number of elements that may contribute to the success of support groups, such as peer leadership, family involvement, professional facilitation or co-facilitation, and the use of manualised programs.

The studies in this review describe a range of outcome factors and the benefits experienced by support group participants. Further studies elucidating the mechanisms by which the benefits are achieved and, in particular, the contribution to the effectiveness of groups by professionals would be beneficial. This field would also benefit from further research on whether people living with mental illness use other types of community groups for support such as writing and music groups and sport clubs, and how the effectiveness of this compares with recognised support groups.

Limitations of the conclusions drawn here and by others include the low number of studies with a rigorous statistical base. Challenges to conducting research in this area include the lack of attention to treatment, poor follow-up, the lack of testing around the involvement of psychiatric nurses or other health professionals and consideration of social-cultural conditions.

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