Providing formal mental health peer support: what does that mean for peer supporters?

A thesis submitted to the University of Manchester for the degree of Doctor of Clinical Psychology in the Faculty of Biology, Medicine and Health.

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Word Count (original submission)

	Body of text (excluding title pages)	Tables/Figures (including title, captions and notes)	Body of Text and Tables/Figures	References	Total
Paper 1	7,355	2,810	10,165	3,165	13,330
Paper 2	4,885	2,206	7,091	1,233	8,324
Paper 3	4,213	1,522	5,735	1,110	6,845
Paper 4	1,924	~	1,924	623	2,547
Total	18,377	6,538	24,915	5,932	31,046

Thesis Abstract

Providing peer support: what does that mean for peer supporters?
A thesis submitted to the University of Manchester for the degree of Doctor of Clinical Psychology by Éilish Burke on 26th May 2017

The aim of this thesis was to understand the effects of formal mental health peer support interventions. It is presented as four papers: (i) a narrative synthesis and meta-analysis of peer support intervention studies that have published data on outcomes of empowerment, self-efficacy and internalised stigma for peer support recipients; (ii) a study to develop consensus on the essential components, personal costs, personal benefits, barriers and facilitators involved in providing peer support; (iii) a study exploring relationships between experiences of providing peer support and empowerment, hope, recovery, quality of life and internalised stigma for peer supporters; and (iv) a paper presenting a critical appraisal and personal reflections on the research process.

In the review paper, 23 studies were identified that met inclusion criteria. Interventions were categorised as: peer-led group interventions; individual peer support; and peer-run services. Most studies were moderate to weak in quality. Meta-analyses were conducted for peer-led group interventions; results suggested these can result in small but significant improvements in empowerment and self-efficacy compared to treatment-as-usual. Evidence was inconclusive for individual peer support, peer-run services, and for internalised stigma as an outcome; more high quality research is needed in these areas.

The second and third papers are presented as linked papers; they report analyses from a cross-sectional online and postal survey with a sample of 147 peer supporters in the UK. In the second study, a list of statements was initially generated through literature review and consultation with experienced peer supporters, and then rated by participants in two further rounds. Consensus was reached on statements pertaining to essential components (n=67), personal benefits (n=21), barriers (n=1) and facilitators (n=35). Results indicated that providing peer support involves many skills and that a wide range of personal benefits come with the role. There were differences between peers providing support in statutory versus non-statutory settings. Recommendations are made for role development and career progression, and future research to better-understand personal costs and benefits. In the third study, relationships were examined between participants' levels of empowerment, hope, recovery, quality of life and internalised stigma, peer support experiences, and total number of personal costs and benefits endorsed. Differences were examined between those who provided support in different settings and with different role-experiences. Experiences did not significantly relate to constructs measured, apart from quality of life. More personal costs was significantly negatively related to empowerment and quality of life; however, many personal costs were related to structural issues which organisations can minimise . Peer supporters endorsed almost twice as many personal benefits than costs including improved wellbeing, reduced service-use, increased social functioning and skill-development. There were no significant group differences. Both papers discuss how peer support may be best facilitated by organisations.

The fourth paper provides further explanations for research decisions made and a critical appraisal of the work undertaken, considering the wider context of clinical practice, theory and empirical evidence. Personal reflections on the research process are presented.

Declaration

No portion of the work referred to in the thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.

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The Author

Éilish Burke was awarded a BA in Psychology from The University of Dublin, Trinity College in 2004 and following this worked in the advertising sector. She completed a MSc in Clinical and Health Psychology at The University of Manchester in 2012. She worked as a research assistant in the Psychosis Research Unit of Greater Manchester Mental Health NHS Foundation Trust before training as a Clinical Psychologist. She has published studies on internalised stigma in psychosis using both quantitative and qualitative methods.

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Paper 1 - The Effects of Peer Support on Empowerment, Self-Efficacy and Internalised Stigma: A Narrative Synthesis and Meta-Analysis.

This paper has been formatted according to the publication guidelines of Stigma and Health (see Appendix A). It has been submitted to the journal as follows: Burke, E., Pyle, M., Machin, K., Varese, F., & Morrison, A.P., *The Effects of Peer Support on Empowerment, Self-Efficacy and Internalised Stigma: A Narrative Synthesis and Meta-Analysis.*

Abstract

Peer support is sometimes formalised and offered as an intervention in mental health services and organisations. Evidence suggests that empowerment, self-efficacy and internalised stigma are theoretically-linked and implicated in the change processes involved in peer support. This review aimed to synthesise quantitative evidence published in the English language from trials that introduced any type of peer support intervention on the outcomes of empowerment, self-efficacy and internalised stigma for those in receipt of peer support. Literature searches were conducted between November 2016 and April 2017 on CENTRAL, CINAHL, Clinicaltrials.gov, EMBASE, MEDLINE, PsychINFO and Web of Science databases. Study quality was appraised. Results were integrated first through narrative synthesis. Where data was available effect sizes were calculated and meta-analyses conducted when there were at least four randomised trials with similar characteristics. 23 studies met inclusion criteria and could be separated into three broad categories: peer-led group interventions; one-to-one peer support; and peer-run services. Most were moderate to weak in quality. Meta-analyses were conducted for group interventions only. Results suggested that peer-facilitated time-limited group interventions can result in small but significant improvements in empowerment and self-efficacy compared to treatment-as-usual. Evidence was inconclusive for one-to-one peer support, peer-run services, and for internalised stigma. Areas for future research include: equivalence trials of group interventions with non-peer facilitators; developing peer-led group interventions specific to the needs of people with particular mental health difficulties; high-quality research on one-to-one peer support and peer-run services; and research to understand the essential components and change mechanisms involved in peer support.

Keywords: consumer provider; meta-analysis; mutual support; peer support; systematic review.

Introduction

Peer Support – An Overview

Peer support occurs when people with similar experiences of mental health problems share support with each other. In recent years, there has been a growth of formalised peer support provided within mental health services (Davidson, Bellamy, Guy, & Miller, 2012; Repper & Carter, 2011), and an increase in publications of trial-based evidence evaluating peer support interventions (Campos et al., 2014). Peer support has been advocated by service user activists and researchers (Deegan, 1996; Mead, 2003). It is championed in part because it is in-keeping with the recovery model of mental health (Bradstreet, 2006), which emphasises the subjective wellbeing of service users over symptom-focused outcomes (Slade, 2009). It is believed that peer supporters can act as 'role-models' of recovery and help mental health services adopt a recovery-oriented approach (Bradstreet, 2006; Repper et al., 2013a). Policy and guidance in countries such as the US, the UK and New Zealand have recognised the role of peer support in mental health service delivery (Mental Health Commission, 2012; Department of Health, 2012; Kaufman, Brooks, Steinley-Bumgarner, & Stevens-Manser, 2012; NICE, 2014)

Links Between Peer Support , Empowerment, Self-Efficacy and Internalised Stigma

Enhancing empowerment is a core principle of peer support described by peer support organisations worldwide (iNAPS, 2011; Repper et al., 2013b; SRN, 2012). Likewise, empowerment has been identified as a key process in recovery (Leamy, Bird, Le Boutillier, Williams, & Slade, 2011; Resnick, Fontana, Lehman, & Rosenheck, 2005). There is an increasing focus on empowering service users to become more involved in care-planning and self-management of long-term conditions, including in mental health (Bravo et al., 2015). Reduced empowerment is associated with negative outcomes such as lower subjective quality of life (Corrigan, Faber, Rashid, & Leary, 1999). However, empowerment is a complex construct; it is believed to vary with context, time and population (Chamberlin & Schene, 1997; Rappaport, 1987; Schutt & Rogers, 2009) and

there is a lack of consensus regarding its definition (Rogers et al., 2007). At an individual level, psychological empowerment has been defined as the process by which a person gains control over life issues (Rappaport, 1987; Zimmerman, 1995). Conceptualisations of empowerment propose that self-efficacy is one of its components (Bravo et al., 2015; Rogers, Chamberlin, Ellison, & Crean, 1997; Zimmerman, 1995). Self-efficacy is defined as the set of beliefs a person holds about their capacity to carry out an act that will influence their life (Bandura, 1977). It has been suggested that people with low self-efficacy and associated negative self-appraisals are more likely to respond badly to setbacks and may be more susceptible to anxiety and depression (Bandura, 1994). Measures of psychological empowerment and self-efficacy have been used interchangeably within the literature (Castelein, van der Gaag, Bruggeman, van Busschbach, & Wiersma, 2008a).

It has been proposed that "stigma is the societal embodiment of disempowerment" (Corrigan, 2004, p.2). Empowerment is described as a continuum; with people with high levels of personal empowerment positioned at one end, and people with low empowerment and high levels of internalised stigma at the other (Corrigan, 2004). Mental health-related internalised stigma (or self-stigma) has been defined as the internalisation of negative public attitudes about mental health problems (Corrigan & Watson, 2002). Strong associations have been found between elevated internalised stigma and poorer outcomes on psychosocial variables, including reduced empowerment (Livingston & Boyd, 2010; Vauth, Kleim, Wirtz, & Corrigan, 2007). Conversely, increased empowerment is associated with reduced internalised stigma (Brohan, Slade, Clement, & Thornicroft, 2010). Mediation analysis and longitudinal studies suggest that internalised stigma may impede recovery (Oexle et al., 2017; Vass et al., 2015).

Mechanisms by which peer support may have its effects remain largely untested, although suggestions involving empowerment, self-efficacy and internalised stigma have been put forward. In accordance with the helper-therapy principle (Riessman, 1965), peer

support may improve perceptions of interpersonal competence for all peers in the supporting relationship, which may increase empowerment (Schutt & Rogers, 2009). One change model has highlighted the importance of a trusting relationship that allows positive role-modelling and active engagement (Gillard, Gibson, Holley, & Lucock, 2015). It is thought that role-modelling provides peers with observations of mastery and success in similar others, which is vicariously reinforcing thereby increasing personal self-efficacy. Peer support offers opportunities to make strategic disclosures about mental distress, and the chance to re-author personal narratives from limited 'patient identity' narratives to more positive narratives (Corrigan et al., 2016; Mead, Hilton, & Curtis, 2001). These processes run contrary to the shame and secrecy believed to be involved in the internalisation of public stigma (Corrigan, Kosyluk, & Rusch, 2013).

Current Evidence and Aim of this Review

Thus, the evidence suggests that empowerment, self-efficacy and internalised stigma are theoretically-linked constructs implicated in the underlying change processes involved in peer support. They are sometimes measured as outcomes of peer support interventions, though an evidence synthesis specifically focused on these three outcomes has not yet been published. About five years ago, a spate of literature reviews was published in the field, most taking a broad scope in the outcomes synthesised including traditional clinical outcomes such as hospitalisation and symptom reduction. A Cochrane review found that outcomes for service users having one-to-one peer support were equivalent to those of service users supported by other mental health professionals (Pitt et al., 2013). Reviewers have tended either to write wide-ranging narrative reviews including all types of evidence (Miyamoto & Sono, 2012; Repper & Carter, 2011), or to limit evidence to data from randomised controlled trials (RCTs) (Fuhr et al., 2014; Lloyd-Evans et al., 2014; Pitt et al., 2013). This review adopted a 'middle-ground', and included quantitative results from RCTs and non-RCTs in order to produce an inclusive up-to-date evidence synthesis on theoretically-derived outcomes.

In summary, the aim of this review was to synthesise the quantitative evidence from all trials that introduced any type of peer support intervention on outcomes of empowerment, self-efficacy and internalised stigma for those in receipt of peer support.

Method

The review followed the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) guidelines (Moher, Liberati, Tetzlaff, & Altman, 2009).

Search Strategy and Study Selection

On 4th November 2016, the first author (EB) conducted an electronic database search of CENTRAL, CINAHL, Clinicaltrials.gov, EMBASE, MEDLINE, PsychINFO and Web of Science. Databases were searched from inception without date or language restriction. Search terms and their synonyms were combined as follows: mental illness AND peer support AND trial AND empowerment OR stigma OR self-efficacy (search strategy for PsychInfo provided in Appendix B). The search was repeated on 8th April 2017 on all databases for the period 2016 onwards and results were crosschecked to identify more recently-published studies. Initially, titles and abstracts of search results were screened by EB. Ten percent of the results were independently screened by a colleague external to the research team. Cohen's kappa was calculated using SPSS software (Version 23; IBM, 2015), and the resulting statistic of 0.80 indicated substantial agreement between the two raters (Landis & Koch, 1977). Discrepancies were discussed by the raters and if doubts remained as to study eligibility, it went forward to full text review.

Inclusion criteria: Papers were included if they reported on studies:

- Of any design evaluating the effects of exposing participants to a formalised face-to-face peer support intervention of any type. Complex interventions were included if the design enabled the effects of the peer support element to be reasonably isolated;
- Where the participants were people with any mental health problem and they comprised at least 50% of the sample;

- Where the broad purpose of the intervention was to improve the mental health/wellbeing of participants;
- Where quantitative data for participants was reported for one measure of empowerment or self-efficacy or internalised stigma;
- Where participants were over 18 years of age; and
- Where the paper was published in a peer-reviewed journal and available in the English language.

Exclusion criteria: Papers were excluded if they reported on studies:

- Where participants had been substantially exposed to peer support at baseline;
- Where peer support was not delivered face-to-face;
- Where peer support was informal only;
- Where outcomes were for non-clinical samples;
- Where quantitative outcomes for the recipients of peer support were not reported;
- Where the research was cross sectional or was a case study; and
- Where the same data was reported in fuller-form in another paper.

The reference sections of similar reviews (Chinman et al., 2014; Fuhr et al., 2014; Lloyd-Evans et al., 2014; Pitt et al., 2013; Wright-Berryman, McGuire, & Salyers, 2011) were cross-checked for additional studies. Authors of studies listed on trial registries and conference abstracts were emailed to inquire whether their results had been published. Reference sections of included papers were examined and their corresponding authors emailed to identify additional studies.

Data Extraction

Data was extracted from original papers by EB including: study design; modality and description of the intervention; planned duration, number and frequency of sessions; actual number and frequency of sessions attended; assessment time points, dropout and attrition rates; measures used; statistical information for outcomes at each assessment time point (sample size (n), means, standard deviations (SDs), effect sizes (ESs)); details of

control condition and randomisation procedures (where applicable); and demographic details of participants. Corresponding authors were contacted by email for unreported data.

Methodological Quality of Included Studies

The quality of included studies was examined using an adaptation of the Effective Public Health Practice Project (EPHPP) tool (Armijo-Olivo, Stiles, Hagen, Biondo, & Cummings, 2012). It was chosen over others (e.g. Higgins et al., 2011) since it can be used to appraise the quality of randomised controlled trials (RCTs) in addition to other study designs. The tool examines eight component areas of potential bias, with scoring instructions for six (selection bias, design, confounders, blinding, data collection methods, and withdrawals and drop-outs) that contribute to a global rating. For this review, the two other areas of potential bias examined by the tool (intervention integrity and analyses) were scored and contributed to the global rating. The authors deemed it important that the global score reflect these areas since included studies comprised a wide variety of interventions. Details on adaptations made to the tool, and the dictionary with scoring instructions are in Appendix C. Assessments were carried out by EB. Six studies (26%) were independently assessed by a colleague external to the research team. A two-way mixed intra class correlation coefficient was calculated on mean ratings; the estimated consistency between raters of 0.83 may be interpreted as ‘almost perfect’ (Landis & Koch, 1977). There were three discrepancies (two due to oversight and one due to differences in interpretation) which were discussed and a consensus rating agreed upon.

Data Analysis

Because the review included non-randomised designs, results were first integrated through narrative synthesis (Mays, Pope, & Popay, 2005; Popay et al., 2006). The main components of a narrative synthesis are: developing a preliminary synthesis of the findings of included studies; exploring relationships in the findings; and assessing the robustness of the synthesis produced. Results were organised by outcome of interest.

Where data were available, ESs were calculated to enable some comparison of effect magnitude across studies. For RCTs, the mean and SD of total scale score and valid n for intervention and control groups at end-of-treatment were used to calculate a between-subjects standardised mean difference (Cohen's *d*). For pre-post studies the baseline and end-of-treatment mean and SD, together with n and the correlation between baseline and end-of-treatment scores (where provided by authors on request) was used to calculate a within-subjects *d* using the method described by Borenstein and colleagues (2009). Comprehensive Meta-Analysis software (Version 3.3; Biostat, 2014) was used for calculations. When aggregate data to calculate ESs of the *d* family were not available, already-computed effects were extracted (e.g. η^2) and converted to *d* using appropriate methods (Lenhard & Lenhard, 2017). Interpretation of ESs was based on Cohen's (1977) guidance that 0.2 represents a small effect, 0.5 a moderate effect and 0.8 a large effect.

Where appropriate, an attempt was made to integrate effects. Consideration of the similarity of studies is crucial when combining results in meta-analyses and combining results from a small number of studies should be undertaken with caution since it can lead to problems estimating between-study variance (Borenstein, 2009). When data was available for at least four RCTs with similar characteristics, a meta-analysis was performed using Review Manager software (Version 5.3; RevMan, 2012). Hedge's correction was applied to standardised mean differences at end-of-treatment/intervention and follow-up (Hedges & Olkin, 2014). Effects were integrated using a random effects model. Heterogeneity was explored with statistical tests and 'one-study-removed' sensitivity analyses (i.e. running the analysis each time with a different single study removed to identify the influence of any one study on the observed effect). The small number of studies precluded meaningful interpretation of funnel plots or tests to assess publication bias (Rothstein, Sutton, & Borenstein, 2006).

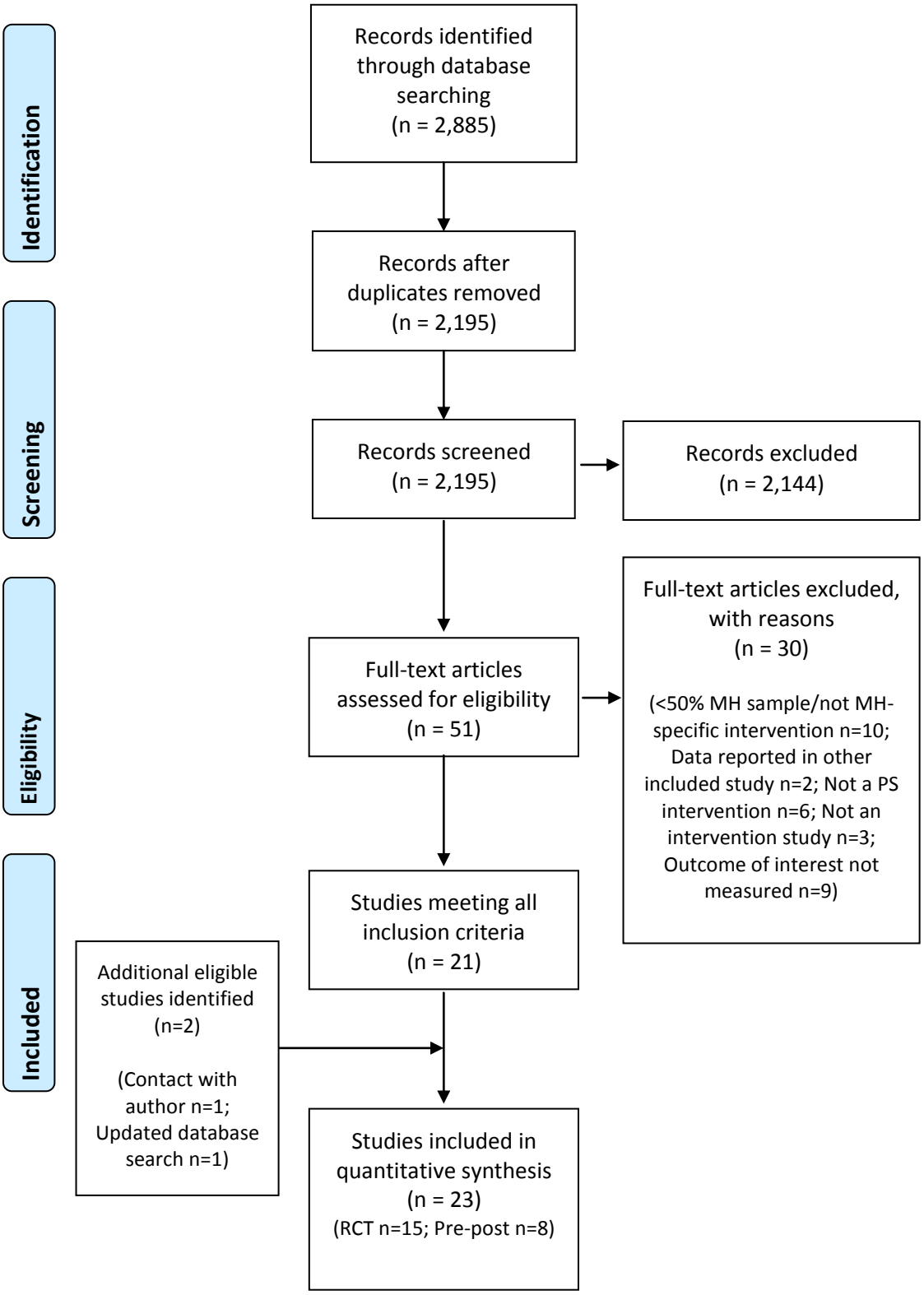

Figure 1. PRISMA flow diagram

Results

Study Selection

Figure 1 is the PRISMA chart describing the flow of studies through the review process. The search yielded 2,195 results after the removal of duplicates. The majority of studies were excluded as irrelevant on abstract and title screening, leaving 51 papers which were read in-full and reviewed against inclusion and exclusion criteria. 30 studies were excluded for the reasons outlined in the flow chart and in Appendix D. One study was identified through contact with an author and another was identified when the database search was re-run, bringing the total to 23.

Inclusion of studies measuring self-advocacy and activation. Of the 23 studies, two measured 'patient self-advocacy' as an outcome (Chinman et al., 2015; Eisen et al., 2012), and a further two measured 'patient activation' (Jonikas et al., 2013; Pickett et al., 2012). Patient self-advocacy is the extent of a person's involvement in decision-making about their health care (Brashers, Haas, & Neidig, 1999). Similarly, patient activation is the extent of a person's knowledge, skill, confidence and beliefs for managing health (Green et al., 2010). These studies were included because the authors judged there to be sufficient face validity in the relationship between these constructs and self-efficacy having examined the scales used in their measurement (see below).

Study Characteristics

Study characteristics are presented in Table 1. Fifteen studies reported empowerment data, 15 reported data on self-efficacy (and related constructs), and five reported internalised stigma data. Many reported data for more than one construct (e.g. Russinova et al. (2014) reported empowerment, self-efficacy and internalised stigma data). All but one of the RCTs were superiority trials, comparing a peer-delivered intervention in addition to treatment as usual (TAU) to TAU alone. Eisen et al. (2012) had three conditions: a peer-delivered intervention; the same intervention delivered by another

mental health professional; and TAU. Most studies took place in the US (n=16), three took place in The Netherlands, two in Canada, and one each in Switzerland and Germany.

The sample size range was wide; the smallest sample was a pre-post trial of one-to-one and group peer support with 10 depressed Latina female survivors of intimate partner violence (IPV) (Nicolaidis, Mejia, et al., 2013). The largest sample involved 1,827 people with various diagnoses randomised either to receive TAU at a traditional community mental health service, or to receive peer-run services plus TAU (Rogers et al., 2007). The majority of studies had participants with a variety of mental health diagnoses, although three had a sample with depression (Nicolaidis, Mejia, et al., 2013; Nicolaidis, Wahab, et al., 2013; O'Conner, McKinnon, Ward, Reynolds, & Brown, 2015) and one had a psychosis sample (Castelein et al., 2008b). Three studies had exclusively veteran (ex-military) participants (Chinman et al., 2015; Eisen et al., 2012; Resnick & Rosenheck, 2008). There was a relatively even split of male:female participants, excluding veteran studies (mostly male) and female-targeted interventions (Nicolaidis, Mejia, et al., 2013; Nicolaidis, Wahab, et al., 2013). Most participants were middle-aged. Most interventions were delivered in community settings except Livingston, Nijdam-Jones, Lapsley, Calderwood, and Brink (2013) which took place in a forensic inpatient setting.

Characteristics of Interventions

Interventions varied, but were broadly categorised as: group interventions; one-to-one support from a peer worker; and peer-run services. These categories are in-keeping with previous descriptions and syntheses (Davidson et al., 1999; Lloyd-Evans et al., 2014). It is important to note that many studies, in particular those investigating peer-run services, described complex interventions which involved more than one type of peer support. A detailed description of interventions is provided in Appendix E, in addition to the summaries below.

Table 1. *Characteristics of included studies*

				Baseline demographics (total sample)			Intervention characteristics						Results			
Study (Country)	De-sign	Interven-tion & (Control) groups	n	Diagnosis n (%)	Age years Mean (SD)	F n (%)	Mod-ality	Sett-ing	Intervention components	Sessions offered	Data coll-ected	Mea-sure used	Sessions attended	Drop-outs at ET n (%)	Key findings as reported in paper	Effect size *d* (95% CI)
Empowerment																
RCTs																
Barbic et al. 2009 (CA)	RCT Multi-site	RWP (TAU)	16 (17)	BP=7 (21.2) SS/P=26 (78.8);	44.6 (N/R)	11 (33.3)	Grp	Com.	Recovery workbook programme co-facilitated by peer.	12 sessions weekly.	BL; ET	RES	N/R	N/R	Total RES score improved sig more for ppts in RWP than TAU.	N/R[a]
Boevink et al., 2016 (NL)	RCT Multi-site	TREE (WLC)	80 (83)	MD=19 (11.7); PD=24 (14.7); SS/P=66 (40.5); Other=54 (33.1)	43.9 (N/R)	78 (47.9)	Grp	Com.	Recovery self-help groups led by ≥2 PSWs. Also patient & staff training courses.	Fort-nightly	BL; 12m; 24m	RES	N/R	40 (24.5)	No sig effect of TREE on RES scores in ITT or AsT analyses.	-0.20[b] (-0.54 - 0.13)
Eisen et al. 2012 (US)	RCT Multi-site	PL V2V (CL V2V) (TAU)	74 (82) (84)	N/R Veterans with ≥1 psychiatric diagnosis.	N/R 72% were 36-70	20 (8.0)	Grp	VA	Recovery group using written materials. Led by 2 peers.	12 sessions weekly	BL; ET	RES	Mean =3.8 26% attended none.	58 (19.5)	No sig differences on RES scores between the 3 groups.	-0.12[c] (-0.44 – 0.19)
Pickett et al. 2012 (US)	RCT Multi-site	BRID-GES (WLC)	212 (216)	BP=169 (39.5); MD=77 (18.0); SS/P=89 (20.8); Other=37 (8.6)	42.8 (10.9)	238 (55.6)	Grp	Com.	Peer-led course covering mental illness, self-help skills, recovery principles & PS.	8 sessions weekly	BL; ET; 8m	RES	Mean =4.86, (SD=3.3)	85 (19.9)	Ppts in BRIDGES had sig improved RES score compared to controls.	0.27 (0.05 – 0.48)

Rogers et al. 2007 (US)	RCT Multi-site	COSP (TAU)	920 (907)	AD=68 (3.7); MD=811 (44.4) SS/P=89 (20.8); Other=27 (1.5)	42.7 (N/R)	1,098 (60.1)	Peer-run ser-vice	Com.	Peer-operated service programs providing a variety of interventions.	Not specified – as needed	BL; 4m; 8m; 12m	RES	57% in COSP (and 15% in TAU) used the COSP.	N/R (app-rox. 20.5 % at 12m)	ITT= no sig change on total RES score between COSP and TAU. In sensitivity analysis with one site removed there was a small sig improvement.	0.14[d, e]
Rusch et al. 2014 (CH)	RCT	COP (TAU)	50 (50)	BP=20 (20.0) MD=60 (60.0); SS/P =27 (27.0);	42.0 (N/R)	59 (59.0)	Grp	Com.	Manualised intervention to support decision about disclosure of MH problems. Facilitated by 2 peers.	3 sessions weekly.	BL; ET; 6wk	RES	Mode=3	13 (13)	No sig effect of COP on total RES score compared to TAU.	0.24 (-0.18 – 0.67)
Russi-nova et al. 2014 (US)	RCT	Photo-voice (TAU)	40 (42)	BP=27 (33.0) MD=21 (26.0); SS/P=28 (34.0); Other=6 (7.0)	N/R 68% over 40	56 (68.0)	Grp	Com.	Peer-led manualised anti-stigma intervention using photography.	10 sessions weekly.	BL; ET; 6m	RES	Mean=6.9 (2.7) 75% attended 6 or more.	15 (18.3)	Photovoice ppts had sig improved scores on the 'community activism and autonomy' subscale of the RES, but no sig change for total RES compared with TAU.	0.16 (-0.27 – 0.60)
Salzer et al. 2016 (US)	RCT	CIL/CPS (TAU)	50 (49)	N/R Inclusion criteria = diagnosis of SS/P, BP or MD.	48.7 (8.8)	46 (46.5)	Peer-run ser-vice	Com.	Personalised support from certified peer specialist	Not specified – as needed for 6m.	BL; ET; 12m	RES	Mean hrs contact= 6.4(4.7). 29 met CPS ≥2 times.	13 (13.1)	No sig differences between the CIL/CPS and TAU over time.	0.30 (-0.12 – 0.73)

Segal et al. 2010 (US)	RCT Multi-site	SHA (TAU)	Approx 834 (Approx. 208)	N/R MD=382 (75.6)[2].	N/R 41.0 (7.8)[k]	N/R 239 (47.3)[k]	Peer-run service	Com.	Peer-run organisation guided by a self-help ideology providing a variety of interventions.	Not specified – as needed for 8m.	BL; 1m; 3m; 8m	PES	Mean per month= 6.5; Median= 2; Mode= 2	537 (51.5)	Ppts in SHA had sig greater improvements in total PES score compared to TAU.	0.18[d, f]
Segal et al. 2011 (US)	RCT	COSP (TAU)	Approx 97 (Approx 65)	N/R MD=82 (59.0)[2]	N/R 37.0 (9.8)[k]	N/R 75 (54.0)[k]	Peer-run service	Com.	Peer-run organisation providing a variety of interventions.	Not specified – as needed for 8m.	BL; 8m	PES	Mean per month= 4.24 (0.43); Median= 4; Mode= 4	23 (14.2)	Ppts in COSP had sig worse total PES scores compared to TAU.	-0.51[d, f]
van Gestel-Timmermans et al. 2012 (NL)	RCT Multi-site	RIUTY (WLC)	168 (165)	AD=74 (22.2); MD=119 (35.7); PD=104 (31.2); SS/P=109 (32.7);	43.5 (N/R)	222 (66.1)	Grp	N/R	Manualised Recovery course. Workbook. Used. Led by 2 peers.	12 sessions weekly.	BL, ET, 6m	DES	9.0 (3.3)	20%	Ppts in RIUTY had sig improved DES scores compared to controls and this maintained at follow-up.	0.34 (0.09 – 0.59)
Pre-post studies																
Cook et al. 2009 (US)	Pre-post (one grp)	WRAP	95	BP=30 (38.0); MD=20 (26.0); PD=2 (3.0) SS/P=16 (20.0)[2]	46.6 (10.4)[k]	51 (63.8)[k]	Grp	Com.	Manualised self-management intervention. Led by 2 peers.	8 sessions weekly.	BL; ET	RES	5.0 (2.8)	15 (16.7)	Ppts had sig reduced total RES scores at ET.	N/R
Living-ston et al. 2013 (CA)	Pre-post (one grp)	PSW emp-loyed	30	SS/P =22 (88)[2]	42 (10.8)[k]	5 (20.0)[k]	121 & Grp	For-ensic in-ptnt.	1 x PSW delivered weekly mutual support grp & 121 sessions.	Not specified – as needed.	BL; 9m	RES	19 (63.3) attended median of 5 121 OR grp sessions.	5 (16.7)	No sig change on total RES scores.	0.20 (-0.5 – 0.45)
Resnick & Rosen-heck, 2008 (US)	Pre-post (2 co-horts)	V2V (pre-V2V)	218 (75)	N/R	48.5 (8.7)	15 (5.1)	Grp	VA	Peer education and support program. Recovery literature used. 'Read & discuss' format.	Not specified – as needed for 9m.	BL; 1m; 3m; 9m	RES	102 ppts. attended ≥10 V2V sessions at 9m.	N/R	Sig increased total RES score for veterans enrolled after the V2V	0.0 (-0.12 - 0.12)[g, h]

									Peer-led.	Groups held 5 days /wk.					program was implemented in both ITT and AsT analyses.	
Vayshen-ker et al. 2016 (US)	Pre-post (one grp)	RWC	50	AD=4 (8.0); BP=9 (18.0) MD=4 (8.0); SS/P=14 (28.0); Other / missing=8 (16.0)	43.0 (13.3)	19 (38.0)	Peer-run ser-vice	Com.	Peer-run agency resource & wellness centre and supported employment program.	Not specified – as needed for 6m.	BL; 3m; 6m	RES	Mean visits 15.7 over 6m.	16 (32.0) at 3m; 19 (38.0) at 6m	AsT= moderate or high attenders (≥6 sessions) had sig greater improvements in the 'self-esteem–self-efficacy' and 'community activism–autonomy' subscales of the RES when compared to minimal or non-attenders (≤6 sessions), but not for total RES.	N/R
Self -efficacy																
RCTs																
Boevink et al. 2016 (NL)	RCT Multi-site	TREE (WLC)	80 (83)	MD=19 (11.7); PD=24 (14.7); SS/P=66 (40.5); Other=54 (33.1)	43.9 (N/R)	78 (47.9)	Grp	Com.	Recovery self-help groups led by ≥2 PSWs. Also patient & staff training courses.	Fort-nightly	BL; 12m; 24m	MHCS	N/R	40 (24.5)	ITT=Sig improvements in MHSC score with a small effect size. AsT= Large effect size in those exposed to ≥1 element of TREE.	0.13 (-.21 – 0.47)[a]
Castelein et al.	RCT	GPSG-P	56	SS/P=106 (100.0)	38.6 (N/R)	36 (34.0)	Grp	N/R	Peer support groups for people with	16 sessions	BL; ET	MHCS	N/R	9 (8.0)	ITT analysis =No sig	0.20 (-0.20 –

2008 (NL)	Multi-site	(WLC)	(50)						SS/P. 'Minimally guided' by nurse staff.	fortnightly.					differences found between groups. AsT= High attenders (≥9 sessions) sig increased MHCS scores compared to low attenders (<9 sessions).	0.60)
Chinman et al. 2013 (US)	RCT Multi-site Cluster	PEER (TAU)	122 (116)	N/R	53.3 (N/R)	28 (11.8)	121 incl. case mgnt	VA	Two PSWs added to 3 VA assertive community treatment teams. PSWs carried out various case management duties.	Not specified – as needed for 12m.	BL; 12m	PAM-MH	0=43%; 1=11%; 2-4= 10%; 5-12 = 18%; 13+ = 18%	18%	PEER ppts had a sig improved PAM scores compared to TAU.	0.29 (0.03 – 0.54)
Eisen et al. 2012 (US)	RCT Multi-site	PL V2V (CL V2V) (TAU)	74 (82) (84)	N/R Veterans with ≥1 psychiatric diagnosis.	N/R 72% were 36-70	20 (8.0)	Grp	VA	Recovery group using written materials. Led by 2 peers.	12 sessions weekly	BL; ET	PAM-MH	Mean =3.8 26% attended none.	58 (19.5)	No sig differences between the 3groups on the PAM-MH.	-0.02[c] (-0.33 – 0.30)
Jonikas et al. 2013 (US)	RCT Multi-site	WRAP (WLC)	251 (268)	BP=188 (38.1); MD=125 (25.3); SS/P=105 (21.2); Other= (62) 12.6	45.8 (9.9)	342 (65.9)	Grp	Com.	Manualised self-management intervention. Led by 2 peers.	8 x 2.5hr sessions weekly.	6wk BT; 6wk AT; 32wk AT	SAS	Mean= 5.1 (3.1) 233 (84%) received interven-tion	61 (11.8)	WRAP ppts had sig greater improvement on SAS scores over time compared to WLC.	0.20 (0.02 – 0.38)
Mahlke et al. 2017 (DE)	RCT Multi-site	121-PS (TAU)	114 (102)	BP=33 (15.3); MD=54 (25.0); PD=51 (23.6); SS/P=60 (27.8); Other / missing=20 (9.3)	41.5 (12.8)	124 (57.4)	121	In-ptnt. & Com.	Highly trained PSWs providing 121 support aiming to enhance peers' recovery and sense of control in their lives.	1 hr session weekly for 6m.	BL; ET; 12m	GSES	Mean= 12.2 (9.6)	68 (31.5)	ITT=GSES scores at 12m (6m follow-up) were sig better in the intervention group.	0.13 (-0.21 – 0.47)

Pickett et al. 2012 (US)	RCT Multi-site	BRIDGES (WLC)	212 (216)	BP=169 (39.5); MD=77 (18.0); SS/P=89 (20.8); Other=37 (8.6)	42.8 (10.9)	238 (55.6)	Grp	Com.	Peer-led course covering mental illness, self-help skills, recovery principles & PS.	8 sessions weekly	BL; ET; 8m	SAS	Mean =4.86, (SD=3.3)	85 (19.9)	Ppts in BRIDGES had sig improved score on self-advocacy 'assertiveness' subscale but not total SAS.	0.17 (-0.05 – 0.38)
Russinova et al. 2014 (US)	RCT	Photovoice (TAU)	40 (42)	BP=27 (33.0) MD=21 (26.0); SS/P=28 (34.0); Other=6 (7.0)	N/R 68% over 40	56 (68.0)	Grp	Com.	Peer-led manualised anti-stigma intervention using photography.	10 sessions weekly.	BL; ET; 6m	GSES	Mean=6.9 (2.7) 75% attended 6+.	15 (18.3)	No sig differences between Photovoice and TAU on GSES.	0.37 (-0.07 – 0.80)
Segal et al. 2010 (US)	RCT Multi-site	SHA (TAU)	Approx 834 (Approx. 208)	N/R MD=382 (75.6)[2].	N/R 41.0 (7.8) [k]	N/R 239 (47.3) [k]	Peer-run service	Com.	Peer-run organisation guided by a self-help ideology providing a variety of interventions.	Not specified – as needed for 8m.	BL; 1m; 3m; 8m	SES	Mean per month= 6.5; Median= 2; Mode= 2	537 (51.5)	Ppts in SHA had sig greater improvement in SES scores than TAU.	0.30[d, f]
Segal et al. 2011 (US)	RCT	COSP (TAU)	Approx 97 (Approx 65)	N/R MD=82 (59.0)[2]	N/R 37.0 (9.8) [k]	N/R 75 (54.0) [k]	Peer-run service	Com.	Peer-run organisation providing a variety of interventions.	Not specified – as needed for 8m.	BL; 8m	SES	Mean per month= 4.24 (0.43); Median= 4; Mode= 4	23 (14.2)	Ppts in COSP had sig worse total SES scores compared to TAU.	-0.63[d, f]
van Gestel-Timmermans et al. 2012 (NL)	RCT Multi-site	RIUTY (WLC)	168 (165)	AD=74 (22.2); MD=119 (35.7); PD=104 (31.2); SS/P=109 (32.7);	43.5 (N/R)	222 (66.1)	Grp	N/R	Manualised Recovery course. Workbook. Used. Led by 2 peers.	12 sessions weekly.	BL, ET, 6m	MH-CS	9.0 (3.3)	20%	Ppts in RIUTY had sig greater improvement n MHCS scores than those in WLC.	0.33 (0.08 – 0.58)
Pre-post studies																
Fukui et al. 2010 (US)	Pre-post (one	PTR	47	BP=25 (53.2); MD=8 (17.0); SS/P=8 (17.0);	46 (11.6)	33 (70.2)	Grp	Com.	Peer-led recovery group. Workbook.	12 sessions weekly.	BL; ET	GSES	Mean=7; 60%	15 (31.9)	There was a sig improvements in GSES score	0.38 (0.14 – 0.62)

	grp)			Other=6 (12.8)									attended 12 sessions		between pre-and post-intervention.	
Nico-laidis et al. 2013a (US)	Pre-post (one grp)	PHA	59	Moderate – severe depressive symptoms (PHQ score ≥15)	38.4 (12.5)	59 (100.0)	121 incl. case mgnt	Com.	Peer health advocate providing various support and intervention to depressed African American female survivors of IPV.	Not specified – as needed over 6m.	BL; ET	DSES	30 (50.8%) engaged in ≥6hrs of service	27 (45.8)	Sig improvements in DSES score at ET.	N/R
Nico-laidis et al.b 2013 (US)	Pre-post (one grp)	Promo-tora	10	Moderate – severe depressive symptoms (PHQ score ≥15)	38 (N/R)	10 (100.0)	Grp & 121 case mgnt	Com.	Latina 'promotora' – peer providing 121 support, case mngt & co-facilitating group intervention for depressed Latina survivors of IPV.	Group= 12 sessions weekly. 121= not specified.	BL; 6m	DSES	Grp=10 ppts attended ≥10. Mean 121= 16hrs	0 (0.0)	Sig improvements in DSES score at ET.	N/R
Resnick & Rosen-heck 2008 (US)	Pre-post (2 co-horts)	V2V (pre-V2V)	218 (75)	N/R	48.5 (8.7)	15 (5.1)	Grp	VA	Peer education and support program. Recovery literature used. 'Read & discuss' format. Peer-led.	Not specified – as needed for 9m. Groups held 5 days /wk.	BL; 1m; 3m; 9m	MH-CS	102 ppts. attended ≥10 V2V sessions at 9m.	N/R	ITT=No sig difference in MHCS. AsT=Sig greater total MHCS in high attenders (attended ≥10 V2V sessions) compared to pre-V2V group0.22 .	0.22 (0.11 - 0.33)[g, h]
Internalised-stigma																
RCTs																
Rusch et al. 2014 (CH)	RCT	COP (TAU)	50 (50)	BP=20 (20.0) MD=60 (60.0); SS/P =27 (27.0);	42.0 (N/R)	59 (59.0)	Grp	Com.	Manualised intervention to support decision about disclosure of MH problems. Facilitated by 2 peers.	3 sessions weekly.	BL; ET; 6wk	ISMI [i]	Mode=3	13 (13)	No sig effect of COP on total ISMI score compared to TAU.	-0.11 (-0.54 – 0.31)

Russi-nova et al. 2014 (US)	RCT	Photo-voice (TAU)	40 (42)	BP=27 (33.0) MD=21 (26.0); SS/P=28 (34.0); Other=6 (7.0)	N/R 68% over 40	56 (68.0)	Grp	Com.	Peer-led manualised anti-stigma intervention using photography.	10 sessions weekly.	BL; ET; 6m	ISMI	Mean=6.9 (2.7) 75% attended 6 or more.	15 (18.3)	Photovoice ppts had sig reduced ISMI scores compared with TAU.	-0.20 (-0.64 – 0.23)
Pre-post studies																
Living-ston et al. 2013 (US)	Pre-post (one grp)	PSW emp-loyed	30	SS/P =22 (88)[2]	42 (10.8) [k]	5 (20.0) [k]	121 & Grp	For-ensic in-ptnt.	1 x PSW delivered weekly mutual support grp & 121 sessions.	Not specified – as needed.	BL; 9m	ISMI	19 (63.3) attended median of 5 121 OR grp sessions.	5 (16.7)	No sig effect on the ISMI at ET.	-0.02 (-0.28 – 0.24)
O'Con-ner et al. 2015 (US)	Pre-post (one group)	Peer edu-cation	19	MD - at least moderate depressive symptoms (PHQ score ≥10)	67 (5.0)	12 (63.2)	121	Com.	121 peer-delivered manualised education program aimed at reducing internalised stigma in depressed older adults.	Not specified – as needed over 3m.	BL; ET	ISMI [j]	Mean=9 meetings	N/R	Sig reduction in ISMI scores at ET.	N/R
Vayshen-ker et al. 2016 (US)	Pre-post (one grp)	RWC	50	AD=4 (8.0); BP=9 (18.0) MD=4 (8.0); SS/P=14 (28.0); Other / missing=8 (16.0)	43.0 (13.3)	19 (38.0)	Peer-run ser-vice	Com.	Peer-run agency resource & wellness centre and supported employment program.	Not specified – as needed for 6m.	BL; 3m; 6m	ISMI	Mean visits 15.7 over 6m.	16 (32.0) at 3m; 19 (38.0) at 6m	AsT= moderate to high attenders (≥6 sessions) had sig reductions in total ISMI score compared to minimal or non-attenders (≤6 sessions).	N/R

Note. [a] The corresponding author was contacted regarding an inconsistency in data reported in the original paper but did not provide clarification therefore an effect size was not calculated;

[b] Calculated using data for WLC versus exposure to intervention at 1yr follow-up; [c] Calculated for comparison between peer-led V2V and TAU (i.e. a superiority analysis) for consistency

with other studies in the review; [d] No raw data reported therefore effect size is that reported by the authors; [e] It is unclear which time-point(s) the analyses are conducted for; [f] eta-squared effect sizes converted to Cohen's d; [g] A within-group effect size for the V2V group is reported (a between-groups effect size is not reported due to the potential for confounders since participant cohorts were recruited over a lengthy time period); [h] Data is combined from 3m & 9m follow-up; [i] Stigma resistance subscale of the ISMI not included; [j] "mental illness" changed to "depression" in wording of ISMI questionnaire items; [k] Numbers exclude participants who dropped out.

*Abbreviations:*121=one-to-one / individual; AD=anxiety disorder; AsT=as treated; AT=after treatment; BL=baseline; BP=bipolar disorder; BRIDGES=Building Recovery of Individual Dreams and Goals; BT=before treatment; CA=Canada; CH=Switzerland; CI=confidence interval; CIL= Center for Independent Living ; CL-V2V=clinician-led vet-to-vet; Com.=Community; COP=Coming Out Proud; COSP=consumer-operated service program; CPS=Certified Peer Specialist; d=standardised mean difference; DE=Germany; DES=Dutch Empowerment Scale (Boevink et al., 2009); DSES=Depression Self-Efficacy Scale (Ludman et al, 2003); ET=end of treatment; F=female; GPSG-P=guided peer support group for psychosis; GPSG-P=Guided peer-support group for psychosis; Grp=group; GSES=General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995); Incl=including; Inpt.=inpatient; IPV=intimate partner violence; ISMI=Internalised stigma of mental illness scale (Ritscher et al, 2003); ITT=intention to treat; m=month; MD=mood disorder; mgnt=management; MH=mental health; MHCS Mental Health Confidence Scale (Carpinello et al, 2000); n=number; N/R=not reported/unable to calculate; NL=The Netherlands; PAM-MH=Patient Activation Measure for Mental Health (Green et al., 2010); PD=personality disorder; PEER=Peers Enhancing Recovery; PES=Personal Empowerment Scale (Segal et al, 1995); PHA=peer health advocate; PHQ=Patient health questionnaire (Kroenke et al., 2001); PL-V2V=peer-led vet-to-vet; POP-P&ES=Personhood & Empowerment Scales (Campbell et al, 2004); Ppt.=participant; PS=peer support; PSW=peer support worker; Ptnt=patient; PTR=Pathways to Recovery; RCT=randomised controlled trial; RES=Rogers' Empowerment Scale (Rogers et al., 1997); RIUTY=Recovery Is Up To You; RWC=resource and wellness centre; RWP=Recovery Workbook Program; SAS=Self-Advocacy Scale (Brashers et al, 2009); SD=standardised deviation; SES=Self-Efficacy Scale (Centre for Self Help Research, 1996); SHA=self help agency; Sig=significantly; SS/P=schizophrenia spectrum/psychosis; TAU=treatment as usual; TREE=Toward Recovery, Empowerment and Experiential expertise; US=The United States of America; V2V=vet-to-vet; VA=veterans affairs; Wk=week; WLC=waiting list control; WRAP=Wellness Recovery Action Planning.

Group interventions (n = 12; nine RCTs and three pre-post studies). Over half of the group interventions studied (five RCTs and two pre-post studies) were weekly, time-limited, structured groups that were led/facilitated by one or more trained peer supporter. One was co-facilitated by a peer supporter and an occupational therapist (Barbic, Krupa, & Armstrong, 2015). Groups were grounded in the recovery model and used workbooks and materials, often with voluntary homework tasks in-between sessions. The duration of sessions ranged from 45 minutes to 2.5 hours. Two studies investigated the 12-week Wellness Recovery Action Planning program (WRAP: Copeland, 2002) (Cook et al., 2011; Jonikas et al., 2013) which had a strengths-based approach and incorporated psychoeducation, group discussion, group working, and the creation of self-management and crisis plans. Two studies used the Spaniol Recovery Workbook (Spaniol, Koehler, & Hutchinson, 1994) as the basis for a 12-week intervention (Barbic, Krupa, & Armstrong, 2009; Eisen et al., 2012). One study (Fukui, Davidson, Holter, & Rapp, 2010) used the Pathways to Recovery strengths-based self-help workbook (PTR: Ridgway, McDiarmid, Davidson, Bayes, & Ratzlaff, 2002), while another (van Gestel-Timmermans, Brouwers, van Assen, & van Nieuwenhuizen, 2012) followed the manualised psychoeducation and self-management course ‘Recovery Is Up To You’ (RIUTY: van Gestel-Timmermans, Brouwers, & Van Nieuwenhuizen, 2010) for 12 weeks. Finally, Pickett et al. (2012) investigated the manualised peer-led education course ‘Building Recovery of Individual Dreams and Goals’ (BRIDGES: Pickett et al., 2010).

The aim of two groups was to reduce internalised stigma. Rüsch et al. (2014) investigated the three-session ‘Coming Out Proud’ program concerning decision-making about disclosure of mental illness (Corrigan et al., 2013). Russinova et al. (2014) piloted the 10-session ‘Photovoice’ intervention; which included psychoeducation about stigma, group discussion and the creation of photography and narratives about coping with stigma. One intervention investigated a peer support group for people with psychosis which was ‘minimally guided’ by a nurse (Castelein et al., 2008b); it involved pair- and group-

discussions about living and coping with psychosis every two weeks over 16 sessions. The other two group interventions investigated ongoing (i.e. not time-limited) peer support groups. Resnick and Rosenheck (2008) looked at 9-month outcomes in a cohort of veterans receiving care from a service where a Vet-to-Vet (V2V) peer-led education and support program had been introduced. Attendance at V2V was voluntary, groups were held five days a week for 45 minutes and followed a 'read and discuss' format with designated recovery-related topics. Boevink, Kroon, Delespaul, and Van Os (2016) investigated the effect of peer-led self-help groups, which were the core element of a broader recovery-oriented program. Groups were held weekly for two hours and were based on principles of recovery and empowerment.

All studies reported that peer leaders/facilitators shared stories about their personal recovery as a way to start discussions amongst the group members.

One-to-one support from a peer worker (n = 6; two RCTs and four pre-post studies). In Mahlke et al.'s (2017) RCT, peer supporters aimed to enhance participants' perceived control over their lives; they shared ideas about managing recovery and supported peers with daily life activities, in crises and mediated in conflicts with clinicians and family. They aimed for at-least four hour-long meetings and at-most weekly meetings over six months. Chinman et al.'s (2015) RCT investigated the impact of peer specialists added to veterans' health administration mental health intensive case management (VHA-MHICM) teams over a year. Peer specialists had one-to-one sessions with participants and undertook various case management duties which included support with attending appointments, medication and recovery planning.

The pre-post studies of one-to-one peer support had small samples (range = 10 - 32). The aim of one (O'Conner et al., 2015) was to reduce internalised stigma in depressed older adults through a three-month peer education program; peer educators used motivational interviewing techniques (MI: Miller & Rollnick, 1991) and provided social and emotional support, information about depression, and shared personal experiences of

recovery. The three other studies of one-to-one peer support also included some aspect of group intervention. Nicolaidis, Wahab, et al. (2013) originally intended to run depression self-management workshops informed by cognitive behavioural therapy principles (CBT: Beck, 1967); however, these were abandoned mid-way due to low attendance and thereafter one-to-one contacts incorporated topics from the CBT group. Peer supporters undertook case management tasks and used MI skills for 6 months to help depressed African American female survivors of IPV set and reach self-management goals related to depression and safety. The same author investigated the impact of one-to-one case management from a peer trained in MI techniques, plus a peer-led culturally-adapted 12-session group for depression self-management for Latina survivors of IPV (Nicolaidis, Mejia, et al., 2013). The group was CBT-informed and components included education about IPV and depression, safety planning, mood and thought monitoring, thought challenging and self-care. Livingston et al. (2013) investigated a 'patient engagement intervention' that included peer support in a forensic hospital. A peer support worker was employed and provided one-to-one sessions of 5-30 minutes and led weekly hour-long mutual support groups for 19 months.

Peer-run services (n = 5; four RCTs and one pre-post study). In a cluster RCT, Rogers et al. (2007) compared participants randomised to receive support from eight consumer operated service programs (COSPs) across the US, in addition to TAU in a nearby traditional community mental health services for 12 months. COSPS provided a variety of interventions but common ingredients were described as a focus on peer support, education about recovery, an ethos of empowerment and practical support with independent living. A similar comparison of a drop-in board-and-staff-run COSP plus TAU versus TAU alone for eight months was tested by Segal, Silverman, and Temkin (2011). The same authors conducted a cluster RCT comparing participants randomised to services from five self-help agencies (SHAs) plus TAU in traditional community mental health services, versus TAU alone for eight months (Segal, Silverman, & Temkin, 2010).

SHAs were peer-run drop-in centres with a self-help ideology that functioned as participatory democracies with peer involvement in decision-making at the strategic level. Common elements of support in the SHAs were as for the COSPs described above. None of these peer-run-service studies described what efforts were made to engage participants into accessing supports from the COSPs/SHAs. By contrast, Salzer et al. (2016) outlined an assertive approach taken by a certified peer specialist (CPS) to engage participants randomised to receive one-to-one support from the CPS and core services of a Centre for Independent Living (CIL; services similar to COSPs) in addition to TAU for six months. The CPS made multiple attempts to arrange initial meetings which followed a standard protocol, further meetings were tailored to individuals' needs and it was calculated that the proportion of peer support within the overall intervention was 31%. The final study of a peer-run service was a naturalistic pre-post study with a small sample of COSP service users (Vayshenker et al., 2016).

Measures Used

Of the 15 studies that reported empowerment data, the majority (n=12) used the Rogers' Empowerment Scale (RES: Rogers et al., 1997) which has well-established validity and reliability (Corrigan et al., 1999; Rogers et al., 1997; Rogers, Ralph, & Salzer, 2010; Wowra & McCarter, 1999). Two studies used the 20-item Personal Empowerment Scale (PES: Segal, Silverman, & Temkin, 1995) and one used the Dutch Empowerment Scale (DES: Boevink et al., 2016) which are less well-published in the literature. Weak correlations have been found between the RES and PES (Castelein et al., 2008a), and moderate correlations between the RES and DES (Boevink et al., 2016) suggesting the scales may measure different aspects of empowerment. All of the studies that reported internalised stigma data used the Internalised Stigma of Mental Illness scale (ISMI: Ritsher, Otilingam, & Grajales, 2003). There was less consistency in the measures of self-efficacy used across studies. Six measures were used across 15 studies, including measures of self-advocacy and patient activation as previously outlined. The most frequently-used

self-efficacy measure was the Mental Health Confidence Scale (MHCS: Carpinello, Knight, Markowitz, & Pease, 2000). Patient self-advocacy was measured with the Patient Self-Advocacy Scale adapted for mental health (PSAS; Brashers et al., 1999). Similarly, patient activation was measured with the Patient Activation Measure for Mental Health (PAM-MH; Green et al., 2010). Further details on the scales, including scale items are included in Appendix F.

Quality Appraisal

Component and global ratings on the EPHPP tool are presented in Table 2. No studies were rated strong on selection bias because none used random recruitment. All RCTs were rated strong on study design and most were rated strong on confounders because randomisation would have minimised bias in these areas. Eisen et al. (2012) was rated weak on confounders because efforts to identify these were not described and Barbic et al. (2009) and Boevink et al. (2016) were rated weak because they did not control for confounders identified. In most RCTs, assessors were not blinded to participant treatment allocation. Given the nature of interventions, all participants were themselves aware of their allocation but no studies described whether participants were informed of the specific research question involved. Two studies had a high rate of participant withdrawals/drop-outs at follow-up (Nicolaidis, Wahab, et al., 2013; Segal et al., 2010), and two did not report withdrawal/drop-out information (Barbic et al., 2009; Resnick & Rosenheck, 2008). Quality of reporting was poor overall; for example, only three RCTs provided a flow diagram to illustrate trial phases, participant allocation, follow-up and attrition, as recommended by the Consolidated Standards of Reporting Trials (CONSORT: Begg et al., 1996) (these were Boevink et al. (2016), Castelein et al. (2008b) and Mahlke et al. (2017)).

Table 2. Quality appraisal

		Component rating								Global rating
Authors, (year)	Outcome/s	Selec-tion bias	Design	Con-founders	Blind-ing	Data coll-ection method	With-drawals & drop-outs	Inter-vention integrity	Anal-yses	
Barbic et al., (2009)	Emp	W	S	W	M	S	W	W	M	W
Boevink et al., (2016)	Emp; SE	M	S	W	W	S	M	M	S	M
Castelein et al., (2008)	SE	S	S	S	W	S	S	M	S	M
Chinman et al., (2013)	SE	M	S	S	W	S	M	W	S	M
Cook et al., (2009)	Emp	M	M	W	W	M	M	M	M	W
Eisen et al., (2012)	Emp; SE	W	S	W	W	S	S	W	S	W
Fukui et al, (2010)	SE	M	M	W	W	S	M	M	W	W
Jonikas et al, (2013)	SE	M	S	S	M	M	S	M	S	S
Livingston et al., (2013)	Emp; IS	W	M	W	W	S	M	M	M	W
Mahlke et al., (2017)	SE	M	S	S	M	S	M	S	S	S
Nicolaidis et al., (2012)	SE	W	M	W	W	M	W	M	M	W
Nicolaidis et al., (2013)	SE	W	M	W	W	M	S	M	M	W
O Conner et al., (2015)	IS	M	M	W	W	S	S	M	S	M
Pickett et al., (2012)	Emp; SE	W	S	S	M	M	M	W	S	M
Resnick & Rosenheck (2008)	Emp; SE	M	M	S	W	S	W	W	M	W
Rogers et al., (2007)	Emp;	M	S	W	M	S	M	W	M	M
Rusch et al., (2014)	Emp; IS	W	S	S	M	S	S	S	S	M
Russinova et al., (2014)	Emp; IS, SE	M	S	S	M	S	S	M	S	S
Salzer et al., (2016)	Emp	M	S	S	W	S	S	S	S	M
Segal et al., (2010)	Emp; SE	M	S	S	W	M	W	W	W	W
Segal et al., (2011)	Emp; SE	M	S	S	M	M	S	W	W	M
van Gestel-Timmermans et al., (2012)	Emp; SE	M	S	S	M	S	M	M	S	S
Vayshenker et al., (2016)	Emp; IS	W	M	W	W	S	M	W	W	W

Note. Component rating: S=strong; M=moderate; W=weak. Global rating: S if there are no Weak ratings; M if there are 1-2 Weak ratings; Weak if there are 3+ Weak ratings. Emp=empowerment; IS=internalised stigma; SE=self-efficacy

Nine studies were rated weak on intervention integrity which included four out of five investigations of peer-run services. This was because the variety of interventions on offer through these services was broad, intervention fidelity and exposure to peer support was poorly-reported, and there was the potential for contamination in control groups. Only five studies conducted a-priori power calculations to inform sample size (Boevink et al. (2016), Castelein et al. (2008b), Mahlke et al. (2017), Rüsch et al. (2014) and van Gestel-Timmermans et al. (2012)); these were commonly based on a hypothesised medium effect size. Most studies reported intention-to-treat analyses as primary analyses, typically in addition to an as-treated analyses, to assess the effect of actual-exposure to intervention on outcomes. Vayshenker et al. (2016) only reported an as-treated results. In both studies by Segal and colleagues (2010; 2011) uncommon statistical procedures were used which may have introduced bias despite randomisation and would be difficult to replicate (i.e. weighting data according to probability of follow-up, and applying a 'propensity score' to account for characteristics of persons typically self-referring to peer-run services). All but one pre-post study (Cook et al., 2009) were assigned a global rating of weak for risk of bias.

Examination of Outcomes

Key findings are presented in Table 1 as well as summarised below.

Empowerment (n = 15 studies; 11 RCTs and four pre-post studies). There was mixed evidence for the impact of peer support interventions on empowerment. A significant positive effect of intervention was found in six RCTs and two pre-post studies. Four of the RCTs were group interventions (Barbic et al., 2009; Pickett et al., 2012; van Gestel-Timmermans et al., 2012), one of which reported significant improvements on a subscale of the RES rather than the total score (Russinova et al., 2014). The two other RCTs that reported a positive effect were investigations of peer-run services (Rogers et al., 2007; Segal et al., 2010), although in Rogers et al. (2007) the effect was detected in as-treated analysis only. No effect of peer support intervention was found in four RCTs; three

groups (Boevink et al., 2016; Eisen et al., 2012; Rüsch et al., 2014) and one peer-run service (Salzer et al., 2016). No effect was found in the forensic inpatient pre-post study (Livingston et al., 2013). A significant negative effect was found in one RCT of a peer-run service (Segal et al., 2011) and one pre-post study of a group intervention (Cook et al., 2009).

ESs calculated for RCTs at end-of-treatment ranged from -0.20 to 0.34 representing small effects, sometimes in opposite directions. The most robust ESs were for Pickett et al. (2012) (*d* = 0.27 (0.05-0.48)) and van Gestel-Timmermans et al. (2012) (*d* = 0.34 (0.09-0.59)); however, although their 95% confidence intervals did not cross zero they were nonetheless wide. Both were trials of manualised peer-led group interventions. The latter study had a low overall risk of bias suggesting its findings are more reliable.

A meta-analysis was conducted on results from five RCTs of time-limited, peer-led group interventions (Barbic et al. (2009) was not included due to unavailable data). (Main forest plots are presented below and those for sensitivity analyses presented in Appendix G).

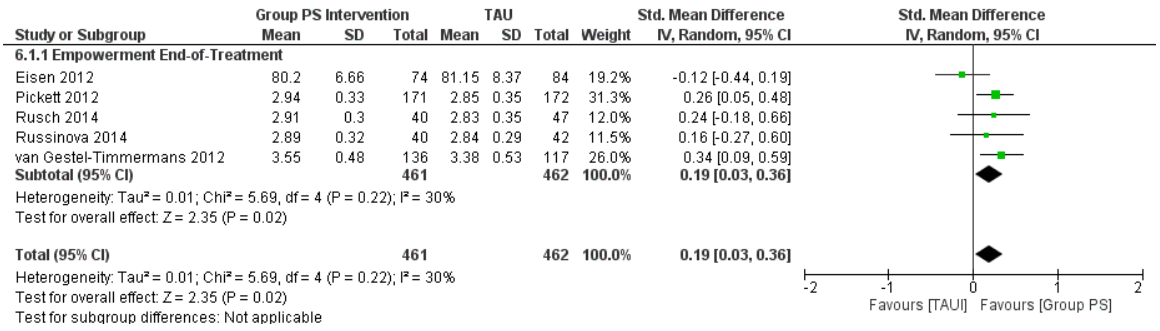

Figure 2. Forest plot – empowerment at end-of-treatment

Some heterogeneity was identified ($Tau^2 = 0.01$; Q = 5.69, p=0.22; $I^2 = 30\%$). In sensitivity analysis, Eisen et al. (2012) was removed because it had a high risk of bias and was conducted with veterans; there was a marginal increase in the summary effect (Hedge's *g* 0.27, CI 0.13 - 0.42, p = 0.0002) and heterogeneity was reduced, though this may be artefactual given the small number of studies. Rüsch et al. (2014) was removed

because it had the shortest intervention (the three-session COP program); when removed no change was observed (Hedge's *g* 0.18, CI -0.02 - 0.38, p = 0.07). Van Gestel-Timmermans et al. (2012) was removed because it was the only study to use the DES measure; when removed the summary effect was reduced and no longer significant (Hedge's *g* 0.14, CI -0.05 - 0.34, p = 0.14). At follow-up, a small but significant positive effect was maintained (Hedge's *g* 0.20, CI 0.05 - 0.35, p = 0.008). Again, removal of the COP study did not substantially alter the effect (Hedge's *g* 0.22, CI 0.06 - 0.38, p = 0.007), but removal of the DES study reduced the effect to non-significance (Hedge's *g* 0.13, CI -0.05 - 0.31, p = 0.14). Meta-analyses were not conducted for other types of peer support due to insufficient data and dissimilarity in studies.

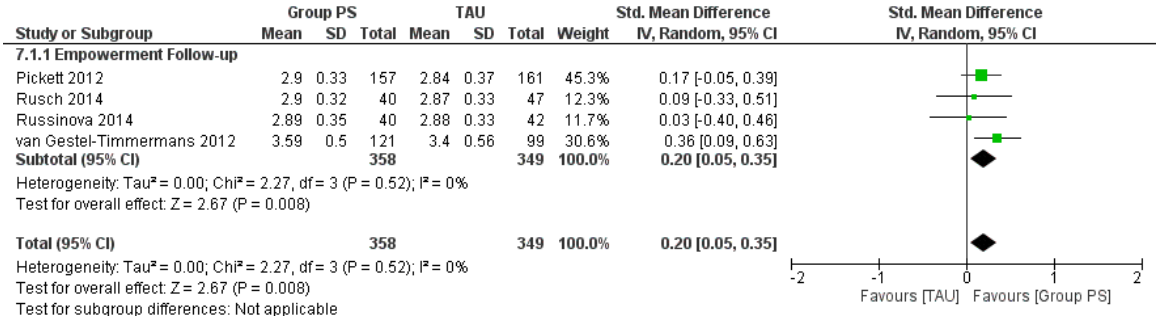

Figure 3. Forest plot – empowerment at follow-up

Self-efficacy (n = 15 studies; 11 RCTs and four pre-post studies). The evidence for self-efficacy was more consistent in so much as there were fewer studies that reported negative effects of peer support. A significant positive effect was found in eight RCTs (five group interventions, two one-to-one peer worker trials, and one peer-run service). However, in the RCT of 'minimally guided' groups for psychosis (Castelein et al., 2008b) and the pre-post V2V study (Resnick & Rosenheck, 2008) positive effects were significant in as-treated analyses only. No effect was found in the Photovoice anti-stigma RCT and the Eisen et al. (2012) veterans recovery group RCT. With regards to peer-run services, as for empowerment, there were contradictory findings from two studies by the same author (Segal et al., 2010; 2011). ESs at end-of-treatment ranged from -0.02 to 0.33, representing

small effects. The most robust effects were for the Chinman et al. (2012) trial of one-to-one peer support in veterans' mental health services (*d* = 0.29 (0.03-0.54)), and the van Gestel-Timmermans et al. (2012) recovery group intervention (*d* = 0.33 (0.08-0.58)).

A meta-analysis was conducted on data from six RCTs of time-limited group interventions. Analyses found a small but significant improvement in self-efficacy favouring intervention over TAU at end-of-treatment (Hedge's *g* 0.20, CI 0.09 - 0.31, p = 0.0002) with low heterogeneity ($Tau^2 < 0.01$; Q = 3.55, p=0.62; $I^2 = 0\%$). With the low-quality veterans study Eisen et al. (2012) removed, the summary effect did not substantially change (Hedge's *g* 0.23, CI 0.12 - 0.34, p < 0.0001).

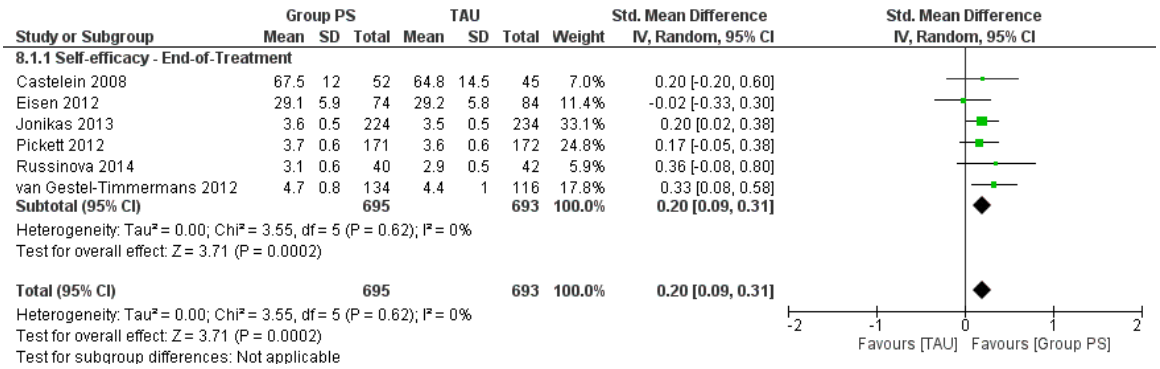

Figure 4. Forest plot – self-efficacy at end-of-treatment

At follow up, a small positive effect was maintained (Hedge's *g* 0.17, CI 0.03 - 0.30, p = 0.01). No other meta-analyses were conducted on this outcome.

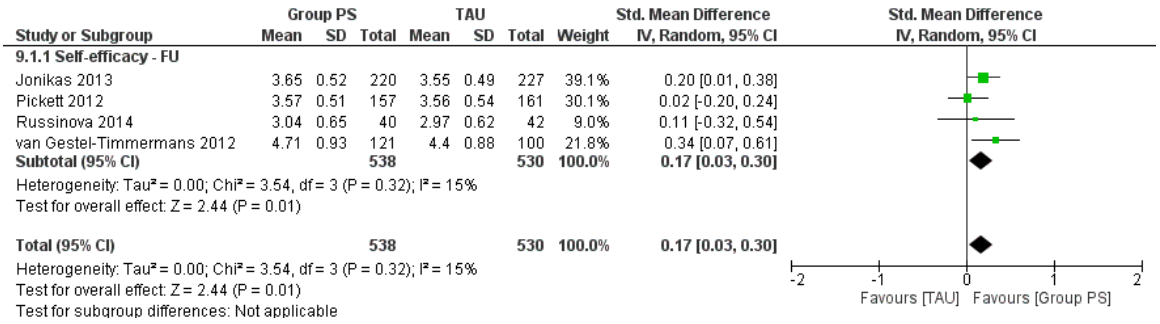

Figure 5. Forest plot – self-efficacy at follow-up

Internalised stigma (n = 5 studies; two RCTs and three pre-post studies). There was mixed evidence for the impact of peer support interventions on internalised stigma in the small number of studies identified. The Photovoice RCT reported a significant reduction in internalised stigma for those randomised to the intervention (Russinova et al., 2014), but there was no significant change following the COP program (Rusch et al., 2014). Livingston et al. (2013) did not find an effect for their forensic inpatient intervention, whereas O'Conner et al. (2015) reported a significant reduction in internalised stigma following one-to-one intervention with depressed older adults; however, both studies had small samples. Vayshenker et al. (2016) reported significant improvements in internalised stigma for 'moderate-to-high-attenders' of a peer-run service relative to 'minimal-or-non-attenders'; however, these results should be interpreted with caution since they represent an as-treated analyses and drop-outs are not accounted for.

Discussion

This review aimed to synthesise evidence for the effect of peer support on empowerment, self-efficacy and internalised stigma. A total of 23 studies met criteria (15 RCTs and eight pre-post studies) which examined three main categories of intervention; group peer support, one-to-one peer support, and peer-run services. Results of the review should be interpreted with caution due to a small number of studies often with heterogeneous characteristics, small samples and moderate-to-high risks of bias. Nevertheless, meta-analyses conducted where possible provided some firmer evidence to suggest what type of peer support may be effective and to what extent.

Summary of Findings and Implications for Practice and Research

The most robust evidence suggested by meta-analyses is that peer-led, time-limited group interventions may result in small improvements in empowerment and self-efficacy in community samples, when compared to TAU. Effects were maintained at three-to-four month follow-up. This evidence comes from studies of at least moderate quality; however, the number of studies included was small and thus results should be interpreted with

caution. The finding is consistent with previous reviews of positive effects for peer-delivered curricula (Chinman et al., 2014; Fuhr et al., 2014). Overall, findings were more consistent for self-efficacy than for empowerment. For the outcome of internalised stigma, a small number of heterogeneous studies have been published with mixed results which do not allow for conclusions to be made.

The majority of group interventions were grounded in the recovery model with the purpose of enhancing self-management skills in members and/or reducing stigma. They tended to be manualised and incorporated psychoeducation, use of workbooks and group discussion wherein peer facilitators shared personal stories of recovery. It is possible that such groups have positive effects because they provide explicit opportunities for peer supporters to 'role model' recovery or explicitly encourage members to challenge stigma and construct more positive self-narratives. However, it was not possible through this review to establish what intervention components were key; the activity of peer-facilitators, the mutual support provided by group members, or the content of materials used. Qualitative research and high quality equivalence trials with non-peer facilitators or time-matched control interventions are necessary to investigate this. Only one equivalence study was identified which found no difference in outcomes for persons randomised to peer-facilitated groups versus clinician-facilitated groups (Eisen et al., 2012); however, this study had a high risk of bias so its results should be interpreted with caution.

An important influence in the development of self-management group interventions such as those found to have small positive effects by this review, has been an increased understanding of self-efficacy and behavioural control (Lorig, Sobel, Ritter, Laurent, & Hobbs, 2000). Recovery-oriented self-management programs are on the increase in mental health (Copeland, 2002; Druss et al., 2010; Sterling, Silke, Tucker, Fricks, & Druss, 2010). One example is the advent of 'Recovery Colleges' in the UK and worldwide. These institutions adopt an educational approach and offer structured, time-limited courses that are co-produced and co-facilitated by peers (Meddings, Byrne, Barnicoat, Campbell, &

Locks, 2014; Perkins, Repper, Rinaldi, & Brown, 2012). There are few evaluations or trials of Recovery Colleges yet-published (Meddings, McGregor, Roeg, & Shepherd, 2015) and it would be valuable if more research was undertaken in this area, including measurement of self-efficacy and empowerment as outcomes.

Few studies of one-to-one peer support or peer-run services have published data on the outcomes of interest to this review. Evidence for these types of peer support was mixed, quality was weak in many studies and no conclusions may be made at this time regarding effects. While many pre-post studies of one-to-one peer support reported significantly improved outcomes; sample sizes were small and the absence of comparison groups mean they had a higher risk of bias and results should be interpreted with caution.

Limitations in the Strength of Evidence

The heterogeneity of interventions included in this review is a limitation. For example, one-to-one peer support involved many ingredients including case management, crisis support and the use of techniques from approaches such as MI or CBT. It is debatable whether the use of therapeutic techniques may dilute the unique peer-to-peer aspect of an intervention, and whether it could therefore be undertaken by a non-peer (Gillard, Holley, et al., 2015). Heterogeneity may in part be explained by ongoing uncertainty within the field regarding the essential components and mechanisms of effect involved in peer support. The majority of studies included did not outline mechanisms of effect a priori. An exception was Mahlke et al. (2017) which specifically aimed one-to-one support towards enhancing self-efficacy beliefs in participants; results showed significant albeit small increases in self-efficacy at follow-up suggesting that theoretically-based interventions may be more effective.

Variation in study quality was another limitation. The majority of studies were of moderate to weak overall quality. High quality studies tended to be the RCTs of peer-led group interventions (Jonikas et al., 2013; Russinova et al., 2014; van Gestel Timmermans et al., 2012), or in the case of Mahlke et al. (2017) an RCT of one-to-one peer support.

Intervention integrity was a notable issue for studies investigating peer-run services. There was often a low level of exposure to the intervention in the experimental group, and studies did not report in detail what exposure entailed. Undertaking rigorous research on peer-run services is likely to be challenging since it is difficult to control for confounders in an entire service where contact is person-centred and involves a mixture of practical and therapeutic support. There may be organisational impediments or ideological concerns regarding collecting information on contact with service users in such services; for example, it may be viewed as 'over-professionalising' support and antithetical to peer support values (Faulkner & Kalathil, 2012; Salzer & Shear, 2002). It may be argued that such studies have good external validity since they may reflect the realities of practice and provide important insight for implementation. Nevertheless, a lack of data on intervention integrity threatens the interval validity of evidence for peer-run services.

A wide variety of instruments were used to measure empowerment and self-efficacy in the included studies. Data on self-advocacy and patient activation were included since these constructs were judged to be sufficiently similar to self-efficacy. A fairly-consistent trend for improvements post-intervention across multiple studies using different self-efficacy measures might be viewed as an indication of robust evidence. However, without formal tests of convergent validity between the scales used, it is possible they were measuring different underlying constructs. There is evidence to suggest that the different empowerment scales used do measure different aspects of empowerment (Castelein et al., 2008a). This reflects an ongoing lack of consensus regarding the construct (Rogers et al., 2007) and a need for future research in this area to consider what aspects of empowerment is amenable to change as a result of peer support. Most study samples included people with experience of different mental health problems/diagnoses. It is possible however that peer support may be more or less effective depending on the mental health problem experienced. For instance, people with social anxiety, paranoia or interpersonal difficulties may experience adverse effects in group peer support.

Strengths and Limitations of the Review

To the best of the authors' knowledge, this is the first review to use a theory-driven approach to select outcomes of empowerment, self-efficacy and internalised stigma considered to be important in peer support. Systematic search procedures were followed which identified new studies not previously included in evidence synthesis in the field. Study quality was assessed taking into account intervention integrity, a particularly important area to assess given heterogeneity in studies within the field. The review included all types of peer support and all trial designs; however, this broad scope may be considered a limitation since the extent to which results may be meaningfully integrated is limited by heterogeneity. Meta-analyses were carried out where there were studies of sufficient-similarity; however, there were still differences between the studies included in meta-analysis and many had small sample sizes which may threaten validity of results (IntHout, Ioannidis, Borm, & Goeman, 2015).

Conclusions

Results from this review suggest that peer-facilitated, time-limited group interventions be considered as an intervention for people with mental health problems who wish to experience improvements in mental health-related self-efficacy and empowerment. Such interventions may lead to small but significant improvements. They should be strengths-based and grounded in the recovery model. They should follow a structure, ideally using workbooks already published in the field (e.g. Spaniol et al., 1994) with weekly sessions of minimum one hour over eight-to-twelve weeks. Well-designed equivalence trials with non-peer facilitators and/or time-matched control interventions would help to understand the active ingredients of group interventions. Another area for future research is the protocol-ising of peer-led group interventions to meet the needs of people with particular mental health difficulties. At present, the evidence is inconclusive for one-to-one peer support and peer-run services, and for the outcome of internalised stigma. This is due to the limited number of studies published measuring these constructs,

and problems with quality in those that have been published. Future trials of one-to-one peer support and peer-run services should measure intervention exposure and fidelity with more precision. There is a tentative suggestion from a high quality trial that one-to-one peer support may improve self-efficacy; further well-designed randomised trials of one-to-one peer support using established measures are needed. There is also a need for future research to understand the essential components and change mechanisms involved in peer support which may then influence the design of trials to test efficacy. This research could adopt consensus development approaches or longitudinal qualitative designs.

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Paper 2 - Providing Mental Health Peer Support 1: A Delphi Study to Develop Consensus on the Essential Components, Costs, Benefits, Barriers and Facilitators.

This paper has been formatted according to the publication guidelines of Psychiatric Rehabilitation (see Appendix I) and has been submitted for publication as a linked paper along with Paper 3 of this thesis. It has been submitted to the journal as follows: Burke, E., Pyle, M., Machin, K. & Morrison, A.P., *Providing Mental Health Peer Support 1: A Delphi Study to Develop Consensus on the Essential Components, Costs, Benefits, Barriers and Facilitators.*

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Abstract

Objective: While formalised peer support is on the increase, there continues to be a lack of consensus on the peer supporter role. The aim of this study was to develop consensus on the essential components, personal costs, personal benefits, barriers and facilitators involved in providing mental health peer support.

Methods: The Delphi method was used. In the first round, an exhaustive list of statements pertaining to peer support was generated from literature review and consultation with experienced peer supporters. In the second round, 147 peer supporters in the UK rated statements online or via post, and completed a questionnaire about experiences of providing peer support. Criteria for consensus were applied. Where there was uncertainty statements were re-rated. Descriptive statistics and group comparisons were calculated. The final list of statements was grouped thematically.

Results: Consensus was reached on statements pertaining to essential components (n=67), personal benefits (n=21), barriers (n=1) and facilitators (n=35). Formal peer support involves many skills and competencies. Most participants agreed that a wide range of personal benefits come with the role. Organisations may facilitate peer support through their values, actions and oversight. Approximately half of the sample worked in statutory services and were more likely to have concerns regarding pay and career progression.

Conclusions and Implications for Practice: Results define the peer supporter role and add to the knowledge base about optimal conditions for it to thrive. Recommendations are made regarding role development and career progression, and future research to better understand personal costs and benefits.

Keywords: consumer providers; Delphi methodology; mental health; peer support.

Introduction

Peer support has been defined as "a system of giving and receiving help founded on key principles of respect, shared responsibility and mutual agreement of what is helpful" (Mead, 2003). It has been categorised into three groups; (1) naturally-occurring mutual support, (2) services which are run by peers, that is people with personal experience of mental health problems, and (3) the employment of peers as providers within clinical settings, sometimes called 'formal' or 'intentional' peer support (Davidson et al., 1999). This latter category of peer supporters (sometimes known as 'peer workers' or 'peer support workers') are thus people with personal experience of mental health problems who are employed and ideally have had specialist training to undertake a formalised role in support of others experiencing mental health problems (Scottish Recovery Network, 2013). Formal mental health peer support first emerged in the US where the 'peer specialist' role is now well-established (Cronise, Teixeira, Rogers, & Harrington, 2016). Internationally, peer support practice has advanced with notable centres in the UK, Canada, New Zealand and The Netherlands. The expansion of peer support roles in statutory services has been advocated as a driver of recovery-focused organisational change (Repper & Carter, 2011).

Peer support has been said to contribute unique benefits over traditional mental health care including: the instillation of hope; the use of enhanced empathy since the peer supporter has been 'in the same shoes' as the service user; and peer supporters acting as 'role-models' of recovery (Bradstreet, 2006; Davidson, Bellamy, Guy, & Miller, 2012; Gillard, Gibson, Holley, & Lucock, 2015). The evidence base for the effects of peer support on mental health outcomes is small and of variable quality. Reviews have concluded that peer supporters can achieve outcomes equivalent to those achieved by other mental health professionals (Chinman et al., 2014; Pitt et al., 2013). Peer support is associated with increased recovery, hope and empowerment for people with 'serious mental illness' (Lloyd-Evans et al., 2014). The UK National Institute for Health and Care Excellence (NICE) has recommended peer support to improve service user experience and

quality of life for people with psychosis (NICE, 2014), but highlight that research is needed to define and develop the role.

Existing evidence regarding the impact of the role on peer supporters themselves is largely of a qualitative nature. Syntheses indicate that employment as a peer supporter can both facilitate and inhibit recovery (Bailie & Tickle, 2015), and that peer supporters encounter a range of challenges including low pay, limited opportunities for promotion, stigmatisation by non-peer colleagues, and inadequate training, support and supervision (Vandewalle et al., 2016). Studies undertaken in the UK (Gillard, Edwards, Gibson, Owen, & Wright, 2013), the US (Hamilton, Chinman, Cohen, Oberman, & Young, 2015), Canada (Asad & Chreim, 2015; Moll, Holmes, Geronimo, & Sherman, 2009) and Australia (Kemp & Henderson, 2012) suggest a lack of clarity regarding the role causes problems, including perceived inequality, disempowerment, uncertainty of identity and feelings of being un-supported. However, since these qualitative studies have been undertaken with small samples it is unknown how prevalent such difficulties are.

Attempts have been made to define the principles of peer support in order to help organisations and individuals maintain integrity in practice. The International Association of Peer Supporters (iNAPS) recommend that the work of peer supporters be: hopeful; open-minded; empathic; respectful; facilitating change; honest and direct; mutual and reciprocal; involve equally shared power; strengths-focused; transparent; and person-driven (iNAPS, 2011). The Scottish Recovery Network (SRN) has developed a values framework for peer working comprising: hope; experience; authenticity; responsibility; mutuality; and empowerment (SRN, 2012). Implementing Recovery through Organisational Change (ImROC) suggests that peer support working should be: mutual; reciprocal; non-directive; recovery focused; strengths-based; inclusive; progressive; and safe (Repper et al., 2013). While there are commonalities across these sets of principles, there are also differences. This lack of consensus may pose a problem for organisations commissioning peer support when choosing what principles to adopt. The views of

experienced peer supporters are needed in any efforts to reach further consensus on the role. Soliciting their views may help to resolve current areas of controversy within the peer support community such as the importance of role distinctiveness versus existing health care roles, their involvement in restraint training and practices, and the potential 'over-professionalisation' and separation of peer support from its grass roots in community settings (Faulkener & Basset, 2012; Gillard et al., 2015; Gordon & Bradstreet, 2015)

The primary aim of this study was to develop consensus on the essential components of formal mental health peer support from the perspective of experienced peer supporters. A further aim was to develop consensus on the personal costs and benefits, and the barriers and facilitators encountered by peer supporters.

Method

Design

The Delphi methodology was used. Delphi studies apply systematic procedures to assess the level of consensus among appropriate experts (Jones & Hunter, 1995). The method has been used successfully to define essential components of therapeutic interventions (Byrne & Morrison, 2014) and within the field of peer support (Campos et al., 2014), although never before with experienced mental health peer supporters as experts. Delphi studies comprise a number of iterative stages or 'rounds'. Experts are typically asked to generate and then rate statements about a topic. The aim is to move from an exhaustive list of statements to a shorter list which the majority agrees upon.

An online and postal methodology was used to enable a large number of geographically-dispersed peer supporters to take part, thus maximising the range of opinion in the sample. Participants completed study materials via the study website (hosted on the secure Internet servers of the The University of Manchester in the UK), or in pen-and-paper and returned via post.

Sampling

Eligible participants were people with personal experience of a mental health problem who, at the time of the research or within the previous 5 years, had provided support to another person with a mental health problem to assist them in their recovery as part of a role within an organisation in the UK. Participants needed to be at least 16 years old, and able to give informed consent to take part.

Managers and peer support leaders in statutory and independent sector mental health services known by the research team to employ peer support staff were approached. Further organisations were identified through web searches. Approaches were made via email, explaining the purpose of the study, including an information sheet, poster and hyperlink to the study website (Appendix J and K). Contacts were asked to promote the study to peer supporters within their organisations. Study information was distributed to current and past attendees of a peer support training course part-developed by the third author (KM). The social media platform Twitter was used to share links to the study website and to a recruitment video hosted on the video-sharing platform Vimeo.com. Lastly, snowballing was used whereby a 'thank you' email was sent to those who had already taken part, asking the recipient to forward study details to anyone who might be eligible to participate. To compensate participants for their time, they could enter into a prize-draw to win retail vouchers to the value of GBP£50.

Ethical Approval, Consent and Confidentiality

The study was reviewed and approved by an ethics committee at The University of Manchester (Reference 16118). It was reviewed by the Health Research Authority of the National Health Service (NHS) and approved as staff research (Project ID: 215334). Participants who took part via post were required to sign and return a consent form (Appendix L). Participants who took part online completed an electronic consent form, submission of which implied consent since a signature could not be collected. Research data was anonymised and stored separately from personally-identifiable material, either in

password-protected computerised databases on University secure systems, or in a locked cabinet in a university building as appropriate.

Procedures and Analyses

Round One. Key documents from the academic and grey literature were used to generate the initial list of statements (see Appendix M for a list of documents and further detail on generation of statements). Four experienced peer supporters were consulted; they were separately provided with the list of statements and asked to check for comprehensiveness, duplications, and language that might cause distress or be unclear. Following the integration of feedback from consultants, statements were arranged into a questionnaire format (Appendix N) and presented on separate sequential pages in the following order: essential components, personal costs and benefits, barriers and facilitators.

Round Two. Participants were asked to complete the 'Experience of Providing Peer Support' (EPPS) questionnaire developed for this study (Appendix O). It collected demographic information in addition to asking 23 questions about peer support experiences including training, supervision, pay and role satisfaction.

Participants were then presented with the statements generated in the first round. For statements relating to the essential components of peer support, participants were asked to rate each statement on a 5-point Likert scale whereby 1=Essential, 2=Important, 3=Do not know / it depends, 4=Not important and 5=Should not be included. For the statements relating to personal costs, personal benefits, barriers and facilitators of providing peer support, participants were asked to rate each on a 5-point Likert scale whereby 1=Strongly agree, 2=Agree, 3=Neither agree nor disagree, 4=Disagree and 5=Strongly disagree. Participants were also asked to indicate whether each statement had been part of their personal experience (responses were 'Yes' and 'No'), and to complete questionnaires measuring empowerment, hope recovery, quality of life and internalised stigma (analyses of these data are presented in a linked paper). Lastly, participants were

asked for their consent to be contacted at a later date to re-rate statements where consensus was not reached.

Quantitative analysis. Consensus criteria outlined by Langlands, Jorm, Kelly, and Kitchener (2008) was applied such that:

1. Statements rated by ≥ 80% participants as essential or important to peer support, or with which ≥ 80% strongly agreed or agreed were automatically included; consensus was deemed to have been reached on these statements.
2. Statements rated as essential or important by 70-79% of participants or with which 70-79% strongly agreed or agreed went forward for re-rating in Round Three.
3. Any statements not meeting the above conditions were excluded.

Analyses were conducted using SPSS software version 23 (IBM, 2015). For percentage calculations the dividend was the total number of participants who responded to that statement. Chi-square tests were used for between-group comparisons of categorical data. Independent samples t-tests were used for ordinal and interval data where parametric assumptions were met. Mann-Whitney U tests were used for ordinal and interval data when parametric assumptions were violated. Welch's *t*-test were used when differently shaped distributions meant that Mann-Whitney tests were not appropriate. Missing values were excluded pairwise. A significance level of $p \leq 0.05$ was used.

Round Three. Contact was made with willing participants via email or post. They were presented with the results of total sample ratings from Round Two and asked to re-rate the subgroup of statements upon which consensus had not been reached. The same consensus criteria and statistical procedures as described above were applied to the data. No further rounds were conducted.

Qualitative analysis. To summarise patterns and aid reader comprehension, statements were organised into themes following qualitative analysis. Statements were printed onto paper and initial analysis was done by the first author. Statements were read and re-read to interpret their meaning; interpretation was at the manifest level (i.e. no

attempt was made to interpret statements beyond their surface meanings). Conceptually similar statements were manually clustered together into themes which were given provisional labels. These groupings were proposed to the other authors for their review and feedback. A final decision on the composition and labelling of themes was made by group consensus.

Results

Sample Characteristics and Analysis of Responses to the EPPS Questionnaire

Sample size and attrition. Table 1 provides an overview of characteristics for the sample in Rounds Two and Three, including a breakdown for different group comparisons. In Round Two, 147 peer supporters completed the EPPS questionnaire; 33 dropped out after completing the EPPS and 114 went on to respond to Delphi statements. Differences were examined between those who dropped out and those who continued. A significantly higher proportion of participants who dropped out had a formal peer support qualification (χ^2 (1) = 8.22, p=0.004), had themselves received peer support (χ^2 (1) = 4.81, p=0.028), were unpaid for providing peer support (χ^2 (1) = 4.56, p=0.033) and had lower levels of satisfaction with managerial supervision (t(127) = 2.17, p=0.32). There was a gradual attrition of participants and 79 participants (51.7%) responded to all of the Delphi statements. Sixty nine participants consented to be contacted for Round Three and 44 (63.8%) took part. The majority of the sample was female. Descriptions in the rest of this section are for the Round Two sample unless otherwise specified.

Personal experience of mental health problems. Participants described their experience of mental health problems in their own words. For ease of presentation, similar problems have been grouped together in Table 1. The majority of participants described multiple problems, most commonly depression (55.8%) and anxiety (47.6%). Two participants preferred not to use diagnostic/symptom-labeling systems because they felt this was antithetical to the philosophy underpinning peer support. Some preferred terms such as “emotional distress” and 12.9% preferred not to provide this information.

Work setting and conditions. About one half of the sample provided peer support in statutory services (i.e. the NHS; n=76, 51.7%), 63 (42.9%) worked in voluntary/charitable organisations and eight (5.4%) worked in other organisations including the police (n=5) and the education sector (n=1). In comparison to non-NHS peer supporters, a significantly higher proportion of NHS peer supporters were paid for their role ($\chi^2(1) = 35.32$, $p<0.001$), had longer training ($\chi^2(5) = 27.29$, $p<0.001$), had more frequent managerial ($\chi^2(4) = 17.12$, $p=0.002$) and professional ($\chi^2(4) = 11.08$, $p=0.026$) supervision, had fewer peer colleagues ($\chi^2(4) = 29.44$, $p<0.001$), worked as part of a clinical team ($\chi^2(1) = 41.51$, $p<0.001$), worked more days per week ($t(139.14) = 5.66$, $p<0.001$), were less satisfied with their pay ($t(133.30) = 2.22$, $p=0.28$) and were less satisfied with their opportunities for career progression ($t(138.21) = 4.07$, $p<0.001$).

Table 1. *Sample characteristics at Rounds 2 and 3.*

	Round 2					**Round 3**
		Sample breakdown				
	Total n=147	Completed EPPS only n=33	Responded to statements n=114	NHS n=76	Non-NHS n=71	Total n=44
Gender (n, (%))						
Male	43 (29.3)	11 (33.3)	32 (28.1)	24 (31.6)	19 (26.8)	12 (27.3)
Female	99 (67.3)	10 (57.6)	80 (70.2)	50 (65.8)	49 (69)	30 (68.2)
Did not say	5 (3.4)	3 (9.1)	2 (1.8)	2 (2.6)	3 (4.2)	2 (4.5)
Age in years (Mean, (SD))	41.2 (14.0)	42.4 (12.8)	40.9 (14.4)	42.08 (12.7)	40.27 (15.4)	41.67 (15.8)
Organisation providing PS in (n, (%))						
Voluntary/Charity	63 (42.9)	18 (54.5)	45 (39.5)	~	63 (88.7)	13 (29.5)
Statutory health (NHS)	76 (51.7)	13 (39.4)	63 (55.3)	76 (100.0)	8 (11.3)	28 (63.6)
Other	8 (5.4)	2 (6.1)	6 (5.3)	~	~	3 (6.8)
Working in mental health/clinical team (n, (%))						
Yes	80 (54.4)	14 (42.4)	66 (57.9)	61 (80.3)	19 (26.8)	25 (56.8)
Amount of training received (n, (%))						
None	20 (13.6)	1 (21.2)	13 (11.4)	6 (7.9)	14 (19.7)	5 (11.4)
Less than 1 full day	3 (2.0)	~	2 (2.6)	~	3 (4.2)	~
1 full day	10 (6.8)	1 (3.0)	9 (7.9)	4 (5.3)	6 (8.5)	3 (6.8)
2-3 full days	21 (14.3)	6 (18.2)	15 (13.2)	6 (7.9)	15 (21.1)	8 (18.2)
4-5 full days	22 (15.0)	5 (15.2)	17 (14.9)	8 (10.5)	14 (19.7)	4 (9.1)
6+ full days	71 (48.3)	14 (42.4)	57 (50.0)	52 (68.4)	19 (26.8)	24 (54.5)
Formal qualification received (n, (%))						
Yes	61 (41.5)	19 (57.6)	42 (36.8)	39 (51.3)	22 (31.0)	16 (36.4)
No	66 (44.9)	7 (21.2)	59 (51.8)	31 (40.8)	35 (49.3)	23 (52.3)
Not applicable (no training received)	20 (13.6)	7 (21.2)	13 (11.4)	6 (7.9)	14 (19.7)	5 (11.4)
Being paid for role (n, (%))						
Yes	97 (66.0)	17 (51.5)	80 (70.2)	67 (88.2)	30 (42.3)	32 (72.7)
No	48 (32.7)	16 (48.5)	32 (28.1)	8 (10.5)	40 (56.3)	10 (22.7)
Did not say	2 (1.4)	~	2 (1.8)	1 (1.3)	1 (1.4)	2 (4.5)
Days per week providing peer support						

Once per month / Did not say	1 (0.7)	~	2 (0.9)	~	1 (1.4)	1 (2.3)
½ day	26 (17.7)	7 (21.2)	18 (16.7)	5 (6.6)	21 (29.6)	7 (15.9)
1 day	16 (10.9)	4 (12.1)	12 (10.5)	2 (2.6)	14 (19.7)	3 (6.8)
1 ½ days	5 (3.4)	~	5 (4.4)	3 (3.9)	2 (2.8)	1 (2.3)
2 days	15 (10.2)	3 (9.1)	12 (10.5)	7 (9.2)	8 (11.3)	6 (13.6)
2 ½ days	11 (7.5)	4 (12.1)	7 (6.1)	7 (9.2)	4 (5.6)	4 (9.1)
3 days	21 (14.3)	5 (15.2)	16 (14.0)	15 (19.7)	6 (8.5)	8 (18.2)
3 ½ days	4 (2.7)	~	4 (3.5)	2 (2.6)	2 (2.8)	2 (4.5)
4 days	17 (11.6)	5 (15.2)	12 (10.5)	11 (14.5)	6 (8.5)	4 (9.1)
5 days	31 (21.1)	5 (15.2)	26 (22.8)	24 (31.6)	7 (9.9)	8 (18.2)
Frequency of managerial supervision (n, (%))						
None	21 (14.3)	8 (24.2)	13 (11.4)	4 (5.3)	17 (23.9)	7 (15.9)
<1 per month	27 (18.4)	5 (15.2)	22 (19.3)	11 (14.5)	16 (22.5)	9 (20.5)
Every month	71 (48.3)	13 (39.4)	58 (50.9)	42 (55.3)	29 (40.8)	18 (40.9)
Every 2 weeks	9 (6.1)	2 (6.1)	7 (6.1)	8 (10.5)	1 (1.4)	4 (9.1)
Every week	19 (12.9)	5 (15.2)	14 (2.3)	11 (14.5)	8 (11.3)	6 (13.6)
Frequency of professional supervision (n, (%))						
None	28 (19.0)	8 (24.2)	20 (17.5)	9 (11.8)	19 (26.8)	4 (9.1)
<1 per month	38 (25.9)	7 (21.2)	31 (27.2)	20 (26.3)	18 (25.4)	13 (29.5)
Every month	60 (40.8)	13 (39.4)	47 (41.2)	30 (39.5)	30 (42.3)	18 (40.9)
Every 2 weeks	8 (5.4)	2 (6.1)	6 (5.3)	7 (9.2)	1 (1.4)	4 (9.1)
Every week	12 (8.2)	3 (9.1)	9 (7.9)	9 (11.8)	3 (4.2)	4 (9.1)
Did not say	1 (0.7)	~	1 (0.9)	1 (1.3)	~	1 (2.3)
Experienced mental health problem/s (n, (%))						
Addiction/substance misuse	6 (4.1)	1 (3.0)	5 (4.4)	5(6.6)	1 (1.4)	~
Anxiety	68 (44.9)	16 (48.5)	52 (45.6)	32 (42.1)	36 (50.7)	17 (38.6)
Bipolar disorder	20 (13.6)	~	20 (17.5)	14 (18.4)	6 (8.5)	5 (11.4)
Borderline/EU personality traits/disorder	23 (15.6)	4 (12.1)	19 (16.7)	17 (22.4)	6 (8.5)	5 (11.4)
Depression	81 (55.8)	18 (54.5)	63 (55.3)	41 (53.9)	40 (56.3)	24 (54.5)
Eating disorders	8 (5.4)	3 (9.1)	5 (4.4)	3 (3.9)	5 (7.0)	2 (4.5)
Emotional distress	3 (2.0)	1 (3.0)	2 (1.8)	3 (3.9)	~	1 (2.3)
Neurological differences including ASC	3 (2.0)	2 (6.1)	1 (0.9)	2 (2.6)	1 (1.4)	1 (2.3)
Personality difficulties/disorder (not specified)	5 (3.4)	1 (3.0)	4 (3.5)	3 (3.9)	2 (2.8)	~
Psychosis	27 (18.4)	5 (15.2)	22 (19.3)	20 (26.3)	7 (9.9)	8 (18.2)
Self-harm / suicidality	17 (11.6)	6 (18.2)	10 (8.8)	7 (9.2)	10 (14.1)	2 (4.5)
Trauma / PTSD	20 (13.6)	4 (12.1)	17 (14.9)	16 (21.1)	4 (5.6)	9 (20.5)
Other difficulties	10 (6.8)	2 (6.1)	8 (7.0)	4 (5.3)	6 (8.5)	4 (9.1)
Preferred not to say	19 (12.9)	10 (30.3)	9 (7.9)	8 (10.5)	11 (5.5)	3 (6.8)

Personal receipt of peer support (n, (%))						
Yes	45 (30.6)	15 (45.5)	30 (26.3)	19 (25.0)	26 (36.6)	13 (29.5)
No	100 (68.0)	17 (51.5)	83 (72.8)	57 (75.0)	43 (60.6)	31 (70.5)
Did not say	2 (1.4)	1 (3.0)	1 (0.9)	~	1 (1.4)	~

Note. ~=none; ASC=autistic spectrum condition; EU=emotionally unstable; PTSD=post-traumatic stress disorder; SD=standard deviation.

Approximately one fifth of the total sample (1/3 of the NHS subsample) provided peer support full-time (i.e. five days per week). Almost one third of the total (44.7% of the NHS subsample) were the only peer supporter in their team. About half of the total sample (80.3% of the NHS subsample) worked in a clinical team with other mental health professionals. The majority of this group reported feeling accepted (78.3%) and valued (75.9%) by the wider team. A minority reported feeling not accepted (15.7%) and not valued (19.3%) and 38.6% had negative experiences within the team in relation to their role.

Training and supervision. Peer supporters in the sample most commonly had six or more days of training while 13.4% had received no training. About half the sample (52.0%) had received training from a peer internal to their organisation, 36.2% from a non-peer colleague and 45.7% from an external organisation (multiple training sources could be chosen). The majority (83.1%) were satisfied with training received. Forty one percent of the sample received a qualification after training. Almost three quarters (72.1%) said they felt supported in their role; 18.4% said they did not feel supported. Participants most commonly received supervision on a monthly or less frequent basis. Supervision was less common and less frequent outside the NHS; about one quarter of non-NHS peer supporters received no supervision. Satisfaction levels were higher for managerial supervision (74% satisfied) than for professional supervision (64.6% satisfied). Managerial supervision was defined as “supervision of your day-to-day work which might involve planning & monitoring workload, ensuring health & safety etcetera”. Professional supervision was defined as “support with issues specific to the peer support role, for example, how to clarify one’s own boundaries and develop a personal account of recovery that feels safe to share”. Professional supervision was provided by a variety of professionals including team leaders/managers, occupational therapists, nurses, psychologists and social workers. Senior peer staff and those with specific peer leadership and co-ordination roles provided professional supervision for a minority (20.3%).

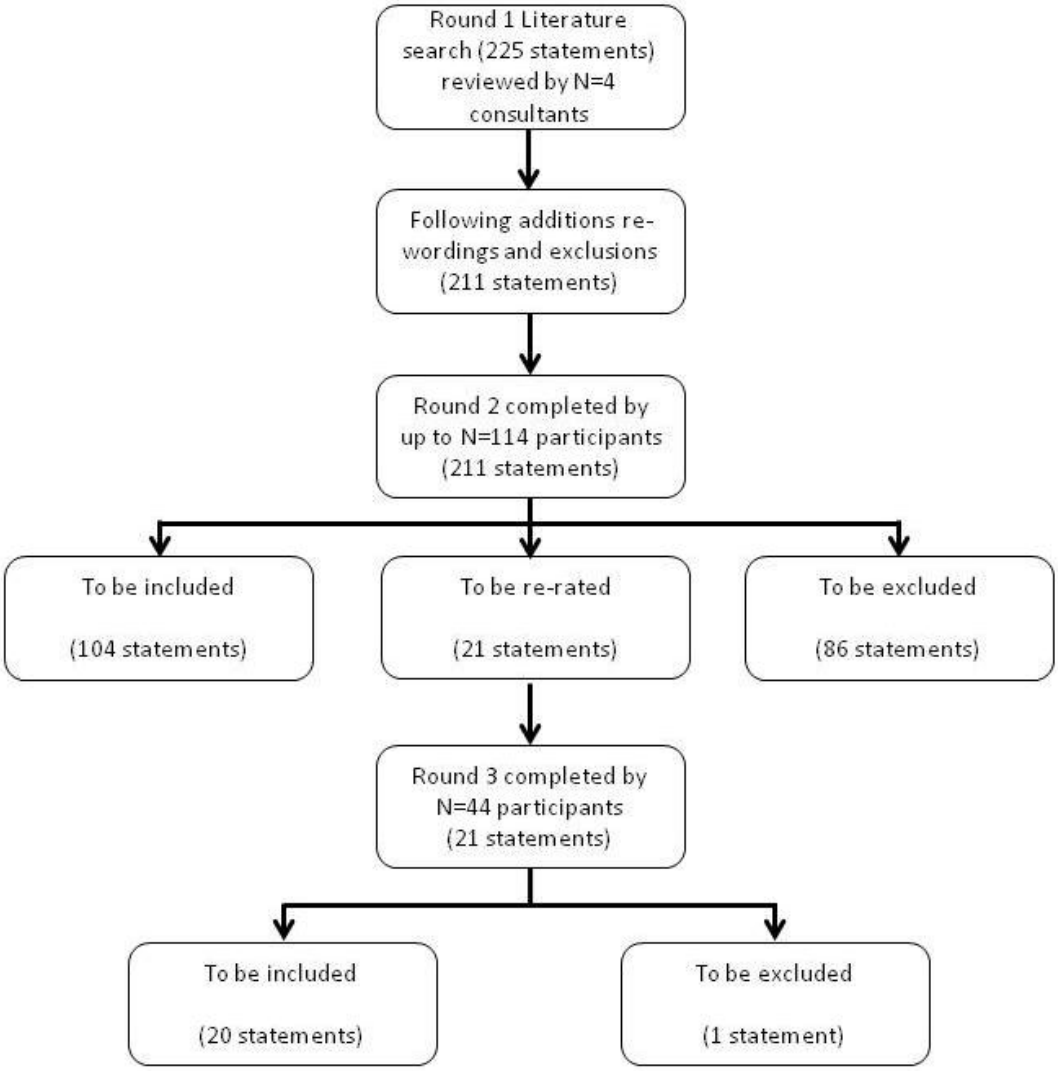

Figure 1. Statements included, excluded and re-rated at different rounds.

Role satisfaction. Three quarters (74.8%) of the total sample were satisfied in their role; this included 24.5% who were 'very satisfied'. Less than half (44.2%) were satisfied with opportunities for career progression; 23.7% of NHS peer supporters reported themselves 'very dissatisfied' with this.

Delphi Rounds and Consensus Achieved

Figure 1 illustrates the number of statements that were included, excluded and re-rated at each round of the study.

Round One. During literature review, the first papers read contributed the most statements and there was considerable repetition of 'ideas' in the subsequently-read papers, generating fewer new items. The final paper contributed five new items, thus it was decided that a point of reasonable saturation had been reached and no further papers were read. A total of 225 statements were generated and reviewed by the four peer consultants. Consultants made suggestions to re-word statements, add new statements and exclude duplicates.

Round Two. Two hundred and eleven statements were rated by participants in Round Two. Following analysis, 104 met consensus criteria and were included, 86 were excluded and 21 went forward to Round Three for re-rating.

Round Three. One statement was excluded in Round Three for not meeting criteria. Thus, overall, consensus was reached on 124 statements representing the essential components (n=67), personal benefits (n=21), barriers (n=1) and facilitators (n=35) of providing formal mental health peer support. Consensus was not reached on any personal costs statements. Table 2 presents the essential components statements (due to word restrictions, tables for personal benefits, barriers and facilitators are in Appendices P, Q and R respectively). Tables are organized by theme developed in the qualitative analysis (See Appendix S for a separate table of themes). Themes are presented alphabetically with constituent statements listed underneath, ranked by percentage consensus achieved from highest to lowest.

Table 2. *Essential components*

An essential component of providing formal mental health peer support is ...	Round included	Percentage consensus (NHS sub-sample)
Building and sharing knowledge		
Taking responsibility for own learning and development, building on skills and keeping current with emerging knowledge on peer support and recovery.	2	90 (95)
Having been through specific training (including during induction period) for the role.	2	88 (89)
Improving understanding of peers about mental health.	2	88 (89)
Knowledge of key concepts in the Recovery model e.g. Recovery as making sense of what has happened and moving on, rather than identifying and getting rid of symptoms.	2	85 (86)
Having a good basic understanding of aspects of mental health and related areas of physical health, addiction, sexual health etc.	2	83 (87)
Knowledge and commitment to peer rights including Mental Health legislation.	2	80 (84)
Developing peer support practice		
Seeking out opportunities to meet with other peer workers to share learning.	2	90 (92)
Being involved in the ongoing development of peer support roles, including training and evaluation.	2	85 (81)
Collecting feedback from peers about their satisfaction with peer support received.	2	84 (82)
Acting as a mentor within the workplace to other peer supporters or non-peer colleagues.	2	81 (81)
Empowering peers		
Empowering peers and encouraging their sense of agency and belief in personal control.	2	97 (97)
Supporting peers to make their own decisions in matters affecting their lives.	2	94 (94)
Being 'strengths based' e.g. exploring what a person has gained from their experience, seeking out qualities and assets, etc.	2	93 (94)
Encouraging peers' sense of personal responsibility for self-care, wellbeing and Recovery and enabling them to find own coping strategies.	2	92 (92)
Helping to establish a culture of 'shared decision making' between peers and non-peer professional staff.	2	81 (90)
Encouragement and active support		
Building hope and optimism.	2	97 (95)
Having skills in encouragement	2	93 (97)
Sharing ideas with peers about ways to achieve Recovery goals drawing on personal experiences and a range of coping, problem-solving, self-help and self-management techniques.	2	91 (92)
Encouraging the reframing of setbacks as part of Recovery and helping peers to identify ways to learn from them.	2	90 (92)
Helping peers to explore and broaden personal identity and worldview.	3	89 (86)
Supporting peers to explore personal values and meaning in life, and facilitiating access to opportunities that are in line with values.	2	88 (92)
Encouraging peers to challenge themselves, face fears and move beyond their comfort zones in order to grow and change.	2	86 (89)
Helping peers to build relationships and social supports, to use community resources and to get involved in community activities.	2	85 (94)
Supporting peers to create Recovery plans and to idenfity and prioritise Recovery goals.	2	81 (85)
Offering practical support.	3	80 (75)
Meeting organisational needs and requirements		
Respecting diversity and having cultural awareness.	2	97 (97)
Working with boundaries that are responsive and flexible, while keeping in mind service/organisational policies.	2	97 (95)
Contributing to maintaining safety and reducing risk from harm for peers.	2	91 (92)
Following the same codes of conduct and rules as all workers, whether peer or not including working within safeguarding and Health and Safety policies.	2	90 (92)
Ability and willingness to offer different types of support e.g. one-to-one; groups; supporting discharge from acute wards etc.	2	86 (89)
Communicating and liasing with non-peer mental health colleagues.	2	85 (92)
An ability to keep and maintain records and understand the requirements of maintaining records.	2	81 (84)
Modelling self-care and recovery		

Taking responsibility for personal self-care, wellness and conducting oneself in a manner that fosters personal recovery.	2	94 (95)
The ability to manage stress and its impact on personal wellbeing.	2	93 (95)
Having compassion towards oneself, in order to have compassion for others.	2	89 (94)
Having experienced significant improvements in own personal wellbeing and recovering a meaningful life, so as to be ready for the role and able to offer support to peers who are not as far along in their own recovery.	2	88 (93)
Being a role model of Recovery.	2	84 (84)
Modeling adaptive functioning skills to peers through attitudes, interactions, behaviours and use of language.	2	81 (80)
'Non-specific' therapeutic competencies		
Having good listening skills.	2	99 (100)
Accepting peers where they are at, avoiding judgment and interpretation.	2	98 (98)
Demonstrating respect for peers in all actions as a peer supporter.	2	98 (100)
Demonstrating compassion to peers.	2	97 (98)
Being person-centred and offering support that is holistic, tailored to the person and takes account of all aspects of peers' lives.	2	96 (98)
Having a trusting relationship with peers.	2	96 (98)
Offering peers space to explore their experiences and validating these.	2	93 (91)
Offering emotional support to peers in distress.	2	92 (92)
Supporting peers through dark times such as crisis.	3	86 (89)
Being non-directive.	3	80 (82)
Priortising unique aspects of being a peer		
Demonstrating genuine empathy.	2	100 (100)
'Being yourself' - developing authentic relationships with peers.	2	97 (97)
Positioning oneself as an equal, not as an expert.	2	95 (94)
Sharing personal experience of Recovery in a way that inspires hope.	2	95 (97)
Working in accordance with the values/principles of peer support, e.g. Recovery-focused, Mutual, Reciprocal, Non-directive, Strengths-based, Inclusive, Progressive, Safe.	2	95 (94)
Developing a shared understanding with peers about mental health and ways to facilitate Recovery.	2	94 (97)
Willingness to both offer and receive support (Mutuality and Reciprocity).	2	92 (95)
Ability to help each other think through solutions.	2	92 (94)
Ensuring that the central focus of the work, inspiring Recovery, and the values of peer support are at the centre of all interactions.	2	89 (90)
Negotiating with peers what is helpful in the relationship.	2	87 (89)
Acting as a 'bridge' between 'them' and 'us' i.e. The people who provide mental health services and service users.	2	84 (91)
Negotiating with peers how to share personal stories with eachother in a safe way.	2	83 (87)
Sharing common concerns and experiences with peers e.g. experiences of oppression and exclusion.	2	83 (84)
Promoting values underpinning peer working		
Challenging stigma and discrimination encountered in the role.	2	96 (95)
Promoting person-centred practice in the service/organisation.	2	91 (92)
Promoting Recovery within the wider service/organisation.	2	86 (86)
Role clarity & supervision		
Having regular supervision and using this to develop understanding and practice.	2	97 (100)
Having a formal job description and clarity about the role and relationships of the peer worker.	2	89 (92)
Receiving a combination of 'managerial' supervision (e.g. from team leader) and 'professional' supervision (e.g. from a senior/other peer).	2	84 (87)

Note. The number of participants rating each statement in Round Two ranged from n=111-114 in the total sample and n=62-63 in the NHS subsample. The total sample in Round Three was n=44 and the NHS subsample was n=28.

NHS subsample sensitivity analysis. Because differences were identified in the role characteristics of NHS peer supporters, consensus was examined separately for this subsample. Data are presented in brackets in the tables. Visual inspection indicates similar levels of consensus on most statements, however the NHS subsample reached consensus on two additional statements in Round Two; "Lack of opportunities for career progression within the peer supporter role" (a personal cost statement; 80% consensus), and "Low levels of pay for the role" (a barrier, 80% consensus).

Excluded statements. An additional table can be found in Appendix T which presents the statements that were excluded.

Discussion

In this study a large and diverse sample of peer supporters was consulted and consensus was developed about the essential components, personal benefits, barriers and facilitators involved in providing formal mental health peer support. Consensus was not reached about the personal costs involved. To the best knowledge of the authors this is the largest survey of peer supporters in the UK published to date and results provide a useful 'snapshot' of peer support practice at present in the region.

Participants reached consensus on 124 statements which were grouped into themes. The 67 essential components elaborated in this study included most of the principles and values put forward by major peer support organisations internationally (iNAPS, 2011; Repper et al., 2013; SRN, 2012) The theme 'empowering peers' is consistent with evidence for improved empowerment as a result of peer support interventions (Lloyd-Evans et al., 2014). There was consensus that self-care and positive role-modelling were essential. The latter has been theorised as an important change process underlying peer support (Gillard, Gibson, et al., 2015). Participants agreed on the importance of meeting requirements that would be expected of all staff. Statements in the 'modelling self-care and recovery' theme (e.g. Taking responsibility for personal self-care), the 'prioritising unique aspects of being a peer' theme (e.g. Willingness to both offer and receive support) and the 'promoting

values underpinning peer working' theme (e.g. Promoting Recovery within the wider service/organisation) are those most-pertaining to the specifics of the peer support role as opposed to good quality therapeutic relationships in general, which are highlighted in other themes (e.g. 'non-specific therapeutic competencies'). Consensus was reached on many 'unique aspects' of the role, in particular the mutual/reciprocal nature of the peer relationship. Whether peer roles should be distinct from non-peer roles is a topic of ongoing debate (Gillard et al., 2013); findings suggest peer supporters are keen to maintain a distinctive practice. Consensus was reached on statements describing 'encouragement and active support' of peers, as well as a wide range of 'non-specific therapeutic competencies'. Proficiency in this wide range of competencies likely requires training, experience and guidance through supervision. Given the breadth of competencies deemed essential, it is not surprising that many would wish to stay and indeed progress in the role, perhaps to consolidate these many skills. Equally, it is unsurprising that peer supporters would wish to be appropriately paid for a role which involves this wide variety of competencies. The need for supervision (both managerial and professional) and for role clarity was agreed.

A cluster of themes, namely 'acquiring and sharing knowledge', 'developing the practice of peer support' and 'promoting the values underpinning peer work' indicate that peers see active involvement in the promotion and development of the profession as essential to their role. These findings suggest a motivated workforce. At the same time, the ability of peer supporters to affect change within organisations is influenced by organisational structures, hierarchies and cultures (Gillard, Holley, et al., 2015). Organisations play a crucial role in facilitating the success of peer support. Consensus was reached on 35 statements representing facilitators; which identify organisational, management and supervisory supports. The list of identified facilitators presented in Table 5 may be useful to organisations considering the implementation of peer support, or who wish to audit their current peer support practice, in conjunction with other resources

published in the (Basset, Ryan, Repper, & Watson, 2012; Peer Worker Research Team, 2015; Repper et al., 2013; Watson, Lambert, & Machin, 2016).

The sample reached consensus on all of the personal benefits statements included in this study. They agreed that providing peer support had the benefits of 'improved wellbeing', 'making a valued contribution', 'material benefits', new learning', and 'social connectedness'. Thus, findings support the qualitative evidence base (Bailie & Tickle, 2015; Faulkner & Basset, 2012; Moran, Russinova, Gidugu, Yim, & Sprague, 2012; Salzer & Shear, 2002; Yuen & Fossey, 2003). It is notable that consensus was not reached for any personal cost statements, and was reached in the case of only one barrier statement. Much of the qualitative literature to date has been concerned with potential costs to peer supporters and barriers to implementation, with views solicited from non-peers as well as peers (Doherty, Craig, Attafua, Boocock, & Jamieson-Craig, 2004; Gillard, Edwards, Gibson, Holley, & Owen, 2014; Hamilton et al., 2015). It is possible that negative perspectives have been overstated and this study presents a more balanced picture. Equally, given participants in this study were self-selected and there was attrition over the course of the survey, it is also possible the results are biased towards a positive presentation of peer support. It is important to highlight that consensus cut-off criteria were high and a large proportion of peer supporters endorsed costs and barriers that were not included. For example, 61% agreed they "became 'burnt out' by prioritising the desire to help peers over own health needs" and 64% agreed that "low levels of pay for the role" was a barrier (see Appendix T). Even low levels of endorsement of personal costs and barriers can be considered important since they indicate areas where efforts should be focused to minimise potential difficulties for peer staff and increase the changes of successful implementation of peer support initiatives. Thus, excluded personal cost and barriers statements as presented in Appendix T should be considered by those planning peer support since these may be used to optimise implementation of peer support programs and pre-plan ways support peers who experience adverse effects."

There were differences in role characteristics and experiences of peer supporters who worked in statutory and non-statutory services. NHS peer supporters may be described as more ‘professionalised’; they were more likely to be paid, worked more hours, had more training and received more frequent supervision. They expressed dissatisfaction with pay and opportunities for career progression, consistent with previous research (Ahmed, Hunter, Mabe, Tucker, & Buckley, 2015; Chinman et al., 2008; Mowbray, Moxley, & Collins, 1998; Van Erp, Hendriksen-Favier, & Boer, 2010). Although the majority were satisfied in their current role, there was a desire to progress and dissatisfaction with opportunities to do so. It was common in the NHS subsample not to have any peer colleagues and to receive role-specific professional supervision from professionals with no experience as a peer supporter. These circumstances likely reflect how novel the role is within mental health services; however, moderate levels of dissatisfaction with professional supervision suggest improvement is needed.

Limitations

This study had a number of limitations, some of which were highlighted in participant feedback. The dominance of the recovery model within statements was noted. It was felt this may have signaled an uncritical acceptance of the recovery model, which is rejected by some (e.g. https://recoveryinthebin.org/). This was likely a reflection of the theoretical grounding of documents used in Round One. The authors acknowledge they could have been more reflexive about the choice of literature and professional perspectives brought to the research. Although statements were checked by peer consultants in Round One, involvement of peer supporters in the selection of the literature used and in the initial generation of statements may have mitigated against the dominance of any one paradigm and may have helped to ensure statements were grounded in the ‘lived experience’ of peer support practice. This illustrates the limitations of initial statement generation by literature review, rather than through discussion with a diverse panel of experts which in this instance was not feasible due to limited resources. A small number of non-NHS peer

supporters reported that they found some statements difficult to answer because they pertained to more clinical contexts. It is acknowledged that diversity in the sample meant that some statements were less relevant for some participants; however, similarities in consensus levels for the total sample and NHS subsample suggest that inclusion of peer supporters from a variety of contexts did not bias results. Because this was a consensus-development study, there was a large number of statements to rate which was burdensome for participants. Attrition was high, with less data collected for the Delphi statements presented later. It is possible that those participants who persevered and rated all statements were those who were motivated to put forward a positive view of the role. The researchers might have been more selective in the number of items to include in Round Two; for instances by deciding to include only those statements that were believed to pertain to the 'unique' aspect of the role. This approach might have reduced the attrition rate thereby minimising the aforementioned potential for bias. However, the researchers deemed that this would instead introduce researcher bias and run contrary to the principles of the Delphi methodology. As mentioned, the sample was self-selected so it is possible that they presented a positively-skewed view of peer support. Future studies that employ universal or random sampling techniques would mitigate against this risk.

A large number of group comparisons were conducted and results of statistical tests should therefore be interpreted with caution given the increased risk of false positive results. Finally, the research took place in the UK and, therefore, may not generalise to countries with different health care systems or cultures regarding mental health and peer support.

Conclusions and Recommendations

This study draws upon key evidence in the field and responds to calls from researchers and guiding bodies such as NICE for the peer supporter role to be further defined. Results add to the knowledge base about how peer support can be best delivered. Experienced peer supporters identified a wide range of essential components of peer

support which were clustered into themes as follows: acquiring and sharing knowledge; developing peer practice; empowering peers; encouragement and active support; meeting organizational requirement; modelling self-care and recovery; non-specific therapeutic competencies; prioritising unique aspects of being a peer; promoting peer work values; and having role clarity and supervision. Results therefore suggest that peer support demands many skills and competencies. This raises questions about how skills are developed and whether they are recognised. This may be of particular concern for peer supporters who are employed in paid roles, or aspire to be. Dissatisfaction with payment and career progression opportunities in statutory services may reflect a mismatch between skills used and what employers currently regard as the scope of the role and are willing to remunerate. Peer supporters in this sample were enthusiastic about developing their practice. From a service perspective it would appear sensible to retain staff wishing to make positive contributions. Payment that is commensurate with skills used and the provision of career development opportunities, perhaps including responsibilities for providing professional supervision to junior peer supporters would appear to be a pragmatic way forward. Findings of this study may be used to develop fidelity checklists for peer support roles. They may be used by services planning to introduce peer support to assess whether sufficient preparation has been undertaken (e.g. education of non-peer staff about the role, clear job descriptions etc.) and support structures are in-place (e.g. employment of more than one peer supporter and appropriate ongoing professional supervision arrangements) to create the best conditions for successful implementation. This study provides some of the first quantitative evidence regarding the personal costs and benefits involved in providing peer support. Peer supporters reached consensus on a wide variety of benefits, including improvements in wellbeing, although no consensus was reached regarding costs at the consensus levels used. Further research in this area is needed to better understand the effects of providing peer support for peer supporters. In the linked paper, relationships are examined between experiences of providing peer support, personal costs and benefits and

psychosocial wellbeing of the peer supporters in this sample. Future trials of peer support intervention should measure the effects of providing peer support, including monitoring adverse effects and use of validated instruments to measure benefits.

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Paper 3 - Providing Mental Health Peer Support 2: Relationships with Empowerment, Hope, Recovery, Quality of Life and Internalised Stigma.

This paper has been formatted according to the publication guidelines of Psychiatric Rehabilitation (see Appendix I) and has been submitted for publication as a linked paper along with Paper 2 of this thesis. It has been submitted to the journal as follows: Burke, E., Pyle, M., Machin, K. & Morrison, A.P., *Providing Mental Health Peer Support 2: Relationships with Empowerment, Hope, Recovery, Quality of Life and Internalised Stigma.*

Abstract

Objective: Qualitative research has identified personal benefits and challenges for peer supporters associated with providing peer support; however, the quantitative evidence base is limited. The aim of this study was to use quantitative methods to explore relationships in experiences of providing peer support and psychosocial constructs. Differences were examined between peer supporters working in different contexts and with different experiences in the role.

Methods: A cross-sectional online and postal survey was undertaken in tandem with a linked peer support consensus study. 147 peer supporters were recruited from a variety of organisations across the UK. Validated instruments measured empowerment, hope, recovery, quality of life and internalised stigma. Instruments created for the study measured peer support experiences, and personal costs and benefits involved. Correlations were calculated and results informed variables entered into regression analysis. Chi-square tests and independent samples t-tests were used for group differences.

Results: Total personal costs was significantly negatively related to empowerment and quality of life. More peer supporters endorsed personal benefits than personal costs statements. Benefits included improvements to mental health and wellbeing, reduced use of services, increased social functioning and development of skills. There were no significant differences between peer supporters working in different contexts and with different experiences.

Conclusions and Implications for Practice: An accumulation of personal costs may result in reduced quality of life, however costs can be minimised by organisations. Limitations of the research are discussed and recommendations for future research are made including the need for longitudinal research.

Keywords: peer support; empowerment; recovery; quality of life; stigma.

Introduction

Mutuality and reciprocity are commonly viewed as essential principles in peer support practice (iNAPS, 2011; Repper et al., 2013; SRN, 2012). Effects are believed to be experienced by all peers in the supporting relationship to some degree. In qualitative research, people providing peer support in a formal capacity (hereafter referred to as 'peer supporters') have reported a variety of positive effects including: increased feelings of empowerment (Faulkner & Kalathil, 2012); hope (Davidson, Chinman, Sells, & Rowe, 2006); improved quality of life (Bracke, Christiaens, & Verhaeghe, 2008; Mowbray, Moxley, & Collins, 1998; Salzer & Shear, 2002); and enhanced recovery (Bailie & Tickle, 2015; Moran, Russinova, Gidugu, Yim, & Sprague, 2012; Salzer & Shear, 2002). The intentional disclosure of mental health problems inherent in peer support runs counter to secrecy and shame which are believed to be involved in the internalisation of stigma (Corrigan et al., 2016). Equally, research suggests peer supporters can encounter a range of challenges in the role including low wages, limited opportunities for career progression, discrimination by non-peer colleagues, and inadequate training, support and supervision (Vandewalle et al., 2016). Therefore peer supporters may experience adverse effects related to the role. It is thought that peers working in statutory services may be at a potentially greater risk of such negative experiences, due to organisational hierarchies, cultures that clash with the values of peer practice and a lack of clarity about the roles within these contexts (Gillard, Edwards, Gibson, Owen, & Wright, 2013; Kemp & Henderson, 2012).

Although the qualitative evidence-base is better established, quantitative evidence on the effects of providing peer support is more limited. Inconsistent findings have been reported in cross-sectional studies. Moran and colleagues (2012) found no association between peer supporters' role characteristics and scores on recovery measures. Ahmed and colleagues (2015) found that employed peer specialists had higher rates of hope and empowerment than unemployed peer specialists, however it appeared that the effect was

due to employment in general rather than employment in peer support per se. A review of six studies on job satisfaction found that peer providers were generally satisfied with work settings and that role clarity, empowerment, perceived support, length of employment, and integration in the workplace predicted satisfaction (Chappell Deckert & Statz-Hill, 2016). Given the limited nature of the quantitative evidence base, calls have been made for further quantitative studies to investigate the relationship between peer support working and wellbeing (Bailie & Tickle, 2015).

The primary aim of this study was to use quantitative methods to explore relationships between experiences of providing peer support and the psychosocial constructs that have been highlighted by qualitative research. A secondary aim of this study was to investigate if there were differences between peer supporters who work in different settings and have had different experiences in the role. Hypotheses were:

i. That satisfaction with the role (including with training, supervision, pay, and opportunities for career progression) and perceived support, team acceptance, team value for peer support, and personal benefits experienced in the role would be positively related to empowerment, hope, mental health recovery and quality of life, and negatively related to internalised stigma.

ii. That personal costs experienced in the role would be negatively related to empowerment, hope, mental health recovery and quality of life, and positively related to internalised stigma.

iii. That peer supporters working in statutory services or with negative role-related experiences would report more internalised stigma and personal costs, and less empowerment, hope, mental health recovery, quality of life and personal benefits, when compared to peers working in non-statutory services or with no negative role-related experiences.

iv. That peer supporters who had themselves received formal peer support would report more empowerment, hope, recovery, quality of life and personal benefits,

and less internalised stigma and personal costs than those who had not received formal peer support.

Method

Data for this study were collected at the same time as that for a Delphi study which is linked within this volume. Readers are directed to the linked paper for details on participant sampling and other procedures.

Measures

Experience of providing peer support (EPPS). The EPPS questionnaire was devised by the authors for the purposes of this study (Appendix O). It collected demographic information in addition to 23 items about peer support experiences; nine of these items were variables in this study (see Table 1).

Table 1. *EPPS items included as variables in the current analysis*

How satisfied are you/were you with this training/not having training?
How satisfied are you/were you with this managerial supervision?*
How satisfied are you/were you with this professional supervision?**
How satisfied are you/were you with this pay/not being paid?
How well-supported do you/did you feel in your peer supporter role?
How satisfaction are you with opportunities for you to progress your role/career as a peer supporter within your organisation?
Overall, how satisfied are you with providing mental health peer support in your current/most recent organisation?
How accepted do you/did you feel in this team as a peer supporter?
Overall, how much do you believe peer support is/was valued by this team?

Note. *Defined as "supervision of your day-to-day work which might involve planning & monitoring workload, ensuring health & safety etc."; **Defined as "support with issues specific to the PS role, e.g. how to clarify one's own boundaries and develop a personal account of recovery that feels safe to share."

Satisfaction with the peer support role, training, supervision and career progression were rated on a ten-point Likert scale whereby 1 = 'very dissatisfied' and 10 = 'very satisfied'. Perceived support in the role, perceived acceptance by mental health team and perceived team value for peer support were rated on similar Likert scales whereby 1 = 'not

well supported/not accepted/not valued' and 10 = 'very well supported/very well accepted/very well valued'. Item means for the sample were used in the analyses. Participants indicated whether they had negative role-related experiences within their team with 'yes', 'no' or 'don't know/would rather not say'. Given that the EPPS does not a measure a single construct (rather each item pertains to different appraisals of the peer support role) it was not deemed appropriate to calculate and present an internal reliability statistic; however distribution statistics are presented for the nine relevant items in Appendix Y.

Personal costs and benefits involved in providing peer support. As part of the linked study, statements concerning the personal costs (n=16) and personal benefits (n=25) associated with providing formal mental health peer support were generated through a process of literature review and expert consultation. Participants were asked to indicate whether each statement had been part of their personal experience as a peer supporter. Response options were 'yes' or 'no'. A total count of 'yes' responses for costs and benefits was calculated for each participant and mean totals were used in the analyses.

Mental Health Confidence Scale (MHCS). Total score on the MHCS was used as a measure of empowerment in this study (Appendix U). The MHCS has 16 items rated on a six-point confidence scale whereby 1 = 'very nonconfident' and 6 = 'very confident'; higher scores indicate increased empowerment (Carpinello, Knight, Markowitz, & Pease, 2000). It has good psychometric properties (Castelein, van der Gaag, Bruggeman, van Busschbach, & Wiersma, 2008). Scores on the optimism subscale (the first six items of the MHCS) were used as a measure of hope. This was to reduce participant burden by keeping the number of measures to a minimum. In this study Cronbach's alpha for the total scale was $\alpha = .92$ and for the hope/optimism subscale it was $\alpha = .89$ indicating high reliability.

Process of Recovery Questionnaire (QPR). The QPR was used to measure mental health recovery (Appendix V). It has 15 items which are rated on a five-point agreement scale whereby 0 = 'strongly disagree' and 4 = 'strongly agree'; higher scores indicate

being further-on in one's recovery (Law, Neil, Dunn, & Morrison, 2014; Neil et al., 2009). The QPR has good psychometric properties (Law et al., 2014; Williams et al., 2015). In this study Cronbach's alpha for the QPR was α = .93 indicating high reliability.

Manchester Short Assessment of Quality of Life (MANSA). The MANSA was used to measure quality of life (Appendix W). Twelve items are rated on a seven-point satisfaction scale whereby 1 = 'couldn't be worse' and 7 = 'couldn't be better'; higher scores indicate better quality of life (Priebe, Huxley, Knight, & Evans, 1999). Good psychometric properties for the scale have been reported (Björkman & Svensson, 2005; Priebe et al., 1999). In this study Cronbach's alpha was α = .86 indicating high reliability.

Internalised Stigma of Mental Illness scale – brief version (ISMI-10). The ISMI-10 was used to measure internalised stigma (Appendix X). It has 10 items which are rated on a four-point agreement scale whereby 1= 'strongly disagree' and 4 = 'strongly agree' and includes two reverse-scored items (Boyd, Otilingam, & DeForge, 2014). Higher scores indicate more internalised stigma; thus it has an inverse valence to the other measures used in the study. The ISMI-10 has good psychometric properties (Boyd et al., 2014; Hammer & Toland, 2016). Cronbach's alpha was α = .81, indicating high reliability. With the permission of the author, the wording was altered so that the term 'mental health problem' was used in place of 'mental illness'. This was following advice from a service user reference group that many people reject the idea of being 'mentally ill' and that such terminology may be stigmatising for participants.

Analysis

Analyses were conducted using SPSS Statistics software version 23 (IBM, 2015). Between-group differences for categorical variables were calculated using Chi-square tests computed on the valid percentages for that variable. Total personal costs and benefits were examined using independent t-tests. To directly compare proportions that endorsed costs and benefits, a cost:benefit ratio was calculated by dividing mean total costs and benefits endorsed into the total number of statements (costs n=16; benefits n=25). Because data for

EPPS variables were not normally distributed two-tailed Spearman's correlations were performed to examine relationships between these and other variables. Missing values were excluded on an analysis-by-analysis basis. The participant number (n) for each test changed reflecting the varying proportions of data provided by participants for the different items or measures. In light of the numerous tests planned, an alpha level of $p \leq 0.01$ was adopted in order to reduce the chance of false positive results.

Results

Sample Characteristics

A total of 147 peer supporters participated in the study; 76 of these provided a full dataset including all psychosocial measures. There were no statistically significant differences between the group who provided a full dataset and the group who did not. Table 2 provides a description of the total sample, categorical items included in the analyses and group differences (see Appendix Y for descriptive statistics of continuous variables). The majority of the sample was female. Approximately half (n=76, 51.7%) provided peer support in statutory mental health services (i.e. the UK National Health Service (NHS)). Approximately half (n=80, 54.4%) described themselves as working in a multidisciplinary mental health team; of these, 61 (74.1%) worked in the NHS. Of those working in a multidisciplinary mental health team, 32 (40%) reported having a negative experience within the team which they perceived to have been related to being a peer supporter (27 (84.4%) of those in the NHS). Less than one third of the total sample (n=45, 30.6%) had themselves received formal peer support. Most reported having personal experience of multiple mental health problems; the most commonly cited problems were depression (55.8%), anxiety (44.9%), psychosis (18.4%) and borderline/emotionally unstable personality traits/disorder (15.6%).

Table 2. *Characteristics of the total sample and of those who provided a complete and incomplete dataset*

	Total sample n=147	Complete dataset n=76	Incomplete dataset n=71	Significant difference Yes/No
	n (%)	n (valid %)	n (valid %)	
Gender				
Male	43 (29.3)	19 (26.0)	24 (34.8)	No
Female	99 (67.3)	54 (74.0)	45 (65.2)	
Did not say	5 (3.4)	3 (ex.)	2 (ex.)	
Working in MH team				
Yes	80 (54.4)	43 (57.3)	37 (52.1)	No
No	66 (44.9)	32 (42.7)	34 (47.9)	
Did not say	1 (0.7)	1 (ex.)	~	
Negative experiences in MH team				
Yes	32 (21.8)	18 (47.4)	14 (37.8)	No
No	43 (29.3)	20 (52.6)	23 (62.2)	
Did not say / Not applicable	72 (48.9)	38 (ex.)	34 (ex.)	
Being paid for role				
Yes	97 (66.0)	53 (71.6)	44 (62.0)	No
No	48 (32.6)	21 (28.4)	27 (38.0)	
Did not say	2 (1.4)	2 (ex.)	~	
Personal receipt of PS				
Yes	45 (30.6)	19 (25.3)	26 (37.1)	No
No	100 (68.0)	56 (74.7)	44 (62.9)	
Did not say	2 (1.4)	1 (ex.)	1 (ex.)	
	M, (SD)	M, (SD)	M, (SD)	
Age in years	41.2 (14.0)	42.1 (15.0)	40.9 (11.9)	No
Total number of personal costs*	7.6 (4.9)	7.2 (4.7)	8.6 (5.1)	No
Total number personal benefits**	22.0 (3.7)	21.9 (3.8)	22.4 (3.3)	No

Note. Ex.=excluded from valid % used in Chi-square test; M=mean; MH=mental health; PD=personality disorder; PS=peer support; PTSD=post-traumatic stress disorder; SD=standard deviation; *n=94 (total sample) and n=66 (completed all measures); **n=87 (total sample) and n=67 (completed all measures).

Personal Costs and Benefits Experienced

Mean number of personal costs endorsed was 7.6 (SD=4.9) and mean number of personal benefits endorsed was 22 (SD=3.7). The costs:benefits ratio was 0.48:0.88 meaning that participants endorsed almost twice as many benefits than costs. Tables 3 and 4 show the personal costs and benefits statements endorsed, ranked by percentage from highest to lowest. Data is also provided for the NHS subsample; visual inspection indicates that a slightly higher proportion of the NHS subsample endorsed almost all statements.

Relationships Between Experiences of Providing Peer Support and Psychosocial Constructs

Correlations between scores on EPPS items, total number of personal costs and benefits experienced, and total scale/subscale scores on the psychosocial measures are presented as a matrix in Table 5. EPPS items were highly inter-correlated, the majority significant at the $p \leq 0.01$ level used. Similarly, empowerment, hope, recovery and quality of life were all significantly positively inter-correlated and significantly negatively correlated with internalised stigma.

EPSS items did not significantly correlate with psychosocial constructs measured, with the exception of quality of life which was significantly positively correlated with perceived support in the role (r_s=.32), perceived acceptance by mental health team (r_s=.41) and perceived team value for peer support (r=.46). Quality of life also positively correlated with satisfaction with training (r_s=.24), satisfaction with professional supervision (r_s=.25), satisfaction with pay (r_s=.25), and satisfaction with career progression (r_s=.27) at a less conservative alpha level of $p \leq 0.05$.

Table 3. *Personal costs*

	Yes, part of my personal experience n (valid %)	
	Total sample	NHS sub-sample
Experiencing stress as a result of the challenges in supporting peers.	74 (74.0)	45 (81.8)
Lack of opportunities for career progression within the peer supporter role.	63 (64.3)	40 (74.1)
Coming into conflict with practices which are not recovery-oriented.	63 (63.0)	41 (74.5)
Feeling under pressure to 'stay well' to prove to colleagues that 'able' for the role.	63 (63.0)	37 (67.3)
Being on low/no pay and feeling oneself to be under-valued and/or exploited.	59 (59.6)	36 (66.7)
Experiencing stress because the peer support role is poorly defined and supported in the service/organisation.	55 (55.0)	34 (61.8)
Becoming 'burnt out' by prioritising the desire to help peers over own health needs.	54 (54.0)	32 (58.2)
Revisiting personal difficult experiences through peers' stories which can cause distress and fear of 'relapse'.	52 (52.5)	34 (63.0)
Worsened personal mental health and wellbeing.	44 (44.9)	25 (47.2)
That the natural relationship at the heart of the helping process becomes over-formalised and over-controlled.	42 (42.9)	28 (52.8)
Feeling the need to monitor/censor oneself when around non-peer colleagues to make sure not acting 'like a service user'.	41 (41.0)	25 (45.5)
Feeling oneself to be stuck in a 'sick' role through having a label/identity as a peer.	35 (36.1)	23 (43.4)
Experiencing negative responses from peers when you disclose about your personal mental health problems.	34 (34.3)	16 (29.6)
Experiencing stigma and discrimination in the role e.g. Being excluded from work and social events by non-peer colleagues.	30 (30.3)	20 (37.0)
Concern that having a label/identity as a 'peer' will have a negative impact on future job prospects.	31 (31.3)	18 (33.3)
Being socially excluded by peers/other service users because viewed as part of a problematic system.	23 (23.2)	14 (25.9)

Note. Valid % based on total responses on that statement. This ranged from n=97–100 across the statements for the total sample and n=53–55 for the NHS subsample.

Table 4. *Personal benefits*

	Yes, part of my personal experience n (valid %)	
	Total sample	NHS sub-sample
The enjoyment of a challenging role.	91 (97.8)	50 (98.0)
Personal growth.	90 (97.8)	50 (100.0)
Having a meaningful occupation that involves making a contribution and feeling of value.	91 (97.8)	51 (100.0)
Learning things from peers that did not know before.	91 (96.8)	50 (98.0)
Increased knowledge about personal mental health and recovery.	88 (95.7)	48 (96.0)
Having permission to disclose personal mental health problems and not needing to hide them.	90 (95.7)	51 (100.0)
Gaining more confidence through the role.	88 (94.6)	47 (94.0)
Gaining a sense of solidarity and participation with peers.	88 (93.6)	46 (90.2)
Sense of fellowship and shared identity with other peer supporters.	86 (92.5)	48 (96.0)
Gaining self-worth through the role.	86 (91.5)	48 (94.1)
Gaining self-esteem through the role.	85 (90.4)	46 (90.2)
Gaining a positive sense of identity through the role.	84 (89.4)	47 (92.2)
Increased self-acceptance.	84 (89.4)	47 (92.2)
Having a role that is valued by others for driving recovery-oriented change.	83 (89.2)	44 (86.3)
Developing skills (e.g. in team-working, communication) which improve future job and career prospects.	83 (89.2)	47 (92.2)
Increased involvement in the community.	82 (89.1)	44 (88.0)
Increased hope for the future.	82 (87.2)	46 (90.2)
Increased social networks and contacts.	81 (87.1)	45 (90.0)
Feeling empowered to cope with own mental health problems and practice the things that contribute to personal recovery.	81 (87.1)	48 (94.1)
Improved personal mental health and wellbeing.	79 (85.9)	45 (90.0)
The role provides a routine (if one lacking previously).	71 (77.2)	42 (84.0)
Feeling less stigmatisation.	70 (76.1)	38 (77.6)
Less personal use of mental health services.	65 (71.4)	40 (81.6)
Being paid.	65 (70.7)	43 (86.0)
Experience of working across many sectors e.g. Statutory services and the third sector.	60 (65.2)	37 (74.0)

Note. Valid % based on total responses on that statement. This ranged from n=91-94 across the statements for the total sample and n=49–51 for the NHS subsample.

Total number of personal costs experienced was significantly negatively correlated with the constructs quality of life (r_s=-.40) and empowerment (r_s=-.35), as well as with satisfaction with pay (r_s=-.43), satisfaction with career progression (r_s=-.49), perceived support in the role (r_s=-.37), and overall role satisfaction (r_s=-.35). Total personal costs was also negatively correlated with hope (r_s=-.29) and recovery (r_s=-.28), and positively correlated with internalised stigma (r_s=.29) at $p \leq 0.05$. Total number of personal benefits experienced was positively correlated with hope (r_s=.30), recovery (r_s=.28) and satisfaction with training (r_s=.27) at $p \leq 0.05$.

Quality of life - sensitivity and regression analyses. Further analyses were conducted to better understand the relationship between experiences of providing peer support and quality of life. Because the MANSA contained an item concerning job satisfaction and another concerning satisfaction with finances, it was thought possible that significant correlations between total MANSA scores and EPPS items may have been in-part artefactual (i.e. due to the same underlying constructs being measured by both). To rule this out, a ‘sensitivity’ analysis was conducted whereby a total MANSA score was calculated excluding the two aforementioned items and Spearman’s correlations were re-run. Quality of life remained significantly correlated with perceived support in the role (r_s=.30, p = 0.009), perceived acceptance by team (r_s=.40, p=0.007), perceived team value for peer support (r_s=.46, p=0.002) and total number of personal costs experienced (r_s=-.46, $p<0.001$).

Table 5. *Correlations between experiences of providing peer support, personal costs and benefits experienced, and psychosocial constructs*

		Sat. training	Sat. mngr. sup.	Sat. prof. sup.	Sat. pay	Percv. supp. role	Sat. career prog.	Overall sat. PS	Percv. accpt. by team	Percv. value by team	Pers. Costs expd.	Pers. Bene-fits expd.	Em-power-ment	Hope	Recov-ery	Qual-ity of life
Sat. mngr. sup.	CC	.32**	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	(n)	*(128)*														
Sat. prof. sup	CC	.41**	.67**	---	---	---	---	---	---	---	---	---	---	---	---	---
	(n)	*(118)*	*(111)*													
Sat. pay	CC	.26**	.34**	.27**	---	---	---	---	---	---	---	---	---	---	---	---
	(n)	*(139)*	*(126)*	*(118)*												
Percv. supp. role	CC	.43**	.74**	.69**	.43**	---	---	---	---	---	---	---	---	---	---	---
	(n)	*(141)*	*(128)*	*(119)*	*(143)*											
Sat. career prog.	CC	.37**	.38**	.50**	.57**	.57**	---	---	---	---	---	---	---	---	---	---
	(n)	*(140)*	*(127)*	*(118)*	*(142)*	*(145)*										
Overall sat. PS	CC	.40**	.67**	.59*	.48**	.72**	.56**	---	---	---	---	---	---	---	---	---
	(n)	*(140)*	*(127)*	*(118)*	*(142)*	*(145)*	*(144)*									
Percv. accpt. by team	CC	.20	.48**	.43**	.26*	.66**	.57**	.46**	---	---	---	---	---	---	---	---
	(n)	*(81)*	*(78)*	*(71)*	*(82)*	*(82)*	*(82)*	*(81)*								
Percv. value by team	CC	.22*	.43**	.33**	.28**	.65**	.51**	.57**	.79**	---	---	---	---	---	---	---
	(n)	*(81)*	*(78)*	*(71)*	*(82)*	*(82)*	*(82)*	*(81)*	*(82)*							
Pers. Costs expd.	CC	-.22*	-.22*	-.21	-.43**	-.37**	-.49**	-.35**	-.30*	-.28*	---	---	---	---	---	---
	(n)	*(92)*	*(87)*	*(76)*	*(91)*	*(93)*	*(92)*	*(93)*	*(55)*	*(55)*						
Pers. Benefits expd.	CC	.27*	-.11	.09	-.03	.07	.07	.06	.21	.24	.15	---	---	---	---	---
	(n)	*(85)*	*(79)*	*(71)*	*(84)*	*(86)*	*(85)*	*(86)*	*(48)*	*(48)*	*(84)*					
Empowerment	CC	.17	.20	.18	.06	.20	.11	.05	.11	.23	-.35**	.22	---	---	---	---
	(n)	*(73)*	*(66)*	*(63)*	*(72)*	*(74)*	*(73)*	*(74)*	*(42)*	*(42)*	*(66)*	*(67)*				
Hope	CC	.18	.21	.30*	.16	.22	.17	.15	.25	.38*	-.29*	.30*	.80**	---	---	---
	(n)	*(73)*	*(66)*	*(63)*	*(72)*	*(74)*	*(73)*	*(74)*	*(42)*	*(42)*	*(66)*	*(67)*	*(75)*			
Recovery	CC	.17	.09	.21	.09	.22	.14	.14	.21	.29	-.28*	.28*	.73**	.79**	---	---
	(n)	*(74)*	*(67)*	*(64)*	*(73)*	*(75)*	*(74)*	*(75)*	*(43)*	*(43)*	*(66)*	*(67)*	*(75)*	*(75)*		
Quality of life	CC	.24*	.24	.25*	.25*	.32**	.27*	.21	.41**	.46**	-.40**	.11	.66**	.65**	.72**	---
	(n)	*(72)*	*(65)*	*(62)*	*(71)*	*(73)*	*(72)*	*(73)*	*(43)*	*(43)*	*(65)*	*(66)*	*(73)*	*(73)*	*(74)*	
Internalised stigma	CC	-.15	-.05	-.03	-.14	-.19	-.15	-.14	.03	-.05	.29*	-.06	-.46**	-.46**	-.54**	-.49**
	(n)	*(71)*	*(64)*	*(61)*	*(70)*	*(72)*	*(71)*	*(72)*	*(41)*	*(41)*	*(65)*	*(66)*	*(72)*	*(72)*	*(73)*	*(72)*

Note. *significant at p≤0.05; **significant at p≤0.01; Accpt.=acceptance; CC=correlation coefficient; Expd.=experienced; Mngr.=managerial; Percv.=perceived; Pers.=personal; Prog.=progression; Prof.=professional; PS=peer support; Sat.=satisfaction; Sup.=supervision.

In order to explore which of these variables might uniquely predict quality of life, a regression analysis was then performed with quality of life as the dependent variable and perceived acceptance by team, perceived team value for peer support and total number of personal costs experienced as the predictor variables. Missing data were deleted listwise to generate a sensible model (Field, 2014); this left a sample of 37 participants with a full dataset to contribute to the model; all of whom provided peer support as part of a mental health team. Given the exploratory nature of the analysis, all variables were entered into the model simultaneously (i.e. forced-entry). Bootstrapping procedures were used to generate confidence intervals and significance values because the data were non-normal. Results are presented in Table 6. The resultant model explained 40% of the variance in quality of life for this sample; R^2 was .40 and significant (F(4, 32)=5.37, p=0.002). An examination of the tolerances and variance proportions on eigenvalues indicated problems with multicollinearity, particularly for perceived acceptance by team and perceived team value for peer support. The only significant predictor of quality of life in the model was total number of personal costs endorsed (β=-.48, partial r=-0.49, p=0.02).

Table 6. *Regression analysis with Quality of Life as the dependent variable (with confidence intervals (CI), standard errors and significance values based on 1,000 bootstrap samples)*

Variable	*b* (Bootstrap CI)	SE	*β*	*p*	Partial *r*	*R*	R^2	Adjusted R^2
Model	~	~	~	~	~	.63	.40	.33
Perceived support in role	-.35 (-2.09 – 1.31)	0.85	-.09	0.68	-0.07	~	~	~
Perceived acceptance by team	-.16 (-2.95 – 1.76)	1.03	-.04	0.86	-0.02	~	~	~
Perceived value by team	1.53 (-0.52 – 3.84)	1.11	.38	0.14	0.19	~	~	~
Total number Costs endorsed	-1.11 (-2.07 – -0.24)	0.43	-.48	0.02	-0.49	~	~	~

Between-group Differences

There were no statistically significant differences on the outcomes measured between NHS versus non-NHS peer supporters; peer supporters who had themselves received formal peer support versus those who had not; and peer supporters who cited negative role-related team experiences versus those who cited none. However, there were a number of findings in the hypothesised direction at levels approaching significance (see Appendix Z for a table reporting data for different groups). On average, NHS peer supporters reported more personal costs and more personal benefits than their non-NHS counterparts (significant at $p \leq 0.05$). Participants who had themselves received formal peer support had, on average, higher quality of life scores (significant at $p \leq 0.05$) and higher recovery scores ($p=0.08$) than those who had not received formal peer support. Those who had negative experiences within their team had, on average, lower quality of life scores than those who did not report negative experiences, and they endorsed a higher number of personal costs (both significant at ≤ 0.05).

Discussion

This study used quantitative methods to explore whether experiences of providing peer support were related to psychosocial constructs. It also examined group-differences for peers providing support in statutory and non-statutory services, and with different experiences in providing that support. It is one of the first studies to use validated instruments to measure wellbeing in peer supporters and the first outside the US to do so.

Results provide some limited support for the first two hypotheses. Relationships between experiences of providing peer support and psychosocial constructs were all in the predicted direction, although most were not statistically significant. Role satisfaction, perceived support and perceived team acceptance and value for peer support were not related to empowerment, hope, recovery or internalised stigma at levels more than would be expected by chance. However, perceived support in the role and perceived team acceptance and value for peer support were significantly positively related to the quality of

life scores of participants. Also, the total number of personal costs endorsed had a significant negative relationship with quality of life and levels of empowerment. Relationships between total costs and the other psychosocial constructs measured approached statistical significance. Regression analysis suggested that total costs experienced had a unique negative effect on quality of life scores for those who worked in multidisciplinary mental health teams. Total personal benefits experienced was positively correlated with hope and empowerment, but these relationships were not significant at the conservative alpha level used.

Results have some important implications. They suggest that challenges experienced in peer support roles may be disempowering and reduce the quality of life of peer supporters. This may have wider negative impacts on wellbeing and functioning for peer supporters and therefore efforts should be taken to minimise them where possible. However, it is notable that many of the most-highly endorsed personal cost statements were related to organisational challenges in terms of how the peer support role is set-up (e.g. low pay, lack of opportunities for career progression and non-recovery oriented service cultures). It is the responsibility of organisations to improve these conditions for peer supporters. This may limit any potential adverse effects of taking on the role.

Results indicate that, when peers work in multidisciplinary mental health teams, the attitudes and behaviour of their non-peer colleagues matter. Perceptions of being supported, accepted and valued in the team were related to quality of life. This finding is in-line with previous qualitative studies which have highlighted the importance of team readiness for peer support (e.g. Hamilton, Chinman, Cohen, Oberman, & Young, 2015; Moll, Holmes, Geronimo, & Sherman, 2009) including having shared expectations and agreement on the parameters of the role (e.g. Asad & Chreim, 2015; Gillard et al., 2015; Kemp & Henderson, 2012). Organisations planning to implement peer support must consider how to prepare teams and to support peers on an ongoing basis. The intentional use of personal experiences of distress is an additional duty inherent to the peer supporter

role which is not expected of non-peer staff. It is therefore appropriate that additional support is provided (Davidson, Bellamy, Guy, & Miller, 2012). In this study, high endorsement of stress in the role and of peer supporters' feeling under pressure to 'stay well' to prove they are 'able for the job' suggests that additional support and supervision may be lacking and /or peers may need to be actively encouraged to avail of this.

Findings regarding personal costs must be viewed together with the findings on personal benefits. It is important to highlight that participants experienced almost twice as many role-related benefits than costs. Each benefit statement was endorsed by at least half the sample (and over three-quarters of the NHS subsample). The most-highly endorsed personal benefit was "the enjoyment of a challenging role". So, even though challenges in supporting peers could be stressful, they were also perceived to be rewarding. Other benefits endorsed included: improvements in wellbeing (e.g. self-worth, self-esteem, self-confidence and hope); improved social functioning; the development of skills; and mutual/reciprocal benefits (e.g. learning from peers, feelings of solidarity and fellowship with peers). Over 70% of the sample (80% of the NHS subsample) said a benefit was less use of mental health services; this finding will be important for statutory mental health service providers to note since it suggests the introduction of peer support initiatives may reduce costs of care. Equally, just under half of the sample reported 'worsened personal mental health and wellbeing' as a cost related to the role. These somewhat contradictory results are consistent with previous qualitative research (Bailie & Tickle, 2015) and indicate that processes involved are not simplistic.

In terms of between-group differences, the study's third hypothesis was not supported; there were no clear differences between the groups examined, though a handful of differences approach statistical significance. NHS peer supporters did not have worse scores on psychosocial measures that their non-NHS counterparts. On average, they did experience a higher total number of personal costs than non-NHS peer supporters; however, they also endorsed a higher total number of personal benefits. There were no

significant differences between peer supporters with negative team experiences and those without. Similarly, the study's fourth hypothesis was not supported; peer supporters who themselves had received formal peer support did not do better than those who did not have peer support. Had differences been found, it could not have been concluded that these were due to peer support received given the non-experimental nature of this study design.

Limitations

This study has a number of limitations. First, the data is correlational only and thus inferences about causation cannot be made. Second, the sample size used in regression analysis was small which may have limited power to detect an effect. It is possible that there were external variables not included as predictors in the regression thus results should be interpreted with caution. Third, it is acknowledged that summing the number of personal costs and benefits statements endorsed is a crude measurement; it presumes a simple cumulative effect with all costs and benefits having similar impact, which may not be valid. Finally, the EPPS measure was devised for this study and has not been formally validated.

Conclusions and Recommendations for Practice and Future Research

Peer supporters in this study endorsed a wide range of personal costs and benefits associated with providing formal peer support derived from the existing evidence base. An accumulation of personal costs may contribute to reduced quality of life, especially for peer supporters in multidisciplinary mental health teams; however, many costs can be minimised by organisations. Ways that organisations can minimise costs and facilitate the successful introduction of peer support are described in the linked paper within this volume and elsewhere in the literature (Davidson et al., 2012; Gillard, Edwards, Gibson, Holley, & Owen, 2014; Repper et al., 2013). Organisations who wish to implement peer support successfully must already be working in a recovery-oriented way. Attention should be paid to clarifying the remit and responsibilities of the role, and to preparing and educating non-peer staff in advance. Managers should seek to address any concerns of non-peer staff,

which may involve ‘myth-busting’ to dispel negative attitudes (Davidson et al., 2012). Managers should seek to instil positive attitudes in non-peer staff so they understand what peer supporters can add that is unique to service user care. Appropriate ongoing support is necessary and organisations should make reasonable adjustments in-line with employment legislation. Group or individual supervision from senior peer supporters who can provide guidance from personal experience may be beneficial, especially with unique peer-related aspects of the role. Consideration of pay-levels and opportunities to progress should also be considered, in particular in order to retain staff.

Peer supporters in this study reported they experienced both improvements and declines in mental health in relation to the role. Effects do not appear to be simple. It may be that they change over time; longitudinal research is needed to understand this further. To-date no quantitative research has examined the impacts of providing peer support over time. Well-designed randomised controlled trials are needed to make more robust conclusions about the effects of peer support. Given hypothesised mutual and reciprocal effects, outcomes for all peers in the supporting relationship should be measured. Quality of life should be measured as an outcome in such research and could be measured as an outcome in services providing peer support.

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Paper 4: Critical appraisal

Overview

The aim of this paper is to provide the reader with a critical appraisal of the research process as a whole, to put the studies presented into the wider context of evidence and practice, and to present personal reflections on the work. It is split into three sections. The first discusses Paper 1 (the narrative synthesis and meta-analysis). The second commences with the rationale for the empirical work undertaken and for presenting it as two linked papers. Issues common to both papers are discussed followed by separate discussions of Papers 2 and 3. Reflections on strengths and limitations, and implications for practice and research are made. Finally, personal reflections are discussed concerning the position of myself as a non-peer researcher conducting work in this field. Because two empirical papers are presented and word count restricted, the opportunity for extensive discussion is limited therefore key points are highlighted.

Paper 1. Narrative Synthesis and Meta-Analysis

Rationale for Topic Choice

While there have been several reviews on peer support interventions (e.g. Lloyd-Evans et al., 2014), most have not provided a theoretical basis for the selection of outcomes. This may be due to under-developed theory regarding mechanisms of effect in peer support (Gillard, Gibson, Holley, & Lucock, 2015; Mahlke et al., 2017). Estimations of efficacy are open to inaccuracy if the outcomes measured are not targeted by the intervention under-study. We believe that a strength of our review is the use of theory to derive the outcomes of empowerment, self-efficacy and internalised stigma reported on. However, given lack of specific proof-of-concept evidence, other change mechanisms may be of more importance.

Rationale for conducting a narrative synthesis and meta-analysis

Initial scoping revealed that not many randomised controlled trials (RCTs) reported on our outcomes of interest. This is likely due to the ‘youth’ of this field of research, given the relative novelty of formalised mental health peer support (Repper & Carter, 2011).

Thus, to present a comprehensive view of quantitative evidence on our outcomes of interest, we decided to include non-RCTs. A narrative synthesis approach was chosen since it allows integration of different types of evidence (Mays, Pope, & Popay, 2005). We wanted to provide readers with an estimation of effects; this information is useful for researchers planning to carry out trials in power calculations (Cohen, 1977). Therefore we computed effect sizes and conducted meta-analyses where appropriate.

Methodological Reflections

Search term strategy and topic refinement. Different terms are used to describe what is referred to as 'peer support' in this thesis. We used terms from the published search strategy of Lloyd-Evans et al. (2014) to help ensure studies were captured. Due to the paucity of research in the field, we decided to include all types of peer support intervention, so long as they were formalised and face-to-face. The resulting heterogeneity in interventions included is an issue (discussed below).

Quality appraisal. The quality of included studies was appraised, in line with recommendations (Moher, Schulz, Altman, & Group, 2001). Adaptations made to the Effective Public Health Practice Tool (Armijo-Olivo, Stiles, Hagen, Biondo, & Cummings, 2012) were made to take-account of heterogeneity, particularly the variability of intervention integrity in included studies. Results of appraisals demonstrated a clear need for more high-quality trials to be undertaken to get a better-picture of effects.

Key Limitations

The breadth of the review was wide in terms of: type of peer support intervention; number of constructs examined (and measures used); and difficulties of peer support recipients. 'Lumping' all such studies together in one review may be inappropriate because the mechanisms involved may be different. Criticisms have been made of approaches that treat peer support as a 'homogenous intervention' (Gordon & Bradstreet, 2015). It also means that results may be integrated only to a limited extent.

Overall Reflections and Directions for Future Research and Clinical Practice

On the basis of our review, we made recommendations for peer-led group interventions which we hope will be useful for those considering implementing peer support. However the quality of the evidence base means that further clinical recommendations cannot be made. There is a need for further well-designed and executed intervention research in the field.

Empirical Studies

Rationale for the Research

The impetus for the empirical research was the lack of agreement regarding the peer support role (Bailie & Tickle, 2015) and a desire that peer supporters should be the ones to define this. We were also aware of the lack of quantitative data regarding peer supporter wellbeing and believed it would be sensible to gather data on wellbeing at the same time as conducting a consensus study, thereby maximising contribution to the field. A decision was made to present data for publication as two separate papers to give readers the fullest-account of the work. It was decided to submit these as linked papers for the convenience of readers.

Patient and Public Involvement (PPI)

Engagement of current/former service users was integral to the research process, given the subject matter and design. The field supervisor of the Trainee (KM) is a senior peer trainer; her involvement was crucial to the development of the research and she provided input throughout the process. During the research design process, the Trainee consulted the Community Liaison Group of The University of Manchester. In Round 1 of the Delphi study, four peer supporter consultants gave their feedback on the statements and feedback was incorporated.

Sampling and Recruitment

Participants were peer supporters who provided support in any setting. Analysis indicated that those working in the NHS may have been a more ‘professionalised’ subset. Some non-NHS peer supporters provided feedback that certain Delphi statements did not

feel relevant. However, ‘sensitivity’ analysis indicated that consensus was similar between the total sample and the NHS subsample for almost all statements, indicating that the decision to include participants from different contexts was justified. Where there were differences (e.g. regarding pay and career opportunities) these have been highlighted.

Methodological Reflections on Paper 2

In many Delphi studies the initial list of statements is generated through group discussion. However, this method has its disadvantages since single powerful voices can dominate, to the exclusion of others (Jones & Hunter, 1995). Limited resources available to the Trainee meant that hosting such discussions was felt to be impractical and therefore a two-phase alternative was adopted; first, generation of statements through literature search, and second, review of these statements by a small group of experts. Such methods have been used successfully elsewhere (Law & Morrison, 2014). Papers were chosen by the first author because it was felt they were the most up-to-date and comprehensive published works that concerned essential components, costs, benefits, barriers and facilitators (see Appendix M). An effort was made to include work from the grey as well as the academic literature; this may have resulted in the dominance of the recovery model within statements (pointed out in feedback) since literature was included from organisations with a recovery orientation (e.g. Implementing Recovery through Organisational Change (ImROC) and the Scottish Recovery Network (SRN).

Methodological Reflections on Paper 3

In Paper 3, relationships were examined between experiences of providing formal mental health peer support and constructs of empowerment, hope, recovery, quality of life and internalised stigma. Constructs were chosen on the basis of the most consistently reported findings from qualitative literature. Measures were reviewed and selected based on their psychometric properties and length, to minimise participant burden. Analysis was largely exploratory, given the lack of previous literature; however, we did outline some hypotheses. Nevertheless, a large number of tests were carried out and thus there was an

increased chance of Type I errors. We adjusted for this by reducing the alpha value, instead of applying Bonferroni corrections, because the latter measure would have meant only extremely large effects were detected (Cabin & Mitchell, 2000).

We found several significant results for quality of life, including our regression model that showed higher personal costs predict reduced quality of life. It is worth noting that quality of life is defined broadly by the measure we used and is thus liable to influence by factors not measured in this study (Connell, O'Cathain, & Brazier, 2014). Results should therefore be interpreted only in so far as it establishes total personal costs as a unique predictor of quality of life, and only for those peers working in multidisciplinary mental health teams.

Key Strengths and Limitations

A strength of the research overall was the level of engagement with peer supporters across the study. Limitations include the cross-sectional nature of the research and the potential for bias due to a self-selected sample and high attrition.

Overall Reflections and Directions for Future Practice and Research

Results further define the peer support role, doing so from the perspective of experienced peer supporters working in statutory and non-statutory sectors. Organisations may use statements to plan for implementation of peer support. Results highlight that well-prepared organisations can minimise adverse effects through proper preparation and ongoing support. Results suggest that a wide variety of personal benefits are experienced by peer supporters in relation to the role. In order to understand these benefits (and costs) better, longitudinal research is needed, including well-designed trials with outcomes measured for all peers in the supporting relationship.

Personal reflections

My personal interest in conducting this research was influenced by having undertaken qualitative research with people with high levels of internalised stigma in relation to experiencing psychosis and being under mental health services (Burke, Wood,

Zabel, Clark, & Morrison, 2016). I was therefore interested in interventions that reduced internalised stigma. I was aware of the employment of peer support workers, particularly within Early Intervention in Psychosis services. From personal experience and academic understanding I am convinced that contact with stigmatised and similar others is a powerful way to reduce stigma (Thornicroft et al., 2016).

Throughout the research process, I have been mindful of my position as a clinician undertaking research in this area. I am aware that an area of concern for service users/survivors is the 'co-option' of peer support (Russo & Sweeney, 2016), similar to how many believe recovery has been co-opted by traditional services and its original radical intentions altered (Slade et al., 2014). I witnessed a lively debate at the annual Peerfest conference in 2015 where there was criticism of increased attendance by statutory services. Thus, I have had concerns about the legitimacy of my conducting research in the area and potentially bringing an overly 'clinical perspective' to the work. Equally, I have been interested to hear debate challenging the traditional clinician versus service-user divide (Perkins, 2016), and to learn of initiatives supporting mental health clinicians to intentionally use their own experiences of mental health problems (Dorset Mental Health Forum, 2016). A move towards more open acknowledgement of personal experiences of psychological and emotional distress by non-peer staff may be seen as the corollary to public-health campaigns such as Time to Change (https://www.time-to-change.org.uk/).

Concerted efforts to involve peer supporters in the research and feedback from participants stating their belief in the importance of the work has reassured me regarding the above concerns. That so many peer supporters spent considerable time responding to a lengthy online survey perhaps indicates to me goodwill towards researchers, peer or non-peer, working in this field. Within the resource constraints of a ClinPsyD thesis project, and the need for work to represent the substantial work of the Trainee, it is more difficult to undertake work fully co-produced with peers. Nevertheless, my future wish and recommendation for other clinician-researchers is to work under the leadership or in full

co-production with user-researchers when undertaking research in this field (Stamou, 2014; Gillard et al., 2010; Pinfold et al., 2015).

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Appendices

Appendix A: Stigma and Health journal guidelines

Prior to submission, please carefully read and follow the submission guidelines detailed below. Manuscripts that do not conform to the submission guidelines may be returned without review.

Submission

Editor: Patrick W. Corrigan
Illinois Institute of Technology

Manuscript Submission Portal Entrance

Manuscript Types and Length

Stigma and Health accepts both regular articles and brief reports.
Articles should not exceed 25 pages inclusive of the introduction, methods, results, and discussion. Tables, figures and references may be outside of this page limit. Authors may request consideration of longer papers, in advance of submission, when there is clear justification for additional length.
Manuscripts based in the following realms are also encouraged:

- Qualitative studies
- Survey research
- Quantitative tests of hypotheses about the form and impact of stigma
- Theoretical reviews and pioneering reports on innovations
- Research studies on methods meant to erase the stigma of mental and physical illnesses
- First person essays about experience with stigma

The journal will likewise consider lengthier theory-based papers with permission from the editor.

Masked Review

This journal has adopted a policy of masked review for all submissions. The title page should include all authors' names and institutional affiliations and full contact information for the corresponding author. The first page of text should omit this information but should include the title of the manuscript and the date it is submitted. Every effort should be made to see that the manuscript itself contains no clues to the authors' identity.

Manuscript Preparation

Prepare manuscripts according to the *Publication Manual of the American Psychological Association*, 6th Edition (2010). Manuscripts may be copyedited for bias-free language (see Chapter 3 of the *Publication Manual*).
Review APA's Checklist for Manuscript Submission before submitting your article.

Formatting

Double-space all copy. Other formatting instructions, as well as instructions on preparing tables, figures, references, metrics, and abstracts, appear in the *Manual*. Additional guidance on APA Style is available on the APA Style website.
Below are additional instructions regarding the preparation of display equations, computer code, and tables.

Tables

Use Word's Insert Table function when you create tables. Using spaces or tabs in your table will create problems when the table is typeset and may result in errors.

Submitting Supplemental Materials

APA can place supplemental materials online, available via the published article in the PsycARTICLES® database. Please see Supplementing Your Article With Online Material for more details.

Abstract and Keywords

All manuscripts must include an abstract containing a maximum of 250 words typed on a separate page. After the abstract, please supply up to five keywords or brief phrases.

Appendix B: Database search strategies for Psychinfo

1 exp community mental health/ or exp community mental health services/ or exp community psychiatry/ or exp mental health personnel/ or exp mental health programs/ or exp mental health services/90166

2 exp mental disorders/ 515520

3 (mental ill* or "mentally ill" or "mental health problem" or mental disab*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] 50127

4 (psych* adj2 (disorder* or diagnos* or ill* or patient*)).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] 132791

5 1 or 2 or 3 or 4658164

6 ((peer* or consumer* or service user* or user* or volunteer or lay) adj3 (support* or intentional* or learn* or work* or special* or educat* or train* or tut* or advis* or adviz* or advic* or consult* or mentor* or provid* or facil* or led or run or deliv* or operat*)).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] 27850

7 "expert patient".mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] 54

8 (mutual support or "mutual aid").mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] 1334

9 (budd* or befriend*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] 5484

10 6 or 7 or 8 or 934466

11 exp STIGMA/ 8681

12 exp EMPOWERMENT/ 6172

13 exp Self-Efficacy/ 17833

14 11 or 12 or 13 32421

15 exp experimental design/ or exp evidence based practice/ or exp treatment effectiveness evaluation/ 84591

16 (clinical trial* or trial* or intervention* or random* or group* or control* or outcome* or assign*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] 1661481

17 15 or 16 1692953

18	5 and 10 and 14 and 17	130

Appendix C(i) Adapted EPHPP risk of bias tool

Amendments to the original tool are highlighted.

QUALITY ASSESSMENT TOOL FOR QUANTITATIVE STUDIES

EPHPP
Effective Public Health Practice Project

COMPONENT RATINGS

A) SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?

1 Very likely
2 Somewhat likely
3 Not likely
4 Can't tell

(Q2) What percentage of selected individuals agreed to participate?

1 80 - 100% agreement
2 60 – 79% agreement
3 less than 60% agreement
4 Not applicable
5 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

B) STUDY DESIGN

Indicate the study design

1 Randomized controlled trial
2 Controlled clinical trial
3 Cohort analytic (two group pre + post)
4 Case-control
5 Cohort (one group pre + post (before and after))
6 Interrupted time series
7 Other specify _____
8 Can't tell

Was the study described as randomized? If NO, go to Component C.

No Yes

If Yes, was the method of randomization described? (See dictionary)

No Yes

If Yes, was the method appropriate? (See dictionary)

No Yes

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

C) CONFOUNDERS

(Q1) Were there important differences between groups prior to the intervention?

1 Yes
2 No
3 Can't tell

The following are examples of confounders:

1 Race
2 Sex
3 Marital status/family
4 Age
5 SES (income or class)
6 Education
7 Health status
8 Pre-intervention score on outcome measure

(Q2) If yes, indicate the percentage of relevant confounders that were controlled (either in the design (e.g. stratification, matching) or analysis)?

1 80 – 100% (most)
2 60 – 79% (some)
3 Less than 60% (few or none)
4 Can't Tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

D) BLINDING

(Q1) Was (were) the outcome assessor(s) aware of the intervention or exposure status of participants?

1 Yes
2 No
3 Can't tell

(Q2) Were the study participants aware of the research question?

1 Yes
2 No
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

E) DATA COLLECTION METHODS

(Q1) Were data collection tools shown to be valid?

1 Yes
2 No
3 Can't tell

(Q2) Were data collection tools shown to be reliable?

1 Yes
2 No
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

F) WITHDRAWALS AND DROP-OUTS

(Q1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?

1 Yes
2 No
3 Can't tell
4 Not Applicable (i.e. one time surveys or interviews)

(Q2) Indicate the percentage of participants completing the study. (If the percentage differs by groups, record the lowest).

1 80 -100%
2 60 - 79%
3 less than 60%
4 Can't tell
5 Not Applicable (i.e. Retrospective case-control)

RATE THIS SECTION	STRONG	MODERATE	WEAK	
See dictionary	1	2	3	Not Applicable

G) INTERVENTION INTEGRITY

(Q1) What percentage of participants received the allocated intervention or exposure of interest?

1 80 -100%
2 60 - 79%
3 less than 60%
4 Can't tell

(Q2) Was the consistency of the intervention measured?

1 Yes
2 No
3 Can't tell

(Q3) Is it likely that subjects received an unintended intervention (contamination or co-intervention) that may influence the results?

4 Yes
5 No
6 Can't tell

H) ANALYSES

(Q1) Indicate the unit of allocation (circle one)

community organization/institution practice/office individual

(Q2) Indicate the unit of analysis (circle one)

community organization/institution practice/office individual

(Q3) Are the statistical methods appropriate for the study design?

1 Yes
2 No
3 Can't tell

(Q4) Is the analysis performed by intervention allocation status (i.e. intention to treat) rather than the actual intervention received?

1 Yes
2 No
3 Can't tell

GLOBAL RATING

COMPONENT RATINGS

Please transcribe the information from the gray boxes on pages 1-4 onto this page. See dictionary on how to rate this section.

A	**SELECTION BIAS**	**STRONG**	**MODERATE**	**WEAK**
		1	2	3
B	**STUDY DESIGN**	**STRONG**	**MODERATE**	**WEAK**
		1	2	3
C	**CONFOUNDERS**	**STRONG**	**MODERATE**	**WEAK**
		1	2	3
D	**BLINDING**	**STRONG**	**MODERATE**	**WEAK**
		1	2	3
E	**DATA COLLECTION METHODS**	**STRONG**	**MODERATE**	**WEAK**
		1	2	3
F	**WITHDRAWALS AND DROPOUTS**	**STRONG**	**MODERATE**	**WEAK**
		1	2	3
G	**INTERVENTION INTEGRITY**	**STRONG**	**MODERATE**	**WEAK**
		1	2	3
H	**ANALYSES**	**STRONG**	**MODERATE**	**WEAK**
		1	2	3

GLOBAL RATING FOR THIS PAPER (circle one)

1 STRONG (no WEAK ratings)
2 MODERATE (one or two WEAK rating)
3 WEAK (three or more WEAK ratings)

Appendix C(ii) Adapted EPHPP risk of bias - Dictionary

Amendments to the original tool are highlighted.

Quality Assessment Tool for Quantitative Studies Dictionary

The purpose of this dictionary is to describe items in the tool thereby assisting raters to score study quality. Due to under-reporting or lack of clarity in the primary study, raters will need to make judgements about the extent that bias may be present. When making judgements about each component, raters should form their opinion based upon information contained in the study rather than making inferences about what the authors intended.

A) SELECTION BIAS

(Q1) Participants are more likely to be representative of the target population if they are randomly selected from a comprehensive list of individuals in the target population (score very likely). They may not be representative if they are referred from a source (e.g. clinic) in a systematic manner (score somewhat likely) or self-referred (score not likely).

(Q2) Refers to the % of subjects in the control and intervention groups that agreed to participate in the study before they were assigned to intervention or control groups.

B) STUDY DESIGN

In this section, raters assess the likelihood of bias due to the allocation process in an experimental study. For observational studies, raters assess the extent that assessments of exposure and outcome are likely to be independent. Generally, the type of design is a good indicator of the extent of bias. In stronger designs, an equivalent control group is present and the allocation process is such that the investigators are unable to predict the sequence.

Randomized Controlled Trial (RCT)

An experimental design where investigators randomly allocate eligible people to an intervention or control group. A rater should describe a study as an RCT if the randomization sequence allows each study participant to have the same chance of receiving each intervention and the investigators could not predict which intervention was next. If the investigators do not describe the allocation process and only use the words ‘random’ or ‘randomly’, the study is described as a controlled clinical trial.

See below for more details.

Was the study described as randomized?

Score YES, if the authors used words such as random allocation, randomly assigned, and random assignment.

Score NO, if no mention of randomization is made.

Was the method of randomization described?

Score YES, if the authors describe any method used to generate a random allocation sequence.

Score NO, if the authors do not describe the allocation method or describe methods of allocation such as alternation, case record numbers, dates of birth, day of the week, and any allocation procedure that is entirely transparent before assignment, such as an open list of random numbers of assignments.

If NO is scored, then the study is a controlled clinical trial.

Was the method appropriate?

Score YES, if the randomization sequence allowed each study participant to have the same chance of receiving each intervention and the investigators could not predict which intervention was next. Examples of appropriate approaches include assignment of subjects by a central office unaware of subject characteristics, or sequentially numbered, sealed, opaque envelopes.

Score NO, if the randomization sequence is open to the individuals responsible for recruiting and allocating participants or providing the intervention, since those individuals can influence the allocation process, either knowingly or unknowingly.

If NO is scored, then the study is a controlled clinical trial.

Controlled Clinical Trial (CCT)

An experimental study design where the method of allocating study subjects to intervention or control groups is open to individuals responsible for recruiting subjects or providing the intervention. The method of allocation is transparent before assignment, e.g. an open list of random numbers or allocation by date of birth, etc.

Cohort analytic (two group pre and post) An observational study design where groups are assembled according to whether or not exposure to the intervention has occurred. Exposure to the intervention is not under the control of the investigators. Study groups might be non-equivalent or not comparable on some feature that affects outcome.

Case control study
A retrospective study design where the investigators gather 'cases' of people who already have the outcome of interest and 'controls' who do not. Both groups are then questioned or their records examined about whether they received the intervention exposure of interest.

Cohort (one group pre + post (before and after)
The same group is pretested, given an intervention, and tested immediately after the intervention. The intervention group, by means of the pretest, act as their own control group.

Interrupted time series
A time series consists of multiple observations over time. Observations can be on the same units (e.g. individuals over time) or on different but similar units (e.g. student achievement scores for particular grade and school). Interrupted time series analysis requires knowing the specific point in the series when an intervention occurred.

C) CONFOUNDERS
By definition, a confounder is a variable that is associated with the intervention or exposure and causally related to the outcome of interest. Even in a robust study design, groups may not be balanced with respect to important variables prior to the intervention. The authors should indicate if confounders were controlled in the design (by stratification or matching) or in the analysis. If the allocation to intervention and control groups is randomized, the authors must report that the groups were balanced at baseline with respect to confounders (either in the text or a table).

D) BLINDING

(Q1) Assessors should be described as blinded to which participants were in the control and intervention groups. The purpose of blinding the outcome assessors (who might also be the care providers) is to protect against detection bias.

(Q2) Study participants should not be aware of (i.e. blinded to) the research question. The purpose of blinding the participants is to protect against reporting bias.

E) DATA COLLECTION METHODS
Tools for primary outcome measures must be described as reliable and valid. If 'face' validity or 'content' validity has been demonstrated, this is acceptable. Some sources from which data may be collected are described below:
Self reported data includes data that is collected from participants in the study (e.g. completing a questionnaire, survey, answering questions during an interview, etc.).
Assessment/Screening includes objective data that is retrieved by the researchers. (e.g. observations by investigators).
Medical Records/Vital Statistics refers to the types of formal records used for the extraction of the data.
Reliability and validity can be reported in the study or in a separate study. For example, some standard assessment tools have known reliability and validity.

F) WITHDRAWALS AND DROP-OUTS

Score **YES** if the authors describe BOTH the numbers and reasons for withdrawals and drop-outs.
Score **NO** if either the numbers or reasons for withdrawals and drop-outs are not reported.
The percentage of participants completing the study refers to the % of subjects remaining in the study at the final data collection period in all groups (i.e. control and intervention groups).

G) INTERVENTION INTEGRITY

The number of participants receiving the intended intervention should be noted (consider both frequency and intensity). For example, the authors may have reported that at least 80 percent of the participants received the complete intervention. The authors should describe a method of measuring if the intervention was provided to all participants the same way. As well, the authors should indicate if subjects received an unintended intervention that may have influenced the outcomes. For example, co-intervention occurs when the study group receives an additional intervention (other than that intended). In this case, it is possible that the effect of the intervention may be over-estimated. Contamination refers to situations where the control group accidentally receives the study intervention. This could result in an under-estimation of the impact of the intervention.

H) ANALYSIS APPROPRIATE TO QUESTION

Was the quantitative analysis appropriate to the research question being asked?
An intention-to-treat analysis is one in which all the participants in a trial are analyzed according to the intervention to which they were allocated, whether they received it or not. Intention-to-treat analyses are favoured in assessments of effectiveness as they mirror the noncompliance and treatment changes that are likely to occur when the intervention is used in practice, and because of the risk of attrition bias when participants are excluded from the analysis.
Appropriate analyses should be reported clearly. In assessing appropriateness of analyses consider the following: whether authors reported the relevant statistics; whether authors justified decision-making concerning choice of statistical tests used; reporting of treatment of missing data; sample size and power calculations; corrections for Type I error; handling of skewness.

Component Ratings of Study:

For each of the six components A – F, use the following descriptions as a roadmap.

A) SELECTION BIAS

Strong: The selected individuals are very likely to be representative of the target population (Q1 is 1) **and** there is greater than 80% participation (Q2 is 1).
Moderate: The selected individuals are at least somewhat likely to be representative of the target population (Q1 is 1 or 2); **and** there is 60 - 79% participation (Q2 is 2). 'Moderate' may also be assigned if Q1 is 1 or 2 and Q2 is 5 (can't tell).
Weak: The selected individuals are not likely to be representative of the target population (Q1 is 3); **or** there is less than 60% participation (Q2 is 3) **or** selection is not described (Q1 is 4); and the level of participation is not described (Q2 is 5).

B) DESIGN

Strong: will be assigned to those articles that described RCTs and CCTs.
Moderate: will be assigned to those that described a cohort analytic study, a case control study, a cohort design, or an interrupted time series.
Weak: will be assigned to those that used any other method or did not state the method used.

C) CONFOUNDERS

Strong: will be assigned to those articles that controlled for at least 80% of relevant confounders (Q1 is 2); **or** (Q2 is 1).
Moderate: will be given to those studies that controlled for 60 – 79% of relevant confounders (Q1 is 1) **and** (Q2 is 2).
Weak: will be assigned when less than 60% of relevant confounders were controlled (Q1 is 1) **and** (Q2 is 3) **or** control of confounders was not described (Q1 is 3) **and** (Q2 is 4); **or** if this component is not-applicable because the study is a pre-post study.

D) BLINDING

Strong: The outcome assessor is not aware of the intervention status of participants (Q1 is 2); **and t**he study participants are not aware of the research question (Q2 is 2).
Moderate: The outcome assessor is not aware of the intervention status of participants (Q1 is 2); **or** the study participants are not aware of the research question (Q2 is 2); **or b**linding is not described (Q1 is 3 and Q2 is 3).
Weak: The outcome assessor is aware of the intervention status of participants (Q1 is 1); **and** the study participants are aware of the research question (Q2 is 1) **or** the reader can't tell (Q2 is 3); **or** if this component is not-applicable because the study is a pre-post study.

E) DATA COLLECTION METHODS

Strong: The data collection tools have been shown to be valid (Q1 is 1); **and** the data collection tools have been shown to be reliable (Q2 is 1).
Moderate: The data collection tools have been shown to be valid (Q1 is 1); **and** the data collection tools have not been shown to be reliable (Q2 is 2) **or** reliability is not described (Q2 is 3).
Weak: The data collection tools have not been shown to be valid (Q1 is 2) **or** both reliability and validity are not described (Q1 is 3 and Q2 is 3).

F) WITHDRAWALS AND DROP-OUTS - a rating of:

Strong: will be assigned when the follow-up rate is 80% or greater (Q2 is 1).
Moderate: will be assigned when the follow-up rate is 60 – 79% (Q2 is 2) **OR** Q2 is 5 (N/A).
Weak: will be assigned when a follow-up rate is less than 60% (Q2 is 3) or if the withdrawals and drop-outs were not described (Q2 is 4).

G) INTERVENTION INTEGRITY - a rating of:

Strong: will be assigned when 80-100% of participants received the intervention (Q1 is 1); **and** the consistency of intervention was measured (Q2 is 1); **and** it is not likely the participants received an unintended intervention / contamination (Q3 is 5).
Moderate: will be assigned when 60% or more participants received the intervention (Q1 is 1 **or** 2); **and** the consistency of intervention was not measured or this is not reported (Q2 is 2 **or** 3); **and** participants may or may not have received an unintended intervention / contamination **or** this is not reported (Q3 is 4 **or** 5 **or** 6) **OR** less than 60% of participants received the intervention of this is not reported (Q2 is 3 **or** 4); **and** the consistency of intervention was measured (Q2 is 1); **and** it is not likely the participants received an unintended intervention / contamination or this is not reported (Q3 is 5 **or** 6).
Weak: will be assigned when less than 60% of participants received the intervention or this is not reported (Q1 is 3 **or** 4); **and** the consistency of the intervention is not measured or this is not reported (Q2 is 2 **or** 3); **and** the subject may or may not have received an unintended intervention (Q 3 is 4 **or** 5 **or** 6).

H) ANALYSES - a rating of:

Strong: will be assigned if the statistical analyses were appropriate (Q3 is 1); **and** the analysis was intention-to-treat (Q4 is 1).

Moderate: will be assigned if the statistical analyses were appropriate or the reader cannot tell (Q3 is 1 **or** 3); **and** the analyses is performed on an as-treated basis or this is unclear (Q4 is 2 **or** 3), **OR** the statistical analyses were appropriate or the reader cannot tell (Q3 is 1 **or** 3).
Weak: will be assigned if the statistical analyses were not appropriate (Q3 is 2).

Appendix D: Studies Excluded from the Review

Study	Reason for exclusion
Cook et al (2011) Results of a randomized controlled trial of mental illness self-management using Wellness Recovery Action Planning	Constructs of interest not measured
Cook et al (2012) Randomized controlled trial of peer-led recovery education using Building Recovery of Individual Dreams and Goals through Education and Support (BRIDGES)	Constructs of interest not measured
Daumit et al (2010) Randomized trial of peer supported physical activity for persons with severe mental illness in community psychiatry	<50% MH sample/ not MH specific
Farrell et al (2004) Chronic disease self-management improved with enhanced self-efficacy	<50% MH sample/ not MH specific
Gould et al (2007) Stigma and the military: Evaluation of a PTSD psychoeducational program	Not a peer support intervention
Granholm et al (2014) Randomized Clinical Trial of Cognitive Behavioral Social Skills Training for Schizophrenia: Improvement in Functioning and Experiential Negative Symptoms	Not a peer support intervention
Greenberg et al (2010) A cluster randomized controlled trial to determine the efficacy of Trauma Risk Management (TRiM) in a military population	<50% MH sample/ not MH specific
Halsbeck et al (2015) Introducing the chronic disease self-management program in Switzerland and other German-speaking countries: findings of a cross-border adaptation using a multiple-methods approach	<50% MH sample/ not MH specific
Hogan et al (2015) Effectiveness of the Pillars of Recovery Group and Key Working Program for Service Users with a Dual Diagnosis of Substance	Not a peer support intervention

Dependence and Concurrent Mental Health Problems: An Initial Constructs Evaluation	
Jerant et al (2009) Home-based, peer-led chronic illness self-management training: findings from a 1-year randomized controlled trial	<50% MH sample/ not MH specific
Kelly et al (2014) A pilot test of a peer navigator intervention for improving the health of individuals with serious mental illness	Constructs of interest not measured
Kennedy et al (2007) The effectiveness and cost effectiveness of a national lay-led self care support programme for patients with long-term conditions: a pragmatic randomised controlled trial	<50% MH sample/ not MH specific
Lucksted et al (2009) Initial evaluation of the Peer-to-Peer program	Constructs of interest not measured
Lucksted et al (2011) Ending Self-Stigma: Pilot Evaluation of a New Intervention to Reduce Internalized Stigma Among People with Mental Illnesses	Not a peer support intervention
Macinnes et al (2008) The evaluation of a short group programme to reduce self-stigma in people with serious and enduring mental health problems	Not a peer support intervention
Magura et al (2007) Effects of 'Dual Focus' Mutual aid on self-efficacy for Recovery and Quality of Life	Not an intervention study
Magura et al (2008) Consumer Evaluation of Dual Focus Mutual Aid	Not an intervention study
Mancini et al (2013) Statewide Implementation of Recovery Support Groups for people with SMI	Constructs of interest not measured (Lack of clarification regarding specific items from larger measurement tool despite request of authors)

Michaels et al (2014) Changing Stigma Through a Consumer-Based Stigma Reduction Program	Constructs of interest not measured (measured used for stigma attitudes and attributions not internalised stigma)
Millar et al (2014) Promoting mental wellbeing: developing a theoreticallyand empirically sound complex intervention	Not a peer support intervention
Nelson et al (2006) A longitudinal study of mental health consumer / survivor initiatives Part 2 – a quantitative study of impacts of participation on new members.	Constructs of interest not measured
Pickett et al (2010) Early Constructs and Lessons Learned from a Study of the Building Recovery of Individual Dreams and Goals through Education and Support (BRIDGES) Program in Tennessee	Data reported in fuller detail in another included paper
Rucker-Whitaker et al (2007) A pilot study of self-management in African Americans with common chronic conditions	<50% MH sample/ not MH specific
Segal et al (2013) Self-Stigma and Empowerment in Combined-CMHA and Consumer-Run Services: Two Controlled Trials	Data reported in other included paper; Constructs of interest not measured – after visual inspection of the stigma measure used, review authors deemed it was a measure of stigma attitudes rather than internalised stigma.
Szczebak et al (2013) Measuring the effect of supported employment treatment on self-efficacy in individuals with severe mental illness	Constructs of interest not measured
Turner (2015) An evaluation of a self-management program for patients with long-term conditions	<50% MH sample/ not MH specific

Appendix E: Characteristics of Intervention and Control Groups in Included Studies

			Intervention characteristics							Control condition characteristics
Study (Design)	Mod-ality	Setting	Intervention components	No. of sessions offered	Duration of sessions	Frequency of sessions	Training of peer supporters	Supervision of peer supporters	Fidelity of intervention	
Barbic et al., 2009 (RCT)	Grp 7-9 per group	Comm	Recovery workbook programme (RWP) adapted from Spaniol et al (1994). Education to increase knowledge and awareness of recovery, illness, the nature of stress, and to enhance personal meaning, build personal support and develop goals and plans of action. Each session included a combination of teaching, group discussion, and practice exercises. Clients encouraged to review material and practice between sessions. Facilitated by an occupational therapist and a peer support worker. In addition to TAU.	12.	2 hrs	Weekly	N/R	N/R	N/R	Treatment as usual as determined by the assertive community treatment (ACT) team where participants were receiving car and from which they had been recruited.
Boevink et al., 2016 (RCT)	Grp ≥8 per group	Comm	Toward Recovery, Empowerment and Experiential expertise (TREE). Provided by 2 or more senior peer workers. Core of programme: (i) Recovery self-help working groups - weekly group (max 8 members) facilitated by peer workers. Based on Recovery and Empowerment and organised as a self-help rather than a therapeutic group activity. In group discussions emphasis on strengths and possibilities. Also (ii) a familiarisation course on the meaning and concept of 'Recovery' for patients. (ii) One-day seminar for patients and their	Early starters = up to 104 weeks. Late starters = up to 52 weeks.	2 hrs	Fortnightly	N/R	N/R	N/R	Wait-list control (WLC). Treatment as usual (TAU) which was professional case management while on wait list. Early Starters group was exposed to TAU up to baseline and to TREE at 12 and 24 months.

			MH care managers on concept of Recovery In addition to care as usual (CAU).							
Castelein et al., 2008 (RCT)	Grp Aprx 10 per group	N/R	Guided Peer Support Group for Psychosis (GPSG-P). Each session involved working in pairs and wider group discussion on how to cope with daily life after a psychotic episode. Groups facilitated by nurses who had training in 'minimal guidance attitude' In addition to TAU.	16	90 mins	Fortnightly	Nurse facilitators were trained in 'minimal guidance attitude' approach.	Nurse facilitators received supervision over telephone after each session.	After each session fidelity was rated on a fidelity rating scale.	WLC - TAU while on waitlist, which was typically medication monitoring, psycho-education and supportive counselling.
Chinman et al., 2013 (RCT)	121 incl. case mgnt	VA Comm	Peers Enhancing Recovery (PEER). Two full-time peer specialists employed and introduced into each of 3 Veterans Health Administration Mental Health Intensive Case Management, (VHA-MHICM). PSs carried out various case management duties including delivering medication, accompanying veterans to appointments, developing recovery plans, meeting with veterans individually, leading and co-leading groups, engaging veterans into servies and helping other colleagues, all while drawing upon their own lived experience. They participated in all service activities. They did not have caseload administrative responsibilities, but rather 'floated' in order to work with multiple veterans more readily.	Not specified.	Not specified	Not specified	30 hour training based on the Georgia model of Medicaid-reimbursed peer specialists and local training pertinent to service.	Weekly supervision by both an “internal” supervisor (MHCIM staff) and an “external” supervisor (PEER principal investigator, a licensed clinical psychologist) .	N/R	TAU in traditional VHA MHICM teams expected to adhere to assertive community treatment practice - providing intensive, flexible community support.
Cook et al., 2009 (Pre-post study)	Grp	Comm	Wellness Recovery Action Planning (WRAP). Manualised self-management intervention. Led by 2 peers. WRAP emphasis holistic health, wellness, strengths and social support. Coursework included lectures, group discussion, personal examples from the lives of the facilitators and participants, individual and group work, creation of self-management	8.	2.5 hrs	Weekly	N/R	N/R (see left)	Use of a simple checklist to track handouts, discussions, and exercises; fidelity remained	n/a

			and crisis plans and voluntary homework exercises.						above 95% for all sessions at all sites.	
Eisen et al., 2012 (RCT)	Grp	VA service	Peer-led vet-to-vet group (PL V2V). Led by 2 peer facilitators. Used written recovery materials such as the Spaniol Recoery Workbook. Peers shared personal experiences as veterans with mental illness with group members. In addition to TAU.	12	45 mins	Weekly	Peers received training in the Vet-to-Vet model from the study team.	Peer received ongoing supervision from a clinician and a peer supervisor.	N/R	Clinician-led recovery group (CL-V2V) using mostly the same materials as PL-V2V. In addition to TAU (TAU not described).
Fukui et al., 2010 (Pre-post study)	Grp (6-13 ppts)	Comm	Pathways to Recovery (PTR); peer-led recovery group. Using PTR workbook and supplemental handouts. Based on the Strengths Model (Rapp & Goscha). Included developing a recovery plan and set goals across multiple domains of life including, home, learning, assets, meaningful work, leisure and recreation, health and wellness, intimacy and sexuality, spirituality, and social support. Core activities include group discussion, reading part of the workbook, small group activities, personal reflection and writing in the workbook.	12	90 mins	Weekly	Peer facilitators attended a 2-day training that covered the basic elements of PTR.	Supervision was provided to the facilitators by service (consumer-run-organisation) director with additional support from research team as needed.	A facilitator guide was used. Facilitators noted session attendance, length and any significant deviations from the curriculum during the sessions.	n/a
Jonikas et al, 2013 (RCT)	Grp (5–12 ppts)	Comm	Wellness Recovery Action Planning (WRAP). Manualised self-management intervention. Led by 2 peers. Further details as per Cook et al., (2009).	8	2.5 hrs	Weekly	All instructors were certified by the Copeland Center for Wellness and Recovery and had	Weekly telephone supervision	Fidelity checklist used for every session and frequent observation of sessions by investigators with feedback	WLC - TAU while on the waiting list which included psychotropic medications and medication management, individual and group outpatient therapy, vocational services, residential services, substance abuse treatment, and inpatient care.

							experience teaching WRAP.		provided afterwards.	
Living-ston et al., 2013 (Pre-post study)	Grp & 121	For-ensic in-patient	Peer support worker employed 1 PSW delivered (i) weekly mutual support group (ii) individual sessions.	Not specified – as needed for up to 19m.	Group=1 hr 121=5-30 mins	Group= weekly 121= various	N/R	N/R	N/R	n/a
Mahlke et al., 2017 (Pre-post study)	121	In-patient & Comm	121-PS Highly trained PS providing 121 support aiming to enhance peers' recovery and sense of control in their lives. Specific tasks included practical support with daily life, helping to endure and understand crises, sharing ideas about individual planning and recovery, providing information, and mediating in conflicts with clinicians or family. In these cases, supplemental appointments with the conflicting parties were possible. All meetings and activities delivered were documented by the peer providers in a short protocol for each meeting.	Not specified – as needed. Expected 4-26 sessions over 6m.	Apprx 1 hr	Maximum weekly frequency	All peer supporters attended a structured 12 weekend, 192 hour training program delivered by a peer worker and a psych-ologist.	Fortnightly group-supervision provided by a psychologist and trainer from the peer education organisation. Further individual supervision on request.	N/R	TAU - both groups received their treatment as usual. This included in- and out-patient care with infrequent meetings with out-patient psychiatrists, and access to community based groups and separate psychological treatments. The control group did not receive any additional intervention beyond treatment as usual.
Nico-laidis et al., 2012 (Pre-post study)	121 incl. case mgnt	Comm	Peer health advocate (PHA) providing various individual support and intervention to depressed African American female survivors of intimate partner violence (IPV). The PHA met individually with participants, undertook case management responsibilities and used motivational interviewing (MI) skills to help women set and reach self-management goals related to depression and safety. For first 40 participants, nine workshop sessions for depression self-management based on CBT principles were offered, facilitated by the Health Advocate, but due	Not specified – as needed over 6m	Not specified.	Not specified.	The peer advocate received 18 hours training in in the use of MI with survivors of IPV.	The peer advocate received individual, in-person, ongoing, bi-monthly training and supervision from the study co-investigator.	Supervision included joint review of audiotaped MI sessions with study participants and joint use of the Motivational Interviewing Treatment Integrity	n/a

			to low take-up these were abandoned. Topics covered were then incorporated into individual sessions.						(MITI) 3.0 (Moyers et al., 2007) fidelity tool.	
Nico-laidis et al., 2013 (Pre-post study)	Grp & 121 case mgnt	Comm	Peer Latina 'promotora' of depressed survivors of IPV who: (i) provided individual support & case mngt services, helping them to access healthcare services, and (ii) co-facilitated a manualised 12-session group cognitive behavioural programme for depression in the context of IPV	Group= 12 sessions 121= not specified – as needed.	Group= N/R. 121 not specified.	Group= weekly. 121= various.	The promotora had a full-day training on depression and other mental health issues common in domestic violence survivors and a 3-day training on MI.	The promotora met individually with the PI to ensure that she felt comfortable leading the intervention. Not otherwise reported.	N/R	n/a
O'Con-ner et al., 2015 (Pre-post study)	121	Comm	3 month peer education (PE) programme delivered by a trained peer educator who provided psychoeducation, social support and motivational interviewing. Peer educators were 7 older adults recruited from the same community as the ppts. All with history of depression in remission. Matched to study participants on age, neighbourhood, and ppts preference for gender and race. PEs did not function as MH counselors - this was emphasized in training. PEs had no set structure to the PE sessions. Were trained to use MI techniques to assess ppts' needs, provide info about depression and its tx, discuss their own experience and road to recovery,	Not specified – as needed. (Target was min.3 contacts over 3m)	Not specified.	Not specified.	PEs completed a 5-session 20hr, manualized training program comprising lectures, role play and group discussion.	PEs attended biweekly supervision with project researchers / clinicians.	N/R	n/a

			and provide social and emotional support.							
Pickett et al., 2012 (RCT)	Grp (12-15 ppts)	Comm	Building Recovery of Individual Dreams and Goals (BRIDGES) 8-week peer-led education course designed to empower MH consumers. Teaches consumers about the biological causes of mental illness, the medications used to treat symptoms and common medication side-effects, and MH treatment services, self-advocacy, communication and problem solving skills, philosophy of recovery, social support and crisis planning. Instructors deliver class materials via scripted lectures, group exercises, personal examples from their own experiences, and group discussion. At the end of each class, participants are encouraged to share their own recovery stories.	8	2.5 hrs	Weekly	All instructors completed an intensive 2.5 day training session led by the researchers. All had prior experience in delivering BRIDGES.	Weekly group conference calls – discussion of attendance, fidelity, problems and upcoming session plans.	Fidelity assessed within 48 h of each session using a detailed bespoke checklist. Mean of fidelity score was 95.1 % (SD = 0.04).	WLC – TAU which included medication management, case management and individual therapy.
Resnick & Rosen-heck, 2008 (RCT)	Grp	VA Comm	Vet-to-Vet (V2V) peer education and support program. Vet-to-Vet is an adjunct to existing services and is entirely voluntary. Specific topics are designated for each of the 5 weekdays: Disability Awareness, Disability Pride; Recovery Workshop; Writers' Meeting; Wellness; and Mental Illness Anonymous (MIA). Meetings are educational in orientation, and structured around reading material in a 'Read & discuss' format. However, there is flexibility in what is selected and discussed; if there are pressing issues, reading material addressing that topic may be substituted for the planned text in order to facilitate discussion on relevant issues. Peer facilitators are not VA staff and do not have access to charts.	Not specified – as needed. Groups held 5 days per week.	45 mins	Weekdays	Peer facilitators are first nominated by other peer facilitators. Training is 4 x 45mins training classes, co-facilitation of 2 groups a week during the training period and ongoing observation and	Mandatory weekly supervision groups are co-led by a professional and a peer supervisor.	Trainees are monitored with a bespoke scale) developed for the purposes of supervision and monitoring of fidelity to the Vet-to-Vet model.	n/a (pre-V2V)

			In addition to TAU.				feedback.			
Rogers et al., 2007 (RCT)	Peer-op. ser-vice	Comm	Consumer-operated service programs (COSPs) providing a variety of interventions loosely falling into the following categories: - drop-in (n=4) - peer support and mentoring (n=2) - education and advocacy (n=2) Common ingredients across all COSPs included a focus on peer support, recovery education, empowerment and tangible assistance for independent community living.	Not specified – as needed.	Not specified – as needed.	Not specified – as needed.	N/R	N/R	N/R	TAU which was an array of different traditional mental health services such as medication management, case management, residential services, psychotherapy, day services and psychosocial rehabilitation services.
			In addition to TAU.							
Rusch et al., 2014 (RCT)	Grp (6-10 ppts)	Comm	Coming-Out-Proud (COP) manualised intervention to support decision about disclosure of MH problems. Facilitated by 2 peers. 3 sessions: Lesson 1: Pros and cons odf disclosure Lesson 2: Different ways to disclose. Lesson 3: How to tell story in a personally meaningful way and get support from others to do this. All pppt receive a copy of the COP workbook.	3	2 hrs	Weekly	Each pair of peers were trained with the workbook and ran a practice group to achieve a fidelity score of at least 80%	N/R	Fidelity of each session rated with bespoke measure. Fidelity rated by observer researchers ranged between 90-100%.	TAU (not described) The majority of participants received psychotherapy and pharmacotherapy during the time of the study.
			In addition to TAU.							
Russi-nova et al., 2014 (RCT)	Grp (N/R)	Comm (Uni)	Peer-led manualised group anti-stigma intervention using photography (Photovoice). Using cameras to photograph objects /events and generate narratives for pictures in facilitated group discussion. Each ppt creates one photovoice piece that combines a photograph and narrative relevant to encountering or coping with	10	90 mins	Weekly	Peer leaders were involved in developme nt of the interventio n	N/R	Bespoke fidelity measure rated every session – Average rating was 3.8 for content	TAU (not described)

			psychiatric stigma. In addition to TAU.						fidelity and 3.6 for process fidelity (max score = 4).	
Salzer et al., 2016 (RCT)	121 & Peer-op ser-vice	Comm	Personalised individual support from a certified peer specialist (CPS) and core services from a Centre for Independent Living (CIL) – a peer-led and staffed services for people with psychiatric disabilities. Core services include peer support, information, referral, independent living skills training, and advocacy. 3 attempts at contact by phone to arrange a 1st session + a letter sent if no contact made. First session followed a standard protocol: overview of the philosophy and history of CILs and the core services on offer . Second session, a standardized script to assess ppt. support needs was used. Further sessions were individualised and driven by ppts' needs. Meetings between participants and the CPS took place at CIL premises. Analysis of supports received in the intervention identify that it comprised 31% peer support. In addition to TAU for 6m.	Not specified – as needed for 6m.	Not specified – as needed for 6m.	Not specified – as needed for 6m.	The CPS had gone through a 75hr training curriculum. Additional training in the CIL core services philosophy and model was provided.	The CPS also received supervision in the CIL core services philosophy and model from peers with disabilities in the organization.	N/R	TAU - whatever outpatient therapy they were receiving from the program they were recruited from (two community mental health centre outpatient programs), which would typically include medication management and supportive therapy.
Segal et al., 2010 (RCT)	Peer-op. ser-vice	Comm	5 x self-help agencies (SHA) located nearby a traditional community mental health agency. (CMHA). SHAs are consumer-operated programs guided by a self-help ideology. Common service elements included peer support groups, material resource, drop-in socialization and direct services. Services included help in obtaining survival resources (food, shelter,	Not specified – as needed.	Not specified – as needed	Not specified – as needed	N/R	N/R	N/R	TAU = usual treatment at local (CMHA) which provided inpatient and outpatient treatment, medication management, individual and group therapy, referral and case management services.

			and clothing), money management, counseling, payeeship services, case management, peer counseling, and provision of information or referral. All SHAs provided physical space for socializing and developing ongoing peer support networks. They also offered opportunities for involvement in local, state, and national advocacy efforts They are run as participatory democracies or are board-and-staff-run. They were open on average 5.3 days per week.							
Segal et al., 2011 (RCT)	Peer-op. ser-vice	Comm	In addition to TAU. A board-and-staff–run consumer-operated drop-in centre (COSP) co-located with a traditional community mental health agency. (CMHA). The COSP provided help with money management and payeeship services, counselling, case management, peer counselling, assistance in obtaining survival resources (such as food, shelter, and clothing), and provision of information or referral. Its drop-in centre program was open six days a week. It promoted mutual support between members. All members participate in a community meeting where program ideas are discussed and decided by vote. Major organizational decisions are delegated to staff, administrators, and the organization's governing board. Its organizational model is that of a "top-down" board-and-staff–run agency.	Not specified – as needed.	Not specified – as needed.	Not specified – as needed.	N/R	N/R	N/R	TAU = CMHA that provided outpatient mental health services that included assessment, medication review, individual and group therapy, case management, and referral. In addition to professional providers, several consumer case managers staff the CMHA.
van Gestel-	Grp	N/R	In addition to TAU. 'Recovery Is Up to You' (RIUTY) – a manualised 12 week course lead by 2	12	2hrs	Weekly	Peer instructors	N/R	Instructors completed a	WLC. TAU while on waitlist (TAU not

Timmer-mans et al., 2012 (RCT)	(3-12 ppts)		peers. Standardised workbook used - each session organised around a recovery - related theme. Important elements of the course were the presence of role models, psychoeducation and illness management, learning from others' experiences, social support and homework assignments. In addition to TAU.				had previously attended the course and then completed a train-the-trainer course.		checklist after each session.	described).
Vayshen-ker et al., 2016 (Pre-post study)	Peer-op. ser-vice	Comm	Participation in a consumer-run agency resource & wellness centre (a drop-in center offering peer-led support groups as well as opportunities to engage in arts and leisure activities) and supported employment program.	Not specified – as needed.	Not specified.	Not specified.	N/R	N/R	N/R	n/a

Appendix F Description of outcome measures used in papers included in Paper 1

Empowerment measures (n=3)

15 studies

1. The Empowerment Scale (Rogers et al, 1997) (n=12),
2. The Personal Empowerment Scale (Segal et al, 1995) (n=2)
4. The Dutch Empowerment Scale (n=1)

1. The Empowerment Scale (Rogers et al, 1997)

Used in 12 studies included in the review.

Description:

The RES is a 28-item scale developed with mental health service-users. Its definition of empowerment has been described as self-efficacy combined with societal empowerment (Castelein et al., 2008a). There are 5 subscales: self-efficacy - self-esteem; power - powerlessness; community activism; righteous anger; and optimism - control over the future.

Validity and reliability:

The scale's validity and reliability has been demonstrated in a number of studies (Corrigan et al., 1999; Rogers et al., 1997; Rogers et al., 2010; Wowra & McCarter, 1999).

Items:

1. I can pretty much determine what will happen in my life
2. People are only limited by what they think is possible.
3. People have more power if they join together as a group.
4. Getting angry about something never helps.
5. I have a positive attitude toward myself.
6. I am usually confident about the decisions I make.
7. People have no right to get angry just because they don't like something.
8. Most of the misfortunes in my life were due to bad luck.
9. I see myself as a capable person.
10. Making waves never gets you anywhere.
11. People working together can have an effect on their community.
12. I am often able to overcome barriers.
13. I am generally optimistic about the future.
14. When I make plans, I am almost certain to make them work.
15. Getting angry about something is often the first step toward changing it.
16. Usually I feel alone.

17. Experts are in the best position to decide what people should do or learn.
18. I am able to do things as well as most other people.
19. I generally accomplish what I set out to do.
20. People should try to live their lives they way they want to.
21. You can't fight city hall.
22. I feel powerless most of the time.
23. When I am unsure about something, I usually go along with the rest of the group.
24. I feel I am a person of worth, at least on an equal basis with others.
25. People have the right to make their own decisions, even if they are bad ones.
26. I feel I have a number of good qualities.
27. Very often a problem can be solved by taking action.
28. Working with others in my community can help to change things for the better.

Scoring:

Each items is rated on a 4-point Likert scale from Strongly Agree to Strongly Disagree. Higher scores indicate more empowerment.

2. The Personal Empowerment Scale (Segal et al., 1995)

Used in 2 studies included in the review.

Description:

The PES focuses on control in common areas of life (e.g. money, accommodation). Its definition of empowerment has been described as the number of choices and opportunities one has in life and in the meeting of basic needs (Castelein et al., 2008a). It contains 20 items. Items were derived from observation at a self-help agency and were reviewed by people who used this agency. There are two subscales: discretion; and reduction in chance. Weak correlations have been found between the RES and the PES indicating unsatisfactory convergent validity and suggesting the scales measure different constructions of empowerment (Castelein et al., 2008).

Validity and reliability

Construct validity and internal consistency has been reported in the original paper by the scale authors (Segal et al., 1995).

Items:

The Personal Empowerment Scale is under copyright and therefore not provided here upon request of the authors.

Reference: Segal, S., Silverman, C., & Temkin, T. (1995). Personal Empowerment Scale .

PsycTESTS Link: http://dx.doi.org/10.1037/t16550-000

The Dutch Empowerment Scale (n=1)

Used in 1 study in the review

Description

The DES is a 40-item scale developed with service users based on the results of a conceptual study of empowerment in The Netherlands. There are 6 subscales: self-management; social support; caring community; connectedness; confidence and purpose; and professional help.

Validity and reliability

Validity and reliability are reported in the original paper (Boevink et al., 2017). Correlation with the RES was moderate; it was higher with the MHCS than with the RES.

Items:

My caregiver and I have a good collaborative relationship
This society makes allowance for people with a psychiatric disability
I have the feeling that I can mean something for someone else
I have a purpose in my life.
The people around me accept me
My caregiver takes my abilities as a starting point, not my limitations
I am able to set my boundaries
Those around me offer me a listening ear
The people around me take me as I am
I know what is good and what is not good for me
In our society, people with a mental disability are considered full citizens
I derive satisfaction from the things that go well
I am able to deal with the problems that come my way
My caregiver is there for me when I need him/her
I decide how I control my life
The people I love support me
I can obtain adequate support when I need it
I am determined to go on
Society respects my rights as a citizen
I have structure in my life
The role of patient is no longer central in my life
I am not afraid to ask for help
This society offers social security to people with a mental disability
I regularly meet people outside my home
I can share my experiences with others with similar experiences
I know what I am good at

I have a good relationship with the people around me
This society creates opportunities that fit my level of participation
The care I receive fits in well with my life
I have a sense of belonging
I think of myself as a person worth something
I turn negative thoughts into positive ones
I can see how my life has made me who I am today
I find peace and safety in my home
I have enough to do each day
This society does not discriminate against people with a mental disability
I do the things that I think are important
I can deal with my vulnerabilities.
I can fall back on the people around me
I am not afraid to rely on myself

Scoring:

Items are scored on a 5 point Likert scale from ‘strongly disagree’ to ‘strongly agree’.

Higher scores indicate more empowerment.

Self-efficacy measures (n=6)

15 studies

1. Mental Health Confidence Scale (Carpinello et al, 2000) (n=4)
2. The Self-Efficacy Scale (based on Bandura et al, 1977) (n=2)
3. General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995) (n=3)
4. Patient Activation Measure, Green et al (2010) (n=2)
5. Depression Self-Efficacy Scale (Ludman et al, 2003) (n=2)
6. Patient self-advocacy scale (n=2)

1. Mental Health Confidence Scale (Carpinello et al, 2000)

Used in 5 studies included in the review

Description

A 16-item scale based on theories of self-efficacy and qualitative research on self-help groups. There are three subscales: optimism; coping; and advocacy. The MHCS is often described as a measure of empowerment; it has been directly compared with other empowerment measures and has been described as measuring the intrapersonal aspects of empowerment (Castelein et al., 2008a).

Validity and reliability

Validity (Carpinello et al., 2000) and reliability (Castelein et al., 2008a; Markowitz, 1998) have been reported.

Items:

	Very Non-confident (1)	Non-confident (2)	Slightly Non-confident (3)	Slightly Confident (4)	Confident (5)	Very Confident (6)
1. Be happy	☐	☐	☐	☐	☐	☐
2. Feel hopeful about the future	☐	☐	☐	☐	☐	☐
3. Set goals for yourself	☐	☐	☐	☐	☐	☐
4. Get support when you need it	☐	☐	☐	☐	☐	☐
5. Boost your self-esteem	☐	☐	☐	☐	☐	☐
6. Make friends	☐	☐	☐	☐	☐	☐
7. Stay out of hospital	☐	☐	☐	☐	☐	☐
8. Face a bad day	☐	☐	☐	☐	☐	☐
9. Deal with losing someone close to you	☐	☐	☐	☐	☐	☐
10. Deal with feeling depressed	☐	☐	☐	☐	☐	☐
11. Deal with feeling lonely	☐	☐	☐	☐	☐	☐
12. Deal with nervous feelings	☐	☐	☐	☐	☐	☐
13. Deal with symptoms related to your mental health diagnosis	☐	☐	☐	☐	☐	☐
14. Say no to a person abusing you	☐	☐	☐	☐	☐	☐
15. Use your right to accept or reject mental health treatment	☐	☐	☐	☐	☐	☐
16. Advocate for your needs	☐	☐	☐	☐	☐	☐

Scoring:

Items are scored on a 6 point Likert scale from ‘Very nonconfident’ to ‘Very confident’. Higher scores indicate more self-efficacy.

2. The Self-Efficacy Scale (CSHR, 1996)

This scale was used in 2 studies included in the review which were by the same author (Segal et al., 2010; 2011)

Description:

The SES is a 15-item scale which was developed by service users based on Bandura’s theory of self-efficacy (1977) (S.Segal, personal communication, April 5, 2017). Items assess intrapersonal confidence in a variety of domains of life.

Validity and reliability

Formal data from tests of validity and reliability have not been published.

Items:

Self-Efficacy, page 72

SELF-EFFICACY

The following are a list of things you may need to do at different times in your life. Looking on page 18 of the booklet, please tell me how confident you are that you could actually do each of the tasks today if needed.

		Comp. Conf.	Very Conf.	Some what Conf.	Not Too Conf.	Not at all Conf.	N/A
1.	How confident are you that you can have a conversation with someone you don't know?	5	4	3	2	1	9
2.	How confident are you that you can figure out what bus to take to an unfamiliar part of town?	5	4	3	2	1	9
3.	How confident are you that you can arrange to see a social worker on your own?	5	4	3	2	1	9
4.	How confident are you that you can arrange to get medical care if you broke your arm?	5	4	3	2	1	9
5.	How confident are you that you can talk to a landlord about renting a place, assuming that you could afford it?	5	4	3	2	1	9
6.	How confident are you that you can talk to a friend about a problem you are having?	5	4	3	2	1	9
7.	How confident are you that you can listen to a friend about a problem he or she is having?	5	4	3	2	1	9
8.	How confident are you that you can lead a meeting on a topic you know a lot about?	5	4	3	2	1	9
9.	How confident are you that you can supervise several people to do a job you know how to do well?	5	4	3	2	1	9
10.	How confident are you that you can call an employer about a job you are qualified for?	5	4	3	2	1	9
11.	How confident are you that you can hand out fliers for something you support?	5	4	3	2	1	9
12.	How confident are you that you can help someone look for a place to stay?	5	4	3	2	1	9
13.	How confident are you that you can speak at a meeting to teach people more about what its like to be poor?	5	4	3	2	1	9
14.	How confident are you that you can participate in a demonstration about budget cuts for social services?	5	4	3	2	1	9
15.	How confident are you that you can talk to local officials about people's rights?	5	4	3	2	1	9

Scoring:

Items are scored on a 5-point Likert scale from ‘Completely confident’ to ‘Not at all confident’. Higher scores indicate more self-efficacy.

3. General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995)

Used in 2 studies included in the review.

Description

A 10-item scale assesses a general sense of perceived self-efficacy in order to predict coping with daily hassles and adaptation following stressful life events. It is unidimensional.

Validity and reliability

A large number of studies have reported validity and reliability for this GSES. A list is available at http://userpage.fu-berlin.de/health/selfscal.htm.

Items:

1 I can always manage to solve difficult problems if I try hard enough.

2 If someone opposes me, I can find the means and ways to get what I want.

3 It is easy for me to stick to my aims and accomplish my goals.

4 I am confident that I could deal efficiently with unexpected events.

5 Thanks to my resourcefulness, I know how to handle unforeseen situations.

6 I can solve most problems if I invest the necessary effort.

7 I can remain calm when facing difficulties because I can rely on my coping abilities.

8 When I am confronted with a problem, I can usually find several solutions.

9 If I am in trouble, I can usually think of a solution.

10 I can usually handle whatever comes my way.

Scoring:

Items are scored on a 4-point Likert scale from ‘Not at all true’ to ‘Exactly true’. Higher scores indicate greater self-efficacy.

4. Patient Activation Measure for Mental Health (Green et al., 2010)

This measure is used in 2 studies included in the review.

Description

A 13-item measure of patient knowledge of illness management and recovery, and confidence and skill in self-management. Adapted from an original measure which focused on physical health.

Validity and reliability

In the original paper, test–retest reliability and concurrent validity were good, and the PAM-MH showed sensitivity to change (Green et al., 2010).

Items:

1. When all is said and done, I am the person who is responsible for managing my mental health
2. Taking an active role in my own mental health care is the most important factor in determining my mental health and ability to function
3. I am confident that I can take actions that will help prevent or minimize some symptoms or problems associated with my mental health condition
4. I know what each of my prescribed mental health medications does
5. I am confident that I can tell when I need to go get mental health care, and when I can handle a mental health problem myself
6. I am confident I can tell my mental health clinician about concerns I have, even when he or she does not ask
7. I am confident that I can follow through on mental health treatments I need to do at home
8. I understand the nature and causes of my mental health condition(s)
9. I know the different treatment options available for my mental health condition(s)
10. I am able to maintain the lifestyle changes I have made for my mental health
11. I know how to prevent further mental health problems
12. I am confident I can figure out solutions when new situations or problems arise with my mental health
13. I am confident that I can maintain lifestyle changes, like diet and exercise, even during times of stress

Scoring:

Items are rated on 4-point Likert scale from ‘Disagree strongly’ to ‘Agree strongly’.

Higher scores indicate higher activation.

5. Depression Self-Efficacy Scale (Bush et al, 2001)

This measure is used in 2 studies included in the review which were by the same author (Nicolaidis et al., 2012; 2013).

Description:

This is a 6-item scale with items measuring self-efficacy specific to managing depression and preventing depression. The scale is unpublished and was provided to the authors via personal communication (C.Nicolaidis, personal communication, 28 January 2017).

Validity and reliability:

High internal consistency has been reported (Ludman et al, 2003).

Items:

	not at all									extr	emely
a. How confident are you in your ability to overcome or control a bout of depression? [bout=episode]	0	1	2	3	4	5	6	7	8	9	10
b. How confident are you in your ability to prevent depression from returning once you are better?	0	1	2	3	4	5	6	7	8	9	10
c. How confident are you in your ability to recognize early on when you are starting to get depressed?	0	1	2	3	4	5	6	7	8	9	10
d. How confident are you in your ability to take effective actions to treat depression early before it has become too severe?	0	1	2	3	4	5	6	7	8	9	10
e. How confident are you that you will seek professional help to treat depression early before it has become too severe?	0	1	2	3	4	5	6	7	8	9	10
f. How confident are you in your ability to manage side effects of antidepressant medications?	0	1	2	3	4	5	6	7	8	9	10

Scoring:

Items are scored on a 10-point Likert scale from ‘not at all confident’ to ‘extremely confident’. Higher scores indicate more self-efficacy.

6. Patient self-advocacy scale (Brashers et al, 1999)

This measure is used in 2 studies included in the review.

Description

This measure was designed to assess involvement in decision-making about mental health care. It was originally developed for use with people with HIV/ AIDS in relation to their physical health care; the wording has been adapted to be appropriate for use in a mental health population. There are three subscales: illness and treatment education, assertiveness in interactions with health care providers, and mindful treatment non-adherence.

Validity and reliability

Not published aside from tests of internal consistency in the included studies which are reported as good (Jonikas et al., 2013; Pickett et al., 2012).

Items:

Please see the un-adapted scale below (the adapted scale was requested from authors but not provided).

TABLE 1
Patient Self-Advocacy Scale Items

Item Number	*Dimension*
1	I believe it is important for *people* [people with HIV or AIDS] to learn as much as they can about their illnesses and treatments.
2	I actively seek out information on my illnesses.
3	I am more educated about my health than most US citizens.
4	I have full knowledge of the health problems of *people like myself* [people with HIV or AIDS].
5	I don't get what I need from my physician because I am not assertive enough.[a]
6	I am more assertive about my health care needs than most U.S. citizens.
7	I frequently make suggestions to my physician about my health care needs.
8	If my physician prescribes something I don't understand or agree with, I question it.
9	Sometimes there are good reasons not to follow the advice of a physician.
10	Sometimes I think I have a better grasp of what I need medically than my doctor does.
11	If I am given a treatment by my physician that I don't agree with, I am likely to not take it.
12	I don't always do what my physician or health care worker has asked me to do.

[a]Reversed scored.

Scoring:

Items are rated on a 5-point Likert scale, from ‘Strongly disagree’ to ‘Strongly agree’. Higher scores indicate more self-advocacy.

Self-stigma measures (n=1)

1. Internalised Stigma of Mental Illenss Scale (Ritscher et al, 2003)

This scale is used in 5 studies.

Description

A 29-item scale developed in collaboration with service users and designed to measure the subjective experience of stigma. There are 5 subscales: alienation, stereotype endorsement, perceived discrimination, social withdrawal and stigma resistance.

Included study O’Conner et al. (2015) adapted the measure so that the phrase ‘mental illness’ was replaced with ‘depression’. Included study Russinova et al. (2014) omitted the stigma resistance subscale due to poor internal consistency.

Validity and reliability

The original paper reports good validity and reliability (Ritscher et al., 2003).

Items:

1. I feel out of place in the world because I have mental health problems
2. Having mental health problems has spoiled my life
3. People without mental health problems could not possibly understand me
4. I am embarrassed or ashamed that I have mental health problems
5. I am disappointed in myself for having mental health problems
6. I feel inferior to others who don’t have mental health problems
7. Stereotypes about people with mental health problems apply to me
8. People can tell that I have mental health problems by the way I look
9. People with mental health problems tend to be violent
10. Because I have mental health problems, I need others to make most decisions for me
11. People with mental health problems cannot live a good, rewarding life
12. People with mental health problems shouldn’t get married
13. I can’t contribute anything to society because I have mental health problems
14. People discriminate against me because I have mental health problems
15. Others think that I can’t achieve much in life because I have mental health problems
16. People ignore me or take me less seriously just because I have mental health problems
17. People often patronize me, or treat me like a child, just because I have mental health

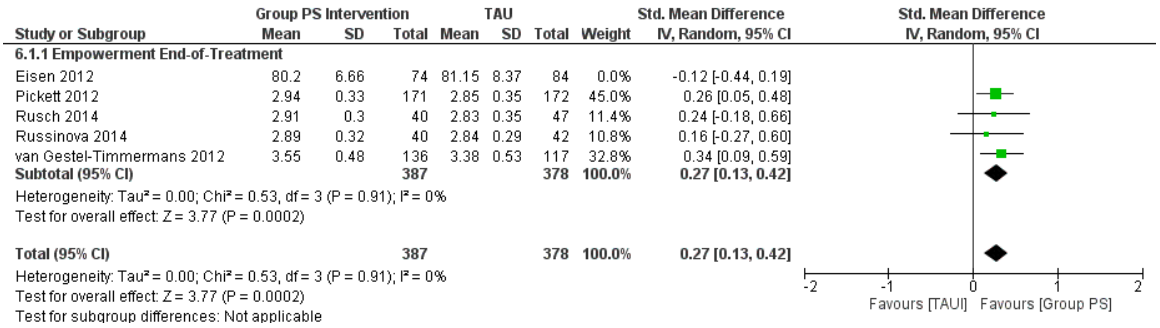
problems
18. Nobody would be interested in getting close to me because I have mental health problems
19. I don't talk about myself much because I don't want to burden others with my mental health problems
20. I don't socialize as much as I used to because my mental health problems might make me look or behave "weird"
21. Negative stereotypes about mental health problems keep me isolated from the "normal" world
22. I stay away from social situations in order to protect my family or friends from embarrassment
23. Being around people who don't have mental health problems makes me feel out of place or inadequate
24. I avoid getting close to people who don't have mental health problems to avoid rejection
25. I feel comfortable being seen in public with someone whom it is obvious has mental health problems*
26. In general, I am able to live my life the way I want to*
27. I can have a good, fulfilling life, despite my mental health problems*
28. People with mental health problems make important contributions to society*
29. Living with mental health problems has made me a tough survivor*

**reverse-scored items*

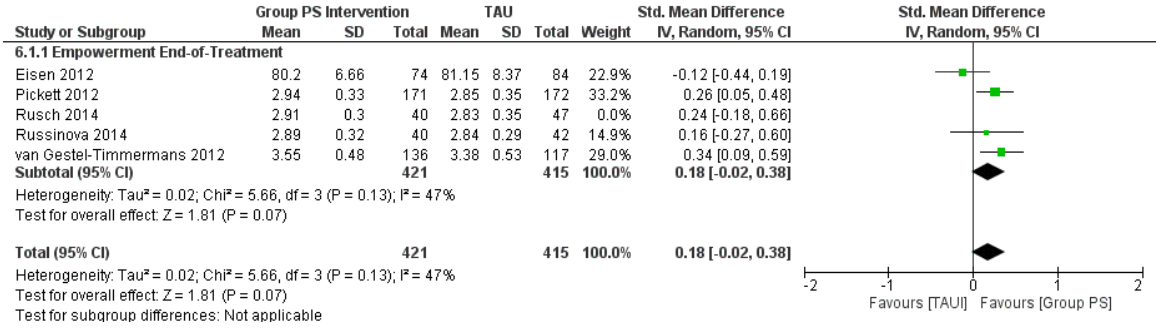
Scoring:

Items are scored on a 4-point Likert scale from 'Strongly disagree' to 'Strongly agree'. There are 5 reverse-scored items; these comprise the stigma resistance subscale. Higher scores indicate increased internalised stigma, and thus worse wellbeing.

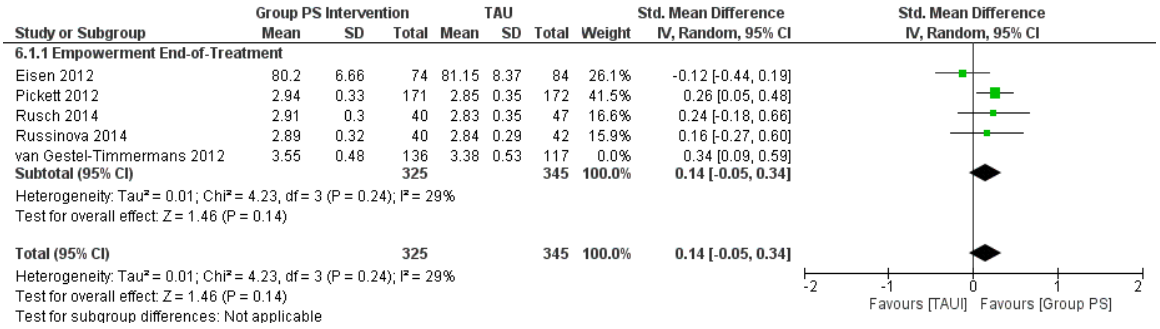
Appendix G: Meta-analysis funnel plots



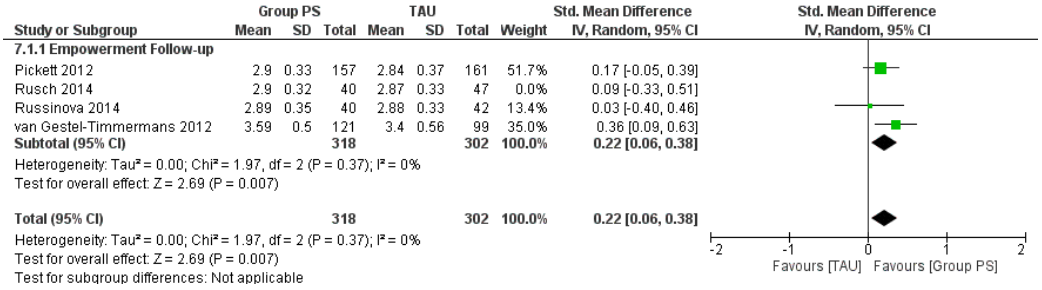
Forest plot – Empowerment at end-of-treatment – sensitivity analysis – excluding Eisen (2012)



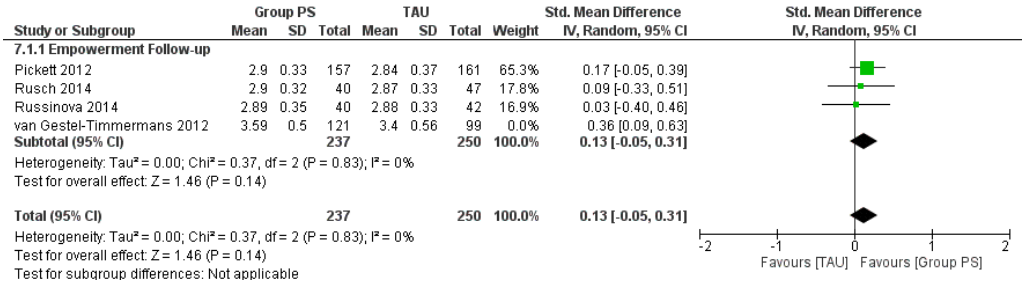
Forest plot – Empowerment at end-of-treatment – sensitivity analysis – excluding Rusch (2014)



Forest plot – Empowerment at end-of-treatment– sensitivity analysis – excluding van Gestel-Timmermans (2012)

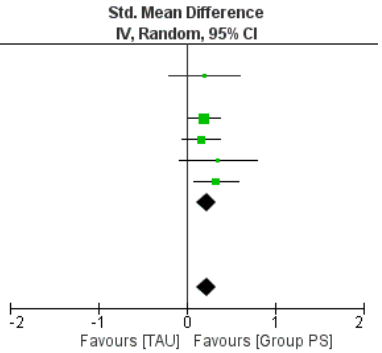


Forest plot – Empowerment at follow-up – sensitivity analysis – excluding Rusch (2014)

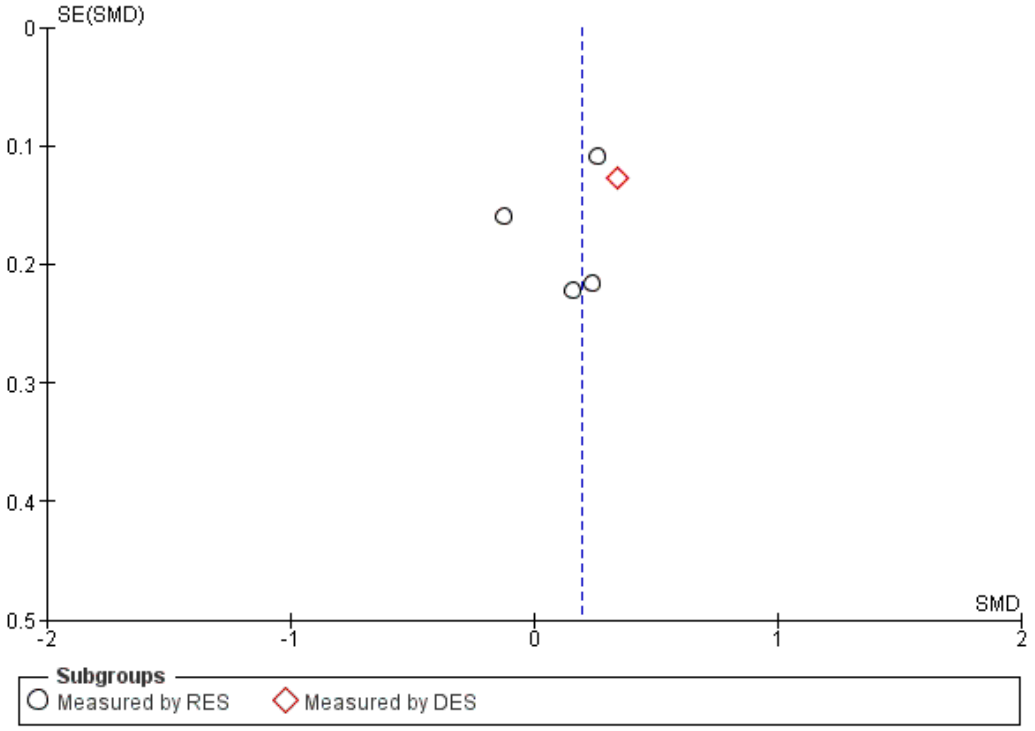


Forest plot – Empowerment at follow-up – sensitivity analysis – excluding van Gestel-Timmermans (2012)

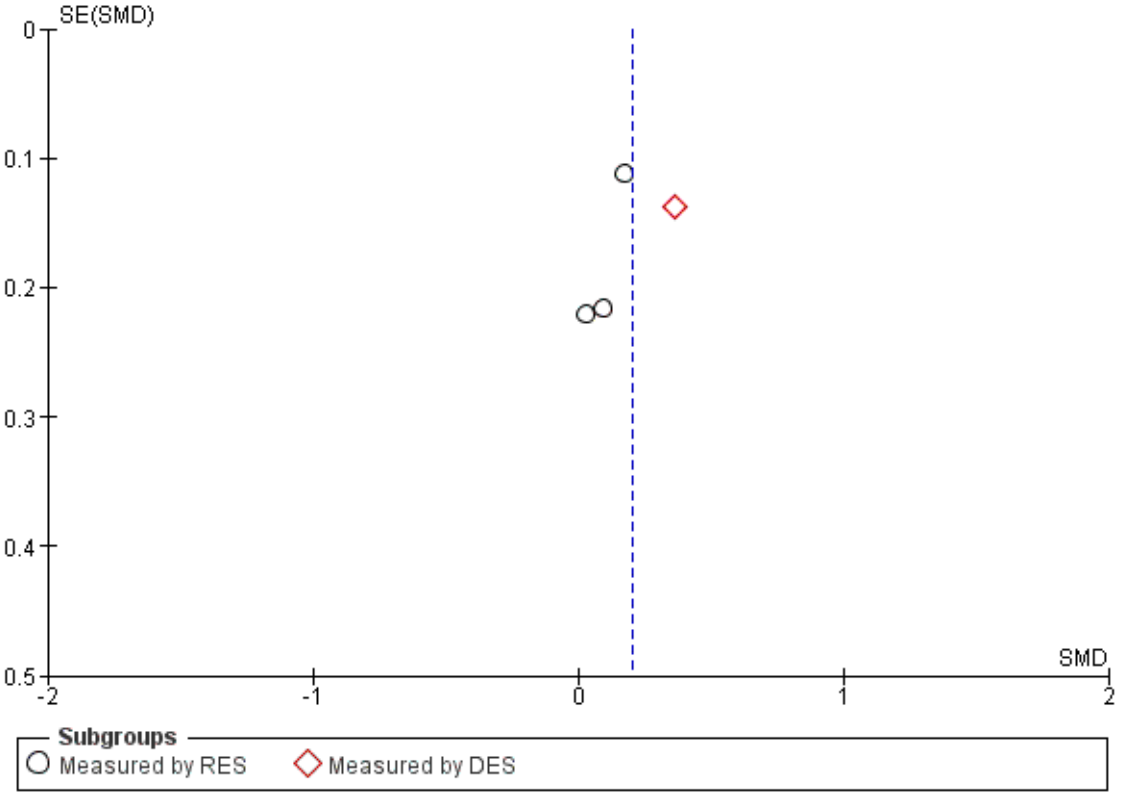
Study or Subgroup	Group PS Mean	Group PS SD	Group PS Total	TAU Mean	TAU SD	TAU Total	Weight	Std. Mean Difference IV, Random, 95% CI
8.1.1 Self-efficacy - End-of-Treatment								
Castelein 2008	67.5	12	52	64.8	14.5	45	7.9%	0.20 [-0.20, 0.60]
Eisen 2012	29.1	5.9	74	29.2	5.8	84	0.0%	-0.02 [-0.33, 0.30]
Jonikas 2013	3.6	0.5	224	3.5	0.5	234	37.4%	0.20 [0.02, 0.38]
Pickett 2012	3.7	0.6	171	3.6	0.6	172	28.0%	0.17 [-0.05, 0.38]
Russinova 2014	3.1	0.6	40	2.9	0.5	42	6.6%	0.36 [-0.08, 0.80]
van Gestel-Timmermans 2012	4.7	0.8	134	4.4	1	116	20.1%	0.33 [0.08, 0.58]
Subtotal (95% CI)			**621**			**609**	**100.0%**	**0.23 [0.12, 0.34]**
Heterogeneity: Tau² = 0.00; Chi² = 1.46, df = 4 (P = 0.83); I² = 0%								
Test for overall effect: Z = 3.98 (P < 0.0001)								
Total (95% CI)			**621**			**609**	**100.0%**	**0.23 [0.12, 0.34]**
Heterogeneity: Tau² = 0.00; Chi² = 1.46, df = 4 (P = 0.83); I² = 0%								
Test for overall effect: Z = 3.98 (P < 0.0001)								
Test for subgroup differences: Not applicable								



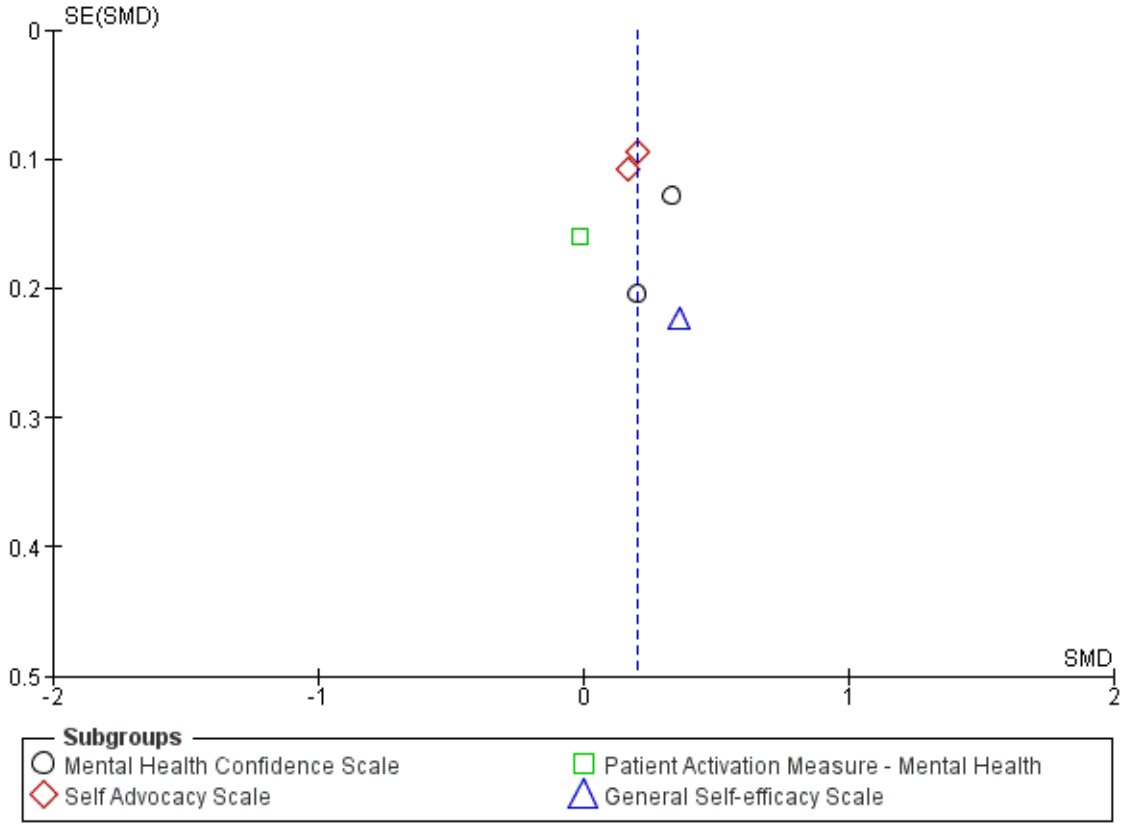
Forest plot – Self-efficacy at end-of-treatment – sensitivity analysis – excluding Eisen (2012)



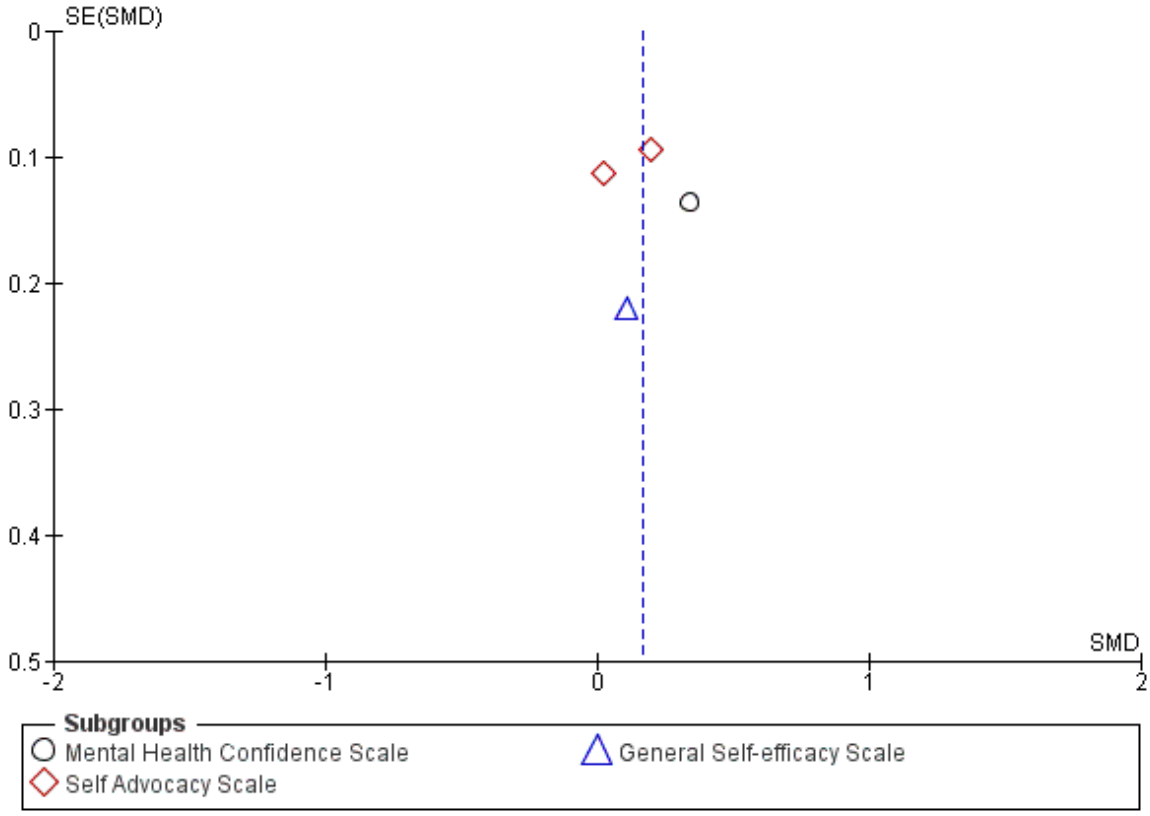
Funnel plot – Empowerment at end-of-treatment



Funnel plot – Empowerment at follow-up



Funnel plot - Self-efficacy at end-of-treatment



Funnel plot - Self-efficacy at follow-up

Appendix H: Full list of abbreviations for Table 1

Abbreviations: 121=one-to-one / individual; a/a=as above; AD=anxiety disorder; AsT=as treated; AT=after treatment; BP=bipolar disorder; BRIDGES=Building Recovery of Individual Dreams and Goals; BT=before treatment; CA=Canada; CH=Switzerland; CI=confidence interval; CIL/CPS=Center for Independent Living/Certified Peer Specialist; CL-V2V=clinician-led vet-to-vet; Com.=Community; COP=Coming Out Proud; COSP=consumer-operated service program; DE=Germany; DES=Dutch Empower-ment Scale (Boevink et al., 2009); DESE=Depression Self-Efficacy Scale (Ludman et al, 2003); ET=end of treatment; F=female; GPSG-P=guided peer support group for psychosis; GPSG-P=Guided peer-support group for psychosis; Grp=group; GSES=General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995); Incl=including; IPV=intimate partner violence; ISMI=Internalised stigma of mental illness scale (Ritscher et al, 2003); ITT=intention to treat; MD=mood disorder; mgnt=management; MHCS - Dutch version.; MHCS Mental Health Confi-dence Scale (Carpinello et al, 2000); N/R=not reported/unable to calculate; NL=The Netherlands; No.=number; PAM-MH=Patient Activation Measure for Mental Health (Green et al., 2010); PD=personality disorder; PEER=Peers Enhancing Recovery; PES=Personal Empowerment Scale (Segal et al, 1995); PHA=peer health advocate; PHQ=Patient health questionnaire (Kroenke et al., 2001); PL-V2V=peer-led vet-to-vet; POP-P&ES=Personhood & Empowerment Scales (Campbell et al, 2004); Ppt.=participant; PSW=peer support worker; Ptnt=patient; RCT=randomised controlled trial; RES=Rogers' Empowerment Scale (Rogers et al., 1997); RIUTY=Recovery Is Up To You; RWC=resource and wellness centre; RWP=Recovery Workbook Program; SAS=Self-Advocacy Scale (Brashers et al, 2009); SES=Self-Efficacy Scale (Centre for Self Help Research, 1996); SHA=self help agency; Sig.=significantly; SS/P=schizophrenia spectrum/psychosis; TAU=treatment as usual; TREE=Toward Recovery, Empowerment and Experiential expertise; US=The United States of America; V2V=vet-to-vet;

VA=veterans affairs; WLC=waiting list control; WRAP=Wellness Recovery Action Planning.

Appendix I - Publication Guidelines for Psychiatric Rehabilitation

Manuscripts must be submitted electronically (.rtf or .doc) through the Manuscript Submission Portal.

Judith A. Cook
University of Illinois at Chicago
Center on Mental Health Services Research and Policy
Chicago, IL
Kim T. Mueser
Boston University
Center for Psychiatric Rehabilitation
Boston, MA

Manuscript Submission Portal Entrance

We strive to ensure that articles and brief reports published in the journal include implications for practice to promote the translation of research findings into useful applications for the field. *Psychiatric Rehabilitation Journal*® (*PRJ*) also promotes the U.S. Psychiatric Rehabilitation Association goal of improving the quality of services designed to support positive community adjustment and integration.

PRJ gives priority to submissions that are clearly applicable to the development, administration, and delivery of psychiatric rehabilitation and other mental health-related services. Data-driven articles that report on the results of rigorous research are especially welcome. Qualitative studies are welcome if they follow established procedures for qualitative research including well-justified sample sizes, and clearly documented analytic strategies.

Pre-post evaluations of services are welcome if they are adequately powered and especially if they include comparison groups. Measurement development or testing research is welcome if the measures pertain to recovery, psychiatric rehabilitation, or mental health more broadly. Comprehensive literature reviews, policy studies, and theoretical manuscripts are also accepted for review depending on their originality, timeliness, and importance to the field.

PRJ welcomes submissions from mental health and psychiatric rehabilitation researchers, service providers, administrators or policy makers; persons with lived experience of psychiatric disability; and family members. We also welcome submissions for the "Speaking Out" section, which have a focus on advocacy and suggest some type of system change or a new perspective that could improve service delivery and outcomes.

Manuscripts are evaluated by the *PRJ* editorial team according to the following criteria:

- material is original and timely,
- writing is clear and concise,
- appropriate study methods are used,
- data are valid,
- conclusions are reasonable and supported by study results,
- information is important, and
- topic has relevance to the field of psychiatric rehabilitation and mental health services.

From these criteria, the editors select papers for peer review. Papers of insufficient priority are promptly rejected.

Masked Review

This journal has a policy of masked review for all submissions.

A title page should include all authors' names and institutional affiliations and a complete mailing and e-mail address for the Corresponding Author. The manuscript should omit this information but should include the title of the manuscript and an abbreviated title to serve as the running head on each page of the manuscript.

Authors must make every effort to see that the manuscript itself contains no clues to the authors' identities. This includes removing the names of academic or other institutions from human subjects assurance statements, and references to authors' prior publications that include citations revealing their identities.

Manuscripts are sent for peer review to at least two independent reviewers.

A separate statistical review is obtained when a reviewer or the editors request it. Authors are informed about the review decision after the review process is completed.

Manuscripts that are not rejected after the first round of peer review usually require revision and re-review by one or more of the original reviewers. Revised manuscripts must conform to the general requirements listed below, including specified word counts, and word counts must be adhered to in revised submissions.

Manuscript Preparation

Prepare manuscripts according to the *Publication Manual of the American Psychological Association* (6th edition). Manuscripts should be copyedited for bias-free language (see Chapter 3 of the *Publication Manual*)

Follow US Psychiatric Rehabilitation Association (USPRA) Language Guidelines. These guidelines are based on the fundamental values of the psychiatric rehabilitation field: respecting the worth and dignity of all persons and groups, as well as honoring and advocating for individual rights and interests, and opposing discrimination in services and in society.

Review APA's Checklist for Manuscript Submission before submitting your article.

Use 12-point Times New Roman font with consistent headings and subheadings and omit underlining. All references should be included in the reference list in APA format. Use of Endnotes is not permitted.

All research manuscripts should include a structured abstract containing a maximum of 250 words. Abstracts that are incomplete or do not conform to the following structure will be returned to the authors for revision.

- **Objective:** the primary purpose of the article should be clearly stated.
- **Methods:** this section must state the sample size and nature of subjects, data sources, study design, how dependent variables were measured and the specific analytic techniques (statistical tests, qualitative analysis strategy) that were used.
- **Results:** primary findings should be stated clearly and concisely, describing statistical results as appropriate.
- **Conclusions and Implications for Practice:** implications of the findings for the field of psychiatric rehabilitation, mental health, or recovery should be clearly stated and future directions may be described.

All theoretical manuscripts should include a structured abstract with the following required sections:

- **Objective:** the primary purpose of the article should be clearly stated.
- **Method:** this section should describe the methodology used and type of analysis conducted.
- **Findings:** primary findings should be stated clearly and concisely.
- **Conclusions and Implications for Practice:** implications of the findings for the field of psychiatric rehabilitation, mental health, or recovery should be clearly stated and future directions may be described.

Abstracts for brief reports should not exceed 150 words.

Please supply up to five keywords or brief phrases after the abstract.

Manuscript Length

Articles should not exceed 5,000 words, excluding tables, figures, and references. Manuscripts submitted for the "Speaking Out" section, as well as Brief Reports, should not exceed 1,500 words. Letters to the Editor should not exceed 300 words. All revisions must adhere to these word limits.

Authors must review and use the Guidelines for Nonhandicapping Language in APA Journals.

Formatting

Double-space all copy. Other formatting instructions, as well as instructions on preparing tables, figures, references, metrics, and abstracts, appear in the *Manual*. Additional guidance on APA Style is available on the APA Style website.

Below are additional instructions regarding the preparation of display equations, computer code, and tables.

Use Word's Insert Table function when you create tables. Using spaces or tabs in your table will create problems when the table is typeset and may result in errors.

Submitting Supplemental Materials

APA can place supplemental materials online, available via the published article in the PsycARTICLES® database. Please see Supplementing Your Article With Online Material for more details.

References

List references in alphabetical order. Each listed reference should be cited in text, and each text citation should be listed in the References section. **Please do not use Endnotes in submissions. All references should be included in the reference list in APA format.**

Examples of basic reference formats:

- **Journal Article:**

Hughes, G., Desantis, A., & Waszak, F. (2013). Mechanisms of intentional binding and sensory attenuation:

The role of temporal prediction, temporal control, identity prediction, and motor prediction. *Psychological Bulletin, 139,* 133–151. http://dx.doi.org/10.1037/a0028566

- **Authored Book:**

Rogers, T. T., & McClelland, J. L. (2004). *Semantic cognition: A parallel distributed processing approach.* Cambridge, MA: MIT Press.

- **Chapter in an Edited Book:**

Gill, M. J., & Sypher, B. D. (2009). Workplace incivility and organizational trust. In P. Lutgen-Sandvik & B. D. Sypher (Eds.), *Destructive organizational communication: Processes, consequences, and constructive ways of organizing*(pp. 53–73). New York, NY: Taylor & Francis.

Publication Policies

APA policy prohibits an author from submitting the same manuscript for concurrent consideration by two or more publications.

See also APA Journals® Internet Posting Guidelines.

APA requires authors to reveal any possible conflict of interest in the conduct and reporting of research (e.g., financial interests in a test or procedure, funding by pharmaceutical companies for drug research).

- Download Disclosure of Interests Form (PDF, 38KB)

Authors of accepted manuscripts are required to transfer the copyright to APA.

- For manuscripts **not** funded by the Wellcome Trust or the Research Councils UK

Publication Rights (Copyright Transfer) Form (PDF, 83KB)

- For manuscripts funded by the Wellcome Trust or the Research Councils UK

Wellcome Trust or Research Councils UK Publication Rights Form (PDF, 34KB)

Ethical Principles

It is a violation of APA Ethical Principles to publish "as original data, data that have been previously published" (Standard 8.13).

In addition, APA Ethical Principles specify that "after research results are published, psychologists do not withhold the data on which their conclusions are based from other competent professionals who seek to verify the substantive claims through reanalysis and who intend to use such data only for that purpose, provided that the confidentiality of the participants can be protected and unless legal rights concerning proprietary data preclude their release" (Standard 8.14).

APA expects authors to adhere to these standards. Specifically, APA expects authors to have their data available throughout the editorial review process and for at least 5 years after the date of publication.

Authors are required to state in writing that they have complied with APA ethical standards in the treatment of their sample, human or animal, or to describe the details of treatment.

- Download Certification of Compliance With APA Ethical Principles Form (PDF, 26KB)

The APA Ethics Office provides the full Ethical Principles of Psychologists and Code of Conduct electronically on its website in HTML, PDF, and Word format. You may also request a copy by emailing or calling the APA Ethics Office (202-336-5930). You may also read "Ethical Principles," December 1992, *American Psychologist*, Vol. 47, pp. 1597–1611.

Appendix J: Participant Information Sheet

MANCHESTER 1824

The University of Manchester

Version 2
23.09.16

CHAMPS

CHecking Agreement on Mental health Peer Support

PARTICIPANT INFORMATION SHEET

You are being invited to take part in the CHAMPS study (CHecking Agreement on Mental health Peer Support). Before you decide whether or not to take part it is important for you to understand why the study is being done and what it will involve. Please take the time to read the following information carefully.

What is the purpose of the research?

Peer support has become more formalised as a role within mental health organisations and services. Yet there is not much research looking at what peer supporters think is essential for them to provide good formal peer support in services, or how experiences of providing peer support might impact on their own wellbeing.
The purpose of the research is to consult with mental health peer supporters in order to:

- Check and develop agreement about the essential components, barriers and facilitators and costs and benefits of providing mental health peer support; and
- Explore relationships between experiences of providing peer support and wellbeing of peer supporters.

Who is carrying out the study?

The study is being carried out by Eilish Burke as part of a doctorate degree in clinical psychology. It is supervised by Prof Anthony Morrison. They are both based at the School of Psychological Sciences in the University of Manchester.

Why am I being invited to take part?

You are invited to take part if you have personal experience of a mental health problem and have provided support to another person with a mental health problem to assist them in their recovery. You must be over 16 years and have provided this peer support in a 'formal' capacity as part of a role (unpaid or paid) you have in an organisation or service in the UK.

What will I be asked to do if I take part?

If you decide to take part, you will be asked:

a) To complete a questionnaire about your experiences of providing peer support.
b) To respond to a series of statements about peer support.
c) To complete four questionnaires that measure mental health confidence, recovery, internalised stigma and quality of life.
d) To be contacted again at a later date to re-rate some of the statements from step (b).

You will be able to participate online, or in pen-and-paper (via post). We estimate that participating in the study will take between 40-80 minutes of your time.

Will I be compensated for participating in the research?

In appreciation of your time, you will be invited to enter into a prize draw to win one of several £50 retail vouchers (if your name is drawn, you chose what retailer the voucher is for). The prize draw will be witnessed by a person who is external to the research team to make sure it is fair.

Do I have to take part?

No. The study is entirely voluntary and it is up to you to decide whether or not to take part. If you decide to take part, you will be asked to complete a consent form. We also recommend that you keep a copy of this information sheet and/or a note of the study website address for your future reference

IRAS ID=215334

Version 2
23.09.16

What are the advantages and disadvantages of taking part?
It is possible that you might find some of the statements or questions in the study uncomfortable to respond to. The statements have been reviewed by peer supporters to make sure they are not likely to cause distress. The questionnaires in our study are regularly used in other mental health research. You may leave unanswered any questions that you like. We appreciate that we are asking for your time to respond to a large number of statements and questions. We have tried to make these as short and easy to complete as they can be. We are hoping the results of our study will contribute to the development of the mental health peer supporter role in a way that prioritises the views and experiences of peer supporters themselves. We hope that this will benefit peer supporters and the people they support.

Will my information be kept confidential?
Yes. All data collected via the study website will be stored on servers owned by the University of Manchester; these are secured using encryption protocols which are industry standard. Any personally identifiable information in pen-and-paper format will be stored in a locked cupboard in a locked room at the University. Your research data (i.e. responses to questions and statements in the study) will be coded using an ID number instead of your name, to ensure it cannot be linked back to you. Research data will be saved on the secure IT systems of the University and only Eilish Burke and Prof Anthony Morrison will have access. The data will be stored for 5 years after it is collected and Prof Morrison will act as the custodian of the data.

What happens to the data collected?
After the study is completed, we will analyse the results using statistical procedures. We will be preparing a summary of the results to send back to participants in Spring 2017; if you would like to receive a copy of this, please let us know. We will submit the results for publication in an academic journal. Eilish Burke will also submit a write-up of the study to the University as part of her doctoral degree. Presentations may be given at conferences.

What happens if I change my mind?
If you decide to take part and then change your mind, you can withdraw by contacting us before 31/01/2017. You do not need to give a reason for withdrawing and your rights or treatment will not be negatively affected. All data collected from you will be excluded from our analysis and safely deleted/destroyed.

Who has reviewed the research?
The project has been reviewed by the University of Manchester Research Ethics Committee 3.

What if something goes wrong?
If you have found any part of the study to be distressing and you wish to speak to one of the researchers, please contact Prof Tony Morrison by email at anthony.p.morrison@manchester.ac.uk or The University of Manchester, 2nd Floor, Zochonis Building, Oxford Road, M13 9PL. We will also provide you with contact details of support agencies in case you wish to discuss any issues which may arise from the study.

What if I want to make a complaint?
If you have a minor complaint please contact the researcher Eilish Burke in the first instance, by telephone at 0161 3060 0400 or email at eilish.burke@postgrad.manchester.ac.uk. If you wish to make a formal complaint or if you are not satisfied with the response you have gained from the researchers, then please contact the Research Governance and Integrity Manager, Research Office, Christie Building, University of Manchester, Oxford Road, Manchester, M13 9PL, by emailing: research.complaints@manchester.ac.uk or by telephoning 0161 275 2674 or 275 2046.

What do I do now?
We would be very grateful for your participation. To do so, please visit the study webpages at:
https://bitly.com/champsstudy.
If you have any further questions about the study or if you are interested in taking part then please contact Eilish Burke on 0161 3060 0400 or at eilish.burke@postgrad.manchester.ac.uk.

Thank you for reading this information sheet

IRAS ID=215334

Appendix K: Advertising poster

Version 2 Date 23.09.2016

CHAMPS

CHecking Agreement on Mental health Peer Support

We are looking for mental health peer supporters in the UK to take part in our study which aims to:

- Check and develop agreement about the essential components, the barriers and facilitators and the costs and benefits of providing peer support.
- Explore relationships between experiences of providing peer support and wellbeing of peer supporters.

The study will involve you responding to statements about peer support and answering some questionnaires.

You can participate online, or there is a pen-and-paper version (sent by post)

If you participate, you will be entered into a prize draw to win one of several retail vouchers.

To find out more, go to the study webpages at:

https://bitly.com/champsstudy

or contact the research team:

Researcher:
Eilish Burke, **Trainee Clinical Psychologist**
eilish.burke@postgrad.manchester.ac.uk
0161 3060 400

Supervisor :
Tony Morrison, **Professor of Clinical Psychology**
anthony.p.morrison@manchester.ac.uk
0161 3060 400

The University of Manchester, 2nd Floor Zochonis Building, Brunswick Street, Manchester, M13 9PL

@ChampsStudy

MANCHESTER 1824
The University of Manchester

This Project Has Been Approved by the University of Manchester's Research Ethics Committee 3 (UREC Ref 16118)
IRAS ID = 215334

Appendix L: Consent form

MANCHESTER 1824
The University of Manchester

Version 2 Date 23/09/2016

CHecking Agreement on Mental health Peer Support (CHAMPS)

Consent form

Please read the statements below, and write your name, signature and the date in the space provided to give your consent to take part.

I confirm that I have read the information sheet for this study and have had the opportunity to consider the information and ask questions and had these answered satisfactorily.	☐
I understand that my participation in the study is voluntary and that I am free to withdraw at any time without giving a reason and without detriment to myself. I understand that if I complete participation, but then decide to withdraw my data that I may do so by contacting the researchers before 31/01/2017.	☐
I understand that my data will remain confidential.	☐
I understand that data collected during the study may be looked at by individuals from the University of Manchester, from regulatory authorities or from the NHS Trust, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my study data.	☐
I agree to take part in this study.	☐

Name: _____ Signed: _____

Date:_____

This research has been approved by The University of Manchester Research Ethics Committee 3

IRAS ID = 215334

Appendix M: Papers used to generate items in Round 1

Listed below are the papers read in the literature review upon which Delphi statements were based. They are presented in the order they were read and statements extracted from them.

Procedure

Each document was read thoroughly by EB. Statements were extracted from the text if judged to represent an essential component, cost/benefit or barrier/facilitator of providing mental health peer support.

The exact wording extracted from the paper was recorded in an electronic database. If the 'idea' of the statement was repeated in other papers, the wording used to express this was also recorded. In developing the final list, the wording of statements was changed so that the overall 'idea' was best captured and read in a sensible way. Duplication of 'ideas' and those deemed not to be relevant were removed.

The first papers read contributed the most statements. There was considerable repetition of 'ideas' in the subsequent papers read, and less and less new items were generated by the later papers. The final paper read contributed just 5 new items in total, thus it was decided that a point of reasonable 'saturation' of ideas had been reached and no further papers were read

1. ImRoc / Repper et al (2013), Peer Support Workers: Theory and Practice;
2. Scottish Recovery Network (2012), Values Framework for Peer Working;
3. ImRoc / Repper et al (2013), Peer Support Workers: a practical guide to implementation;
4. Together / Basset et al (2010), Lived Experience Leading the Way;
5. Scottish Recovery Network – commissioned report (2014), What are decision makers' barriers, facilitators and evidence needs regarding peer support working?
6. Lawton-Smith (2013), Peer support in mental health: where are we today?
7. Bailie and Tickle (2015), Effects of employment as a peer support worker on personal recovery: a review of qualitative evidence.
8. Walker and Bryant (2013), Peer Support in Adult Mental Health Services: a Metasynthesis of Qualitative Findings.

Appendix N: Example of how statements were presented to participants in Round 2 (Essential Components)

Below is a series of statements about what might be essential in providing formal mental health peer support. *(By 'essential' we mean 'absolutely necessary' or 'indispensable'. A component is a 'part').* Statements are sorted alphabetically so that there is no suggestion about order of importance.

For each statement please:

- Rate your opinion on its importance to peer support in general on the scale from 'Essential' to 'Should not be included'.

AND

- In the shaded column on the right, indicate whether or not it has been part of your personal experience as a peer supporter.

"An essential component of providing formal mental health peer support is ...	**Essential**	**Important**	**Do not know / It depends**	**Not important**	**Should not be included**	**Yes, Part of my experience**	**No, Not part of my experience**
Ability and willingness to offer different types of support e.g. one-to-one; groups; supporting discharge from acute wards etc.	☐	☐	☐	☐	☐	☐	☐
Ability to help each other think through solutions.	☐	☐	☐	☐	☐	☐	☐
Accepting peers where they are at, avoiding judgement and interpretation.	☐	☐	☐	☐	☐	☐	☐
Acting as a 'bridge' between 'them' and 'us' i.e. The people who provide mental health services and service users.	☐	☐	☐	☐	☐	☐	☐
Acting as a mentor within the workplace to other peer supporters or non-peer colleagues.	☐	☐	☐	☐	☐	☐	☐
An ability to keep and maintain records and understand the requirements of maintaining records.	☐	☐	☐	☐	☐	☐	☐
Being a role model of Recovery.	☐	☐	☐	☐	☐	☐	☐
Being computer literate and willing to use Microsoft office and IT systems.	☐	☐	☐	☐	☐	☐	☐
Being involved in the ongoing development of peer support roles, including training and evaluation.	☐	☐	☐	☐	☐	☐	☐
Being non-directive.	☐	☐	☐	☐	☐	☐	☐
Being paired with peers who have similar personal characteristics to oneself e.g cultural background, age, religion, gender and personal values.	☐	☐	☐	☐	☐	☐	☐
Being person-centred and offering support that is holistic, tailored to the person and takes account of all aspects of peers' lives.	☐	☐	☐	☐	☐	☐	☐
Being 'strengths based' e.g. exploring what a person has gained from their experience, seeking out qualities and assets, etc.	☐	☐	☐	☐	☐	☐	☐
'Being yourself' - developing authentic relationships with peers.	☐	☐	☐	☐	☐	☐	☐
Building hope and optimism.	☐	☐	☐	☐	☐	☐	☐

Appendix O: Experience of Providing Peer Support (EPPS) questionnaire

Experiences of Providing Peer Support

We'd like to find out more about your role and your experiences in providing mental health peer support.
If you have provided peer support through a role in more than one organisation, please think of your current / most recent role when answering the questions, or the one through where you provide the most peer support.

1. In what type/s of organisation do you currently/did you most recently provide mental health peer support?
Voluntary/charity ☐ *(Please name)* *NHS* ☐ *Council* ☐ *Other* ☐ *(Please name)*_____

2. What is/was your title / the name of your role? _____

3. How much training did you receive to prepare you for your role as a mental health peer supporter?
By 'training', we mean structured support specifically related to being a mental health peer supporter that was given to you in order to develop your skills, knowledge and understanding in supporting recovery in another person.
None ☐ *Less than 1 full day* ☐ *1 full day* ☐ *2-3 full days* ☐ *4-5 full days* ☐ *6+ full days* ☐

4. How satisfied were you with this training/not having training? Rate on the scale between 'Very Dissatisfied' and 'Very Satisfied'

1	2	3	4	5	6	7	8	9	10
Very Dissatisfied									*Very Satisfied*

If your answer was 'None' to Q3, skip to Q7.

5. Who delivered this training? Tick AS MANY as apply.
Peer supporter/s from within my organisation ☐ *Non peer staff from within my organisation* ☐ *An external organisation* ☐

6. Did you receive a formal qualification when you completed this training? *Yes* ☐ *No* ☐

7. How much ongoing managerial supervision do you/did you get for your role as a mental health peer supporter?
By 'managerial supervision' we mean supervision of your day-to-day work which might involve planning and monitoring workload, ensuring health and safety, time management, training needs, administration, record-keeping etc.
None ☐ *Less than once per month* ☐ *Every month* ☐ *Every 2 weeks* ☐ *Every week* ☐

If your answer is 'None', skip to Q10.

8. What is the role / job title of the person who provides/provided this managerial supervision to you? _____

9. How satisfied are you/were you with this managerial supervision? Rate on the scale between 'Very Dissatisfied' and 'Very Satisfied'

1	2	3	4	5	6	7	8	9	10
Very Dissatisfied									*Very Satisfied*

10. How much ongoing 'professional supervision' do you/did you get for your role as a mental health peer supporter?
By 'professional supervision' we mean support with issues specific to the peer supporter role, e.g. how to clarify one's own boundaries and develop a personal account of recovery that feels safe to share.
None ☐ *Less than once per month* ☐ *Every month* ☐ *Every 2 weeks* ☐ *Every week* ☐

If your answer is 'None', skip to Q13.

11. What is the role / job title of the person who provides/provided this professional supervision to you? _____

12. How satisfied are you/were you with this professional supervision? Rate on the scale between 'Very Dissatisfied' and 'Very Satisfied'

1	2	3	4	5	6	7	8	9	10
Very Dissatisfied									*Very Satisfied*

13. Are/were you being paid to provide peer support? *Yes* ☐ *No* ☐

PLEASE TURN OVER

14. How satisfied are you/were you with this pay / not being paid? Rate on the scale between 'Very Dissatisfied' and 'Very Satisfied'

1	2	3	4	5	6	7	8	9	10
Very Dissatisfied									*Very Satisfied*

15. In your current/most recent role, how many DAYS PER WEEK do you/did you provide peer support for?

½ day	1 day	1 ½ days	2 days	2 ½ days	3 days	3 ½ days	4 days	4 ½ days	5 days

16. How well-supported do you/did you feel in your peer supporter role? Rate on the scale between 'Not well supported' and 'Well Supported'

1	2	3	4	5	6	7	8	9	10
Not well supported									*Very well supported*

17. How many other peer supporters work in your immediate team? (e.g. working in the same project or under the same leader/manager)

None ☐ 1 ☐ 2-5 ☐ 6+ ☐ Don't know ☐

18. Do you/did you provide peer support as part of a mental health/clinical team?
(e.g. a team including mental health professionals such as a nurse, social worker, occupational therapist, psychologist, counsellor, psychiatrist)

Yes ☐ *No* ☐

If your answer is 'No', skip to Q22.

19. How accepted do you/did you feel in this team as a peer supporter?

1	2	3	4	5	6	7	8	9	10
Not accepted									*Very well accepted*

20. Overall, how much do you believe peer support is/was valued by this team?

1	2	3	4	5	6	7	8	9	10
Not valued									*Very much valued*

21. Have you had negative experiences within the team in relation to your being a peer supporter?
(e.g. negative/dismissive comments about your role/peer support)

Yes ☐ *No* ☐ *Don't know / Would rather not say* ☐

22. How satisfied are you with opportunities for you to progress your role/career as a peer supporter within your organisation?

1	2	3	4	5	6	7	8	9	10
Very Dissatisfied									*Very Satisfied*

23. Overall, how satisfied are you with providing mental health peer support in your current/most recent organisation?

1	2	3	4	5	6	7	8	9	10
Very Dissatisfied									*Very Satisfied*

What is your Gender? _____

What is your Age? _____

What type of mental health problem/s have you had personal experience of? If you prefer not to say, please leave empty.

_____

_____

Do you receive/have you received peer support from others <u>in a formal capacity</u> which is/was intended to support you in your recovery?

Yes ☐ *No* ☐ *Prefer not to say* ☐

Appendix P: Personal Benefits

Table 3. *Personal benefits*

A personal benefit of providing formal mental health peer support is …	Round included	Percentage consensus (NHS sub-sample)
Improved wellbeing		
Improved personal mental health and wellbeing.	3	100 (100)
Increased hope for the future.	3	100 (100)
Increased self-acceptance.	3	98 (98)
Personal growth.	2	92 (96)
Gaining more confidence through the role.	2	89 (88)
Gaining self-worth through the role.	2	86 (88)
The enjoyment of a challenging role.	2	86 (89)
Gaining self-esteem through the role.	2	85 (86)
Feeling empowered to cope with own mental health problems and practice the things that contribute to personal recovery.	2	81 (86)
Gaining a positive sense of identity through the role.	2	81 (79)
Making a valued contribution		
Having a meaningful occupation that involves making a contribution and feeling of value.	2	94 (96)
Having a role that is valued by others for driving recovery-oriented change.	2	84 (79)
Material benefits		
Being paid.	3	80 (86)
New learning		
Increased knowledge about personal mental health and recovery.	2	92 (91)
Learning things from peers that did not know before.	2	91 (91)
Developing skills (e.g. In teamworking, communication) which improve future job and career prospects.	2	86 (86)
Social connectedness		
Increased involvement in the community.	3	100 (100)
Increased social networks and contacts.	3	93 (96)
Sense of fellowship and shared identity with other peer supporters.	2	87 (86)
Gaining a sense of solidarity and participation with peers.	2	86 (84)
Having permission to disclose personal mental health problems and not needing to hide them.	2	83 (86)

Note: The number of participants rating each statement in Round Two ranged from n=99–102 in the total sample and n=54-56 in the NHS subsample. The total sample in Round Three was n=44 and the NHS subsample was n=28.

Appendix Q: Barriers

Table 4. *Barriers*

A challenge / barrier in providing formal mental health peer support is …	Round included	Percentage agreement (NHS sub-sample)
Poor career prospects		
Lack of opportunity for career progression in peer support e.g. positions which reach high pay bandings.	3	80 (86)

Note. The number of participants rating each statement in Round Two ranged from n=84 -89 in the total sample and n=47-50 in the NHS subsample. The total sample in Round Three was n=44 and the NHS subsample was n=28.

Appendix R: Facilitators

Things that help / facilitate in providing formal mental health peer support are…	Round included	Percentage consensus (NHS sub-sample)
Appropriate training, support and supervision		
Learning from other fields where peer support is well-established e.g. Physical disability, youth work etc.	3	98 (96)
Starting 2-3 peer supporters together in order that they can provide support to each other.	3	95 (100)
Helping peer supporters to clarify own boundaries and develop an account of their lived experience that feels safe to share with peers.	2	92 (94)
Accredited high quality training for peer supporters.	2	91 (91)
Sharing learning and communication with peer supporters in different locations and services/organisations.	2	91 (89)
Talking with experienced peer supporters about the personal implications of having the label 'peer' and how this can affect personal recovery.	3	89 (96)
Having opportunities for group discussion / group supervision with other peer supporters to share experiences and support each other.	2	87 (89)
Peer supporters having a more senior peer supporter as a mentor.	2	82 (82)
Organisation that enables unique aspects of peer work		
Avoiding the 'over professionalisation' of peer support.	3	98 (96)
Allowing peers to use both their lived experience and other life skills.	2	97 (98)
An ability to maintain independence from the service/organisation where necessary.	3	93 (93)
Having strong links with voluntary sector and service-user led groups.	2	86 (84)
Supporting peer supporters to challenge poor practice in an appropriate manner.	2	86 (87)
Peer supporters providing evidence about the positive impacts of their work by telling real-life stories.	2	85 (85)
Organisational values and policy		
A forward-thinking organisational culture with flexibility and willingness to innovate.	2	99 (98)
Policy that mandates peer support roles are created, and accountability that services must deliver on this commitment.	3	98 (96)
Working within a service/organisation that is recovery-focused and whose language, practice, procedures and policies reflects this.	2	91 (89)
A clear role and job description for the peer supporter, including the amount of autonomy involved.	2	94 (91)
Recognising the peer supporter role in policy documents.	2	89 (89)
Commitment from the senior executive team in the organisation, including those involved in commissioning services.	2	87 (91)
Having a spirit of collaboration and partnership in decision-making in the service/organisation.	2	87 (91)
Engagement and commitment from all parts of the organisation such as human resources, occupational therapy etc.	2	85 (89)
Having a senior peer lead / peer champion who promotes peer support work at higher executive levels and helps implement peer support within the service / organisation.	2	82 (80)
Support and reasonable adjustments		
Support for peer supporters to manage the transition from 'patient' to a peer supporter.	3	98 (100)
Managers working with peer supporters to optimise their wellbeing, to find solutions to aspects of work they are finding stressful, to encourage them to seek support when they need it rather than trying to manage alone.	2	94 (96)
Placing peers appropriately so that they are not put in positions which are too stressful or isolated.	2	91 (91)
Help for peer supporters to meet organisational demands such as administration and record keeping.	3	89 (89)
Peer supporters taking responsibility for their own wellbeing.	2	86 (85)
Ensuring all staff have access to the same support for their personal wellbeing as peers supporters do.	2	85 (83)
Team readiness and proactive management		
Having managers and team members who understand the role, principles and values of peer support.	2	96 (96)
Management oversight to ensure peer supporters' perspectives are respected, their	2	92 (96)

input is valued and their involvement is not tokenistic.		
Having buy-in and support from the wider multi-disciplinary team.	3	91 (96)
Training for managers and non-peer colleagues to increase their awareness, receptiveness and support for the role.	2	91 (94)
Management ensuring peer suppport roles are of their equal value to non-peer roles within the wider team.	2	88 (93)
Having clarity about management responsibilities and lines of communication in services/organisations.	2	87 (87)

Note. The number of participants rating each statement in Round Two ranged from n=77-78 for the total sample and n=45-46 for the NHS subsample. The total sample in Round Three was n=44 and the NHS subsample was n=28.

Appendix S: Table of qualitative themes

Essential components	Personal Benefits	Barriers	Facilitators
Acquiring and sharing knowledge; Developing the practice of peer support; Empowering peers; Encouragement and active support; Meeting organisational needs and requirements; Modelling self-care and recovery; 'Non-specific' therapeutic competencies; Prioritising unique aspects of being a peer; Promoting values underpinning peer working; Having role clarity & supervision.	Improved wellbeing; Making a valued contribution; Material benefits; New learning; Social connectedness.	Poor career prospects.	Appropriate training, support and supervision; Organisation that enables unique aspects of peer work; Organisational values and policy; Support and reasonable adjustments; Team readiness and proactive management

Appendix T: Excluded statements

	Percentage consensus (NHS sub-sample)
Essential components	
Supporting peers with mental health appointments (e.g. thinking through questions and concerns prior to outpatient appointments).	68 (76.2)
Having excellent written, verbal and non-verbal communication skills.	66 (66.1)
Training others e.g. Non-peer colleagues.	63 (71.4)
Having own personal Recovery/wellbeing plan and sharing this as appropriate in the service/organisation.	62 (66.1)
Providing friendship/companionship and solidarity to peers.	62 (61.9)
Being computer literate and willing to use Microsoft office and IT systems.	61 (71.4)
Providing other service-wide functions e.g. Reviewing policy, speaking at staff inductions.	60 (65.1)
Peers being assigned to work together because of having shared interests or complementary skills.	60 (58.7)
Spending more time with peers than other mental health professionals do.	58 (55.6)
Having experienced mental health service/s similar to that of peers working with (e.g. had a psychiatric hospital admission if working in inpatient ward)	56 (56.5)
Not being counted 'in the numbers' to meet core staffing requirements.	55 (54.8)
Working with peers who have experienced similar mental health problems.	51 (42.9)
Providing specialist consultancy advice to others.	44 (50.0)
Working with the same peers over significant period of time.	41 (43.5)
Having skills in persuasion.	40 (36.1)
Working with peers who have similar life experiences to oneself.	39 (37.1)
Willingness to use breakaway and restraint techniques, if required.	38 (39.7)
Having a mental health related qualification e.g. Certificate in community mental health or equivalent.	30 (30.6)
Working as a peer supporter for a limited time period, so as to remain close to own experiences of Recovery.	23 (20.6)
Being paired with peers who have similar personal characteristics to oneself e.g. cultural background, age, religion, gender and personal values.	23 (17.5)
Personal costs	
Lack of opportunities for career progression within the peer supporter role.	68 (80.0)
Coming into conflict with practices which are not recovery-oriented.	66 (73.3)
Feeling under pressure to 'stay well' to prove to colleagues that 'able' for the role.	66 (70.0)
Experiencing stress as a result of the challenges in supporting peers.	65 (68.3)
Becoming 'burnt out' by prioritising the desire to help peers over own health needs.	61 (58.3)
Being on low/no pay and feeling oneself to be under-valued and/or exploited.	57 (66.7)
Revisiting personal difficult experiences through peers' stories which can cause distress and fear of 'relapse'.	51 (56.7)
Experiencing stress because the peer support role is poorly defined and supported in the service/organisation.	46 (50.0)
That the natural relationship at the heart of the helping process becomes over-formalised and over-controlled.	42 (46.7)
Concern that having a label/identity as a 'peer' will have a negative impact on future job prospects.	31 (31.7)
Feeling the need to monitor/censor oneself when around non-peer colleagues to make sure not acting 'like a service user'.	31 (28.3)
Worsened personal mental health and wellbeing.	30 (31.7)
Feeling oneself to be stuck in a 'sick' role through having a label/identity as a peer.	28 (26.7)
Experiencing stigma and discrimination in the role e.g. Being excluded from work and social events by non-peer colleagues.	24 (25.0)
Experiencing negative responses from peers when you disclose about your personal mental health problems.	20 (13.3)
Being socially excluded by peers/other service users because viewed as part of a problematic system.	19 (20.0)
Personal benefits	
Experience of working across many sectors e.g. Statutory services and the third sector.	68 (73)
Feeling less stigmatisation.	64 (55)
The role provides a routine (if one lacking previously).	61 (66)
Less personal use of mental health services.	56 (64)

Barriers

Low levels of pay for the role.	66 (80)
Wider context of budget cuts, service re-structure and change.	64 (69)
Lack of understanding of non-peer colleagues about the challenges involved in the peer support role.	63 (66)
Lack of high quality evidence about the effectiveness of peer support.	62 (56)
Higher priority being given to clinical outcomes (e.g. symptom reduction) over the holistic needs and preferences of service users.	61 (76)
Lack of extra funding to pay for peer support in services/organisations so that it is financed through cutting other services/staff provision.	61 (74)
Myths, misconceptions and negative attitudes about peer supporters e.g. that they will be too emotionally 'fragile' for the work and may 'break down'.	61 (66)
Peer support not being properly integrated with the range of other support on offer to people with mental health needs.	61 (64)
Risk-averse and paternalistic cultures, especially the perception that peer supporters will become 'unwell' as a result of the role.	60 (61)
Working in services/organisations which are not already working in a recovery-focused manner (e.g those that are deeply entrenched in a medical model).	58 (63)
The absence of evidence and practical resources on how to implement good peer support programs.	58 (54)
Lack of high quality and accredited formal training for peer supporters.	57 (56)
Peer supporters having a relatively powerless position within the service/organisation.	56 (62)
Differences in personal understanding and expectations of the role and that of management / non-peer colleagues.	56 (58)
Lack of awareness and experience within services/organisations in making reasonable adjustments to support people with additional needs into the workplace.	56 (56)
Peer support being a low strategic priority in the service/organisation.	55 (62)
Organisations not dealing well with situations in which a person might become distressed in the workplace or take sick leave.	54 (56)
Becoming overly influenced by the values and practices of non-peer colleagues, so that focus on the core values and principles of peer support gets lost.	53 (62)
Managing the complexities of having a 'dual identity' as a service user and a service provider.	52 (55)
Uncertainty in colleagues over the distinction between informal peer support and formal peer support.	51 (44)
Problems gaining respect and being seen as credible by non-peer colleagues.	50 (54)
Working with peers who do not seem to move forward in their recovery.	50 (52)
Formal processes and red tape in the service/organisation that prevent peer supporters working in a creative and sensitive way.	50 (52)
Non-peer colleagues' perception of peer support as a temporary 'fad' or 'phase'.	49 (56)
The absence of governing structures for unregistered staff such as peer supporters.	49 (55)
Working with agency / bank non-peer colleagues who are less likely to understand the peer support role.	49 (52)
Reluctance of non-peer colleagues in the service/organisation to refer service users to peer supporters.	48 (53)
Being in the role for too long so that the peer perspective gets lost and start thinking of self as a non-peer employee.	48 (20)
Others' attributing anything interfering with your work (such as any time you have to call in sick) as being related to your mental health, thus reinforcing negativity about peer support.	47 (52)
'Tokenistic' responsibilities being given to peer supporters.	46 (46)
The views and opinions of peers being viewed as 'radical' and incompatible with other approaches in the service/organisation.	46 (42)
Lack of knowledge/understanding and research on the potentially adverse effects of being a peer supporter.	46 (40)
Other staff feeling their jobs are under threat by peer support e.g. Non-peer support workers on similar pay scales being replaced by peer supporters.	45 (58)
Working in the same environments / with the same staff where you are currently or have previously been treated as a service users.	43 (50)
Problems with supervision e.g. supervisor not working within the core principles of peer support.	39 (42)
Not knowing how to make best use of supervision.	39 (32)
Lack of encouragement and support to draw upon own lived experience with peers.	38 (36)
Challenges with employment applications processes e.g. negotiating the financial implications of being in paid employment if previously on benefits.	37 (38)
When non-peer colleagues treat peer supporters as 'patients' rather than equal and valid members of the team.	37 (38)
Previous habit of relating to non-peer mental health professionals as the 'expert' or 'enemy', not as colleagues with whom you can work as equals.	34 (36)
If working in the third sector, managing the challenges of delivering peer support in this organisation, with peer's care plan in NHS services.	33 (n/a)

Having previous personal contact in mental health services with a person that are then assigned to work with as peer supporter.	32 (34)
Too much emphasis on providing peer support on a 121 basis, rather than support in groups, which limits peer solidarity.	32 (28)
Previous habit of relating to service users as friends rather than peers so that it is more difficult to be supportive in an objective way.	28 (26)
Blurring of roles within the service/organisations e.g. overlap with non-peer support worker roles.	21 (56)
Peers not wanting to be supported by peer supporters / preferring to have non-peer support workers.	18 (20)

Appendix U: Mental Health Confidence Scale

This questionnaire explores how confident you feel about dealing with the challenges that commonly influence our lives.

For each item, indicate how confident you are that you could do something to help yourself **right now** on the scale from 'Very NONconfident' to 'Very Confident'.

How confident are you right now that you can:

	Very Non-confident (1)	**Non-confident (2)**	**Slightly Non-confident (3)**	**Slightly Confident (4)**	**Confident (5)**	**Very Confident (6)**
1. Be happy	☐	☐	☐	☐	☐	☐
2. Feel hopeful about the future	☐	☐	☐	☐	☐	☐
3. Set goals for yourself	☐	☐	☐	☐	☐	☐
4. Get support when you need it	☐	☐	☐	☐	☐	☐
5. Boost your self-esteem	☐	☐	☐	☐	☐	☐
6. Make friends	☐	☐	☐	☐	☐	☐
7. Stay out of hospital	☐	☐	☐	☐	☐	☐
8. Face a bad day	☐	☐	☐	☐	☐	☐
9. Deal with losing someone close to you	☐	☐	☐	☐	☐	☐
10. Deal with feeling depressed	☐	☐	☐	☐	☐	☐
11. Deal with feeling lonely	☐	☐	☐	☐	☐	☐
12. Deal with nervous feelings	☐	☐	☐	☐	☐	☐
13. Deal with symptoms related to your mental health diagnosis	☐	☐	☐	☐	☐	☐
14. Say no to a person abusing you	☐	☐	☐	☐	☐	☐
15. Use your right to accept or reject mental health treatment	☐	☐	☐	☐	☐	☐
16. Advocate for your needs	☐	☐	☐	☐	☐	☐

Appendix V: Questionnaire about the Process of Recovery

Take a moment to consider and sum up how things stand for you at the present time, **in particular over the last 7 days**, with regards to your mental health and recovery.

Please respond to the following statements by putting a tick in the box which best describes your experience.

	Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly
1. I feel better about myself	☐	☐	☐	☐	☐
2. I feel able to take chances in life	☐	☐	☐	☐	☐
3. I am able to develop positive relationships with other people	☐	☐	☐	☐	☐
4. I feel part of society rather than isolated	☐	☐	☐	☐	☐
5. I am able to assert myself	☐	☐	☐	☐	☐
6. I feel that my life has a purpose	☐	☐	☐	☐	☐
7. My experiences have changed me for the better	☐	☐	☐	☐	☐
8. I have bee able to come to terms with things that have happened to me and move on with my life	☐	☐	☐	☐	☐
9. I am basically strongly motivated to get better	☐	☐	☐	☐	☐
10. I can recognise the positive things I have done	☐	☐	☐	☐	☐
11. I am able to understand myself better	☐	☐	☐	☐	☐
12. I can take charge of my life	☐	☐	☐	☐	☐
13. I can actively engage with life	☐	☐	☐	☐	☐
14. I can take control of aspects of my life	☐	☐	☐	☐	☐
15. I can find the time to do the things I enjoy	☐	☐	☐	☐	☐

Appendix W: Manchester Short Assessment of Quality of Life

This questionnaire explores how satisfied you are with different areas of your life.

For each statement, please select the response that most represents your current level of satisfaction in that area.

	Couldn't be worse	Displeased	Mostly Dissatisfied	Mixed	Mostly satisfied	Pleased	Couldn't be better
1. How satisfied are you with your life as a whole today?	◻	◻	◻	◻	◻	◻	◻
2. How satisfied are you with your job (or sheltered employment, or training/education as your main occupation)?	◻	◻	◻	◻	◻	◻	◻
3. How satisfied are you with your financial situation?	◻	◻	◻	◻	◻	◻	◻
4. How satisfied are you with the number and quality of your friendships?	◻	◻	◻	◻	◻	◻	◻
5. How satisfied are you with your leisure activities?	◻	◻	◻	◻	◻	◻	◻
6. How satisfied are you with your accommodation?	◻	◻	◻	◻	◻	◻	◻
7. How satisfied are you with your personal safety?	◻	◻	◻	◻	◻	◻	◻
8. How satisfied are you with the people that you live with? OR If you live alone, how satisfied are you with living alone?	◻	◻	◻	◻	◻	◻	◻
9. How satisfied are you with your sex life?	◻	◻	◻	◻	◻	◻	◻
10. How satisfied are you with your relationships with your family?	◻	◻	◻	◻	◻	◻	◻
11. How satisfied are you with your health?	◻	◻	◻	◻	◻	◻	◻
12. How satisfied are you with your mental health?	◻	◻	◻	◻	◻	◻	◻

Appendix X: Internalised Stigma of Mental Illness Scale – Brief Version

Stigma about mental health problems is unfortunately widespread in society. This questionnaire examines whether stigma has affected you and how you view yourself.

For each statement, please select the response which best describes your level of agreement.

(We use the term 'mental health problems' in this questionnaire, but please think of whatever you feel is the best term for your experiences.)

	Strongly Disagree	**Disagree**	**Agree**	**Strongly Agree**
People with mental health problems make important contributions to society.	☐	☐	☐	☐
People with mental health problems tend to be violent.	☐	☐	☐	☐
I don't socialize as much as I used to because my mental health problems might make me look or behave "weird".	☐	☐	☐	☐
Having mental health problems has spoiled my life.	☐	☐	☐	☐
I stay away from social situations in order to protect my family or friends from embarrassment.	☐	☐	☐	☐
I can have a good, fulfilling life, despite my mental health problems.	☐	☐	☐	☐
People without mental health problems could not possibly understand me.	☐	☐	☐	☐
People ignore me or take me less seriously just because I have mental health problems.	☐	☐	☐	☐
I can't contribute anything to society because I have mental health problems.	☐	☐	☐	☐
Others think that I can't achieve much in life because I have mental health problems.	☐	☐	☐	☐

Appendix Y: Table of Continuous Variables

Scales and Subscales (n)	n	Range	Median	M (SD)
EPPS items				
Satisfaction with training	142	9	8	7.6 (2.5)
Satisfaction with managerial supervision*	129	9	8	7.7 (2.5)
Satisfaction with professional supervision**	119	9	8	7.6 (2.5)
Satisfaction with pay	143	9	7	6.4 (2.6)
Perceived support for you in PS role	146	9	8	6.9 (2.7)
Satisfaction with career progression	145	9	5	5.0 (3.0)
Overall satisfaction with PS role	145	9	8	7.3 (2.5)
Perceived acceptance by team	82	9	8	7.1 (2.4)
Perceived value by team	82	9	7	7.0 (2.6)
Psychosocial measures				
Empowerment (MHCS total scale)	75	64	73	71.8 (12.9)
Hope (MHCS Optimism subscale)	75	26	28	26.8 (5.5)
Recovery (QPR total scale)	76	58	60	59.8 (9.9)
Quality of life (MANSA total scale)	74	48	58	57.8 (10.8)
Internalised stigma (ISMI-10 total scale)	73	22	18	18.2 (4.7)

Note. *Defined as "supervision of your day-to-day work which might involve planning & monitoring workload, ensuring health & safety etc."; **Defined as "support with issues specific to the PS role, e.g. how to clarify one's own boundaries and develop a personal account of recovery that feels safe to share."

Appendix Z: Table of Between-Group Differences

Between-group differences in psychosocial constructs, total costs and total benefits experienced

	NHS M (SD)	Non-NHS M (SD)	*df*	*t*	p
Empowerment	72.7 (12.3)	70.5 (13.9)	73	-0.72	0.47
Hope	27.0 (5.9)	26.6 (5.1)	73	-0.25	0.80
Recovery	60.1 (9.5)	59.5 (10.5)	74	-0.24	0.81
Quality of life	57.3 (11.4)	58.5 (10.0)	72	0.47	0.64
Internalised stigma	18.2 (4.6)	18.3 (4.8)	71	0.90	0.93
Total costs experienced	8.61 (4.5)	6.4 (5.1)	92	-2.2	0.03*
Total benefits experienced	22.9 (3.0)	21 (4.2)	85	-2.5	0.02*

	Personal receipt formal PS=Yes M (SD)	Personal receipt formal PS=No M (SD)	*df*	*t*	P
Empowerment	74.1 (14.9)	71.1 (12.4)	72	0.85	0.40
Hope	28.4 (5.0)	26.3 (5.7)	72	1.40	0.17
Recovery	63.1 (7.6)	58.5 (10.3)	73	1.76	0.08
Quality of life	63.1 (10.3)	56.0 (10.6)	71	2.47	0.02
Internalised stigma	17.4 (4.0)	18.7 (4.8)	70	-1.00	0.32
Total costs experienced	7.7 (5.5)	7.7 (4.7)	91	-0.02	0.98
Total benefits experienced	22.3 (3.4)	22.0 (3.8)	84	0.33	0.74

	Negative experiences in MH team=Yes M (SD)	Negative experiences in MH team=No M (SD)	*df*	*t*	p
Empowerment	72.9 (12.9)	75.5 (11.8)	35	-0.64	0.53
Hope	25.9 (6.5)	28.4 (5.2)	35	-1.29	0.21
Recovery	59.5 (10.1)	61.3 (9.4)	36	-0.55	0.58
Quality of life	54.6 (10.4)	62.7 (11.4)	36	-2.28	0.03
Internalised stigma	17.2 (4.1)	18.8 (4.8)	34	-1.09	0.28
Total costs experienced	10.6 (4.3)	7.4 (5.1)	48	2.35	0.02
Total benefits experienced	21.9 (3.9)	22.9 (3.0)	42	-0.87	0.39

Note. df=degrees of freedom; M=Mean, MH=mental health; SD=Standard deviation, t=independent samples t-test statistic, p=significant level; PS=peer support.