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# Recovery-oriented training programmes for mental health professionals: A narrative literature review

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## ABSTRACT

**Objective:** This review explores the quantitative literature regarding recovery-oriented training programmes for mental health professionals. The main objectives were to determine the methodological quality of studies, identify the characteristics of training programmes being implemented, and explore the effects of recovery-oriented training on recovery-related outcomes.

**Methods:** A systematic literature search of six databases resulted in the identification of 17 studies, which were reviewed using narrative synthesis methodology.

**Results:** The identified studies were of variable methodological quality and a number of weaknesses were acknowledged. The heterogeneity among training programmes limited the ability to draw firm conclusions, however training that included experiential learning and service-user involvement may have had additional benefits. Recovery-oriented staff outcomes were the most commonly reported measures of training effectiveness, with results indicating that recovery training has the potential to improve recovery-consistent knowledge, attitudes and competencies of mental health professionals. However, there is limited evidence relating to service-user and service-level outcomes, suggesting that staff recovery training may have limited influence on clinical practice.

**Conclusions and implications for practice:** Due to the heterogeneity among the identified studies, the effectiveness of staff recovery training is inconclusive. Whilst recovery training may have some utility in improving recovery-oriented staff outcomes, training needs to be provided as part of wider organisational change to ensure this translates into clinical practice.

## 1. Introduction

The promotion of recovery-oriented mental health services continues to gain prominence in international research and policy (Department of Health [DoH], 2009; Frost et al., 2017; Mental Health Commission [MHC], 2001, 2007, 2012; Pincus et al., 2016; World Health Organisation, 2013). Whilst there is no single definition of recovery, there is consensus that recovery is focused on personal growth, hope and autonomy (Meehan, King, Beavis, & Robinson, 2008). Accordingly, recovery is based on the service-user's perspective (Young & Ensing, 1999) and involves a continuing process of change, which may or may not be illness focused (Anthony, 2000; 2004). This notion of 'personal recovery' differs from the traditional bio-medical approach of 'clinical recovery', which refers to a reduction or elimination of clinical

symptoms as determined by mental health professionals [MHPs] (Slade, 2009a). Despite calls for reform, bio-medical views of recovery still prevail amongst MHPs (Morera, Pratt, & Bucci, 2017) and provision of recovery-oriented services remains sporadic (Le Boutillier et al., 2014; Perkins & Slade, 2012; Pincus et al., 2016; Tse, Siu, & Kan, 2013).

The successful implementation of personal recovery requires traditional mental health services to adopt a different values base (Slade, 2009b). Professionals need to shift from a position of expertise and authority to one in which they provide coaching directed towards the goals of service-users (Roberts & Wolfson, 2004; Slade, 2009a). MHPs therefore require support to develop core recovery competencies (Borg & Kristiansen, 2004; Clasen, Meyer, Brun, Mase, & Cauley, 2003) and emphasis should be given to professional's belief in and understanding of recovery (Cleary & Dowling, 2009). In addition,

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Del Vecchio (2015) recognised the need to prepare MHPs with recovery-based clinical skills and practice delivery approaches. Despite difficulties with uptake and maintenance of behaviour change, staff training programmes continue to be a key approach to developing knowledge, skills and practices within workplace environments (Williams et al., 2016). Consequently, recovery-oriented staff-training programmes have been implemented across a range of mental health settings. However, to the best of the author's knowledge, there has been no systematic review of these interventions. Whilst much of the recovery evidence is of a narrative nature, more empirical-based data are required to validate the new recovery approach (Clasen et al., 2003; Wilrycx, Croon, van den Broek, & van Nieuwenhuizen, 2012). Thus, this research aimed to systematically review the quantitative literature relating to recovery-oriented training programmes for MHPs. The main objectives were to determine the methodological quality of studies, identify the characteristics of training programmes being implemented, and explore the effects of recovery-oriented training on recovery-related outcomes.

## 2. Methodology

### 2.1. Search strategy

A systematic literature search was conducted in January 2018 using ASSIA (1988-), PsychINFO (1988-), MEDLINE (1988-), CINAHL (1988-), Scopus (1988-), and Web of Science (1988-). Keywords were entered to fulfil the following criteria: staff training interventions (*staff training* OR *staff education*) AND recovery focused (*recovery* OR *recovery orient\**) AND within a mental health context (*mental health* OR *mental illness* OR *mental disorder* OR *psychiatr\** OR *psychosis* OR *schizophren\**). Database searches were defined to identify these terms within the studies title, abstract or keywords.

The search strategy was completed in line with PRISMA guidance (Moher, Liberati, Tetzlaff, Altman, & Prisma Group, 2009). Studies identified from each database were combined and duplicates removed. The titles and abstracts of remaining studies were screened for relevance and full texts were assessed for eligibility according to the inclusion and exclusion criteria. A manual search of reference lists identified additional relevant studies and one was provided during the review process. An overview of this sampling process is displayed in Fig. 1.

### 2.2. Inclusion and exclusion criteria

The notion of recovery within mental health is a relatively recent concept, thus the review was limited to papers published in English from 1988 onwards. Only peer-reviewed articles were included and 'grey literature' was excluded. Studies were required to describe and evaluate a discrete recovery-oriented training programme delivered to MHPs. In addition, the inclusion of quantitative outcome data was a prerequisite.

### 2.3. Quality assessment

Studies were assessed for methodological quality using the Quality Assessment Tool for Studies with Diverse Designs (QATSDD; Sirriyeh, Lawton, Gardner, & Armitage, 2012), which has demonstrated good validity and reliability (Sirriyeh et al., 2012). Studies were given a quality score based on the 14 QATSDD quantitative criteria, which were each scored on a four-point scale (from 0 to 3) with a maximum total score of 42, a higher score indicates better quality. The author assessed all studies against the 14 criteria, and an inter-rater reliability of 71% was obtained between reviewers (two of the authors) on a random sample of four papers (25%).

### 2.4. Data synthesis

Acknowledging the limited number of relevant studies, quality ratings were not used to exclude studies but rather to aid interpretation of the results. A meta-analysis in which the summary data from the individual studies would be statistically analysed in order to yield a single finding was not feasible given the wide range of designs used by the individual studies. Therefore, a narrative synthesis in which the various findings are combined and described in a coherent narrative was conducted in line with published guidance (Popay et al., 2006).

## 3. Results

### 3.1. Study design characteristics

The search strategy identified 17 eligible studies published between 2005 and 2017. Study design characteristics are summarised in Table 1. Studies spanned nine countries and had diverse study designs: pre-test/post-test (1, 2, 3, 4, 6, 8, 10, 11, 12), quasi-experimental (5, 7, 8, 13, 15, 16), repeated measurement (14), and two RCTs (9, 17). Paper 8 included two separate components as was thus counted twice. Service contexts also varied, comprising psychiatric inpatient units (1, 2, 9, 10, 16), community-based mental health services (3, 15, 17), and an academic medical institution (8). Nine studies (4, 5, 6, 7, 11, 12, 13, 14, 17) took place across a range of mental health organisations. The majority of studies ( $n = 13$ ) focused on training MHPs with varying professional backgrounds, and three (4, 6, 17) trained MHPs alongside carers and/or service-users. A further two studies focused exclusively on training mental health nurses (10, 16) and one targeted Doctoral trained professionals (8).

The quality ratings of studies were variable, with scores on the QATSDD (Sirriyeh et al., 2012) ranging from 19 to 35. Studies consistently scored highly on criteria 12 (i.e. fit between research question and method of analysis). Most, with the exception of one (17), scored poorly on criteria 4 (i.e. evidence of sample size considered in terms of analysis), thereby raising questions concerning the evaluative power of the studies. All studies received low scores on criteria 15 (i.e. evidence of user involvement in design) and all but three (1, 2, 17) obtained low scores on criteria 1 (i.e. explicit theoretical framework). Potential sources of detection and performance bias were also identified. Only two studies used randomisation (9, 17), one study failed to report on participant recruitment (9), neither included blinding procedures and one did not detail method of allocation to treatment conditions (9). In addition, the potential for attrition bias was acknowledged: four studies (1, 2, 6, 9) did not report on attrition rates and the remaining studies reported rates ranging from 0% to 73%.

### 3.2. Training programme characteristics

Training attendance was mandatory in five studies (1, 5, 12, 13, 14) and voluntary in seven (2, 4, 6, 8, 10, 15, 16). The remaining five studies failed to provide this information. Characteristics of training programmes are displayed in Table 2. Training ranged from one hour to five days of contact time, and the number of sessions ranged from one to 12. Only three studies provided previously established training: two (3, 11) provided The Collaborative Recovery Training Program (Oades et al., 2005) and one (11) provided Recovery to Practice (SAMHSA, 2010). A further study (5) incorporated an established training package (i.e. Basset et al., 2007) into a wider training programme, while two studies (4, 6) reported the development of training based on the Wellness Recovery Action Plan (WRAP; Copeland & Mead, 2004). One study (17) employed REFOCUS, a team based intervention which is based on research and systematic reviews and targeted staff behaviour to increase their focus on values, preferences, strengths and goals of service users as well as staff and service user relationships through coaching. Training programmes were broadly

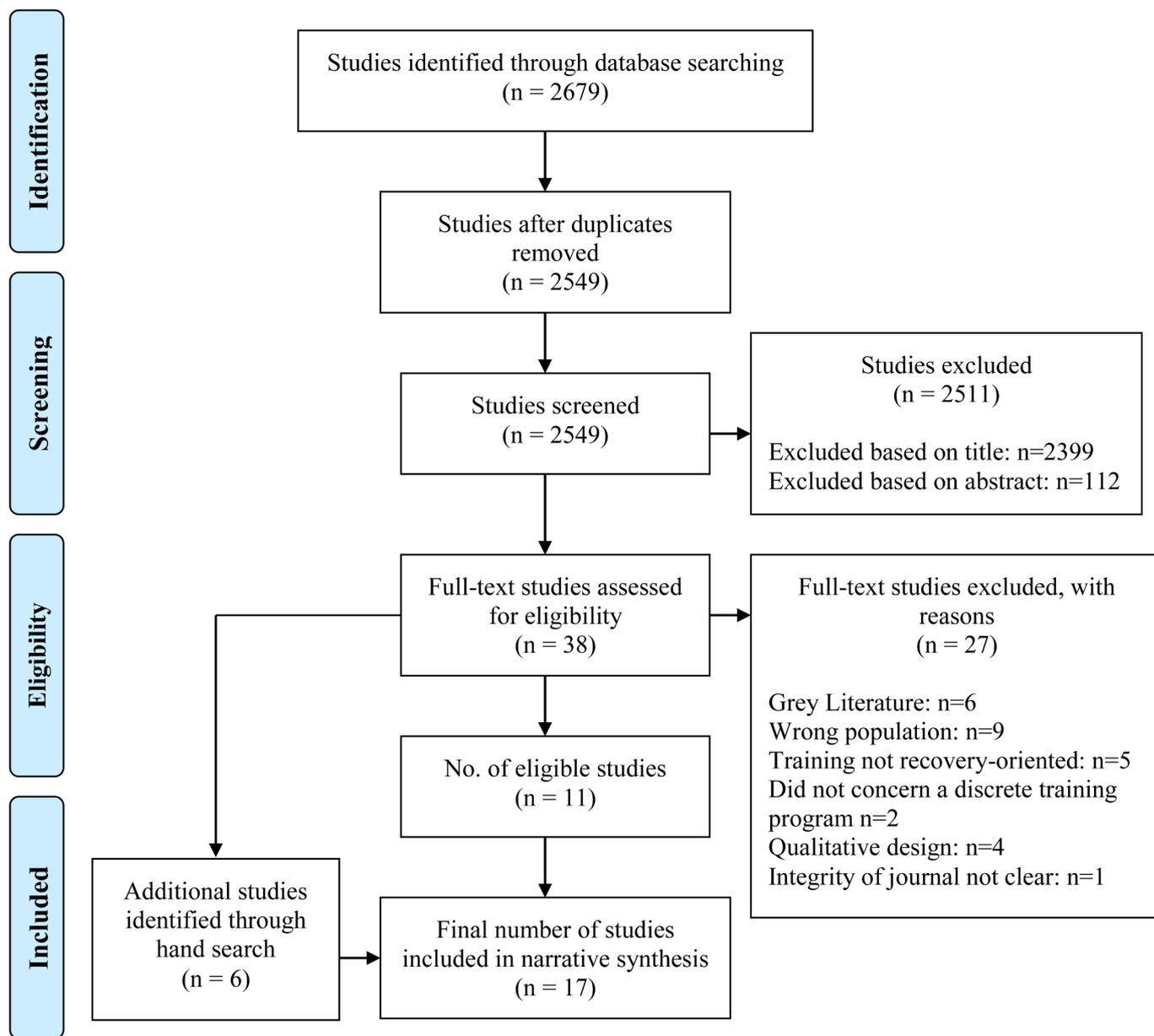


Fig. 1. PRISMA diagram depicting search and screening process.

homogenous in that they all provided a group-based educational component, providing information on recovery principles and strategies to inform recovery-oriented practice. However the components of training programmes differed across studies. Moreover, three studies included additional strategies in the form of organisational support: one (9) established an on-going forum for professionals, another (15) supported the development of service-user-led mutual support groups, and the REFOCUS intervention (17) included intervention meetings, training in recovery coaching with telephone support and optional booster sessions, separate reflection groups for team managers and team members and the use of a reflective practice tool in individual supervision.

Whilst six studies (3, 11, 13, 14, 16, 17) did not provide sufficient information regarding delivery style, all remaining studies (except study 10) reported the inclusion of interactive learning components. Seven (1, 2, 5, 7, 8, 9, 15) included experiential learning (e.g. skill practice, role plays and/or establishing action plans), providing participants with opportunities to develop practical skills. Ten studies (4, 5, 7, 8, 9, 12, 13, 14, 15, 17) included people with lived experience in the delivery of training, providing opportunities to hear personal

experiences of recovery. In total, only three training programs made use of multi-media. One used an interactive DVD to promote self-paced learning (2) and another showed a video lecture (9), both of which formed part of a wider training package. One training programme consisted solely of a 1hr didactic webinar (10).

### 3.3. Training evaluation outcomes

Of the 17 studies, eight assessed the effects of training immediately pre- and post- intervention (2, 3, 4, 6, 8, 9, 10, 11), and one had a data collection period spanning three-months pre- and post- intervention (16). The remaining seven studies utilised longitudinal designs, collecting data at three-months post-training (5), six-months post-training (1, 7, 12) or one-year post-training (13, 14, 15, 17). Training evaluation outcomes are reported in Table 3. Studies assessed the effects of training on a range of staff, service-user and/or service-level outcomes, with four reporting positive effects (4, 7, 11, 12), ten reporting mixed effects (1, 2, 3, 5, 6, 8, 9, 13, 14, 15, 17) and two reporting no effects (10, 16).

**Table 1**  
Study design characteristics.

[Study Number]	Authors	Country	Study Design	Setting/Sample	Sample Size [Attrition]	Quality Rating
[1]	Chang et al. (2013)	USA	Pretest/posttest design	Urban acute psychiatric inpatient unit/ Mental health staff	N = 29 [ns]	28
[2]	Chen et al. (2014)	Canada	Pretest/posttest design	Tertiary care psychiatric inpatient units/ Mental health staff	N = 26 [11.5% post part 1; 73% post part 2]	19
[3]	Crowe et al. (2006)	Australia	Pretest/posttest design (within-and-between groups)	Community based mental health organisations/ Mental health staff from government & non-government organisations	N = 147 [ns] government staff N = 101 [ns] non-government staff	23
[4]	Doughty et al. (2008)	New Zealand	Pretest/posttest design	Mental health organisations/SU & mental health staff	N = 50 [nc] SU; N = 75 [nc] staff	21
[5]	Gilbert et al. (2013)	UK	Quant component: Quasi-experimental design (pretest/posttest, non-equivalent control group)	Community & in-patient rehabilitation teams/ Impact of training for mental health staff on SU care plans	N = 342 [50.4%] staff receiving training; IG: N = 385 (SU of trained staff); CG: N = 288 (SU of staff who did not receive training)	22
[6]	Higgins et al. (2012)	Ireland	Quant component: Pretest/posttest design	Mental health organisations/ various combinations of people identifying as mental health staff, carers &/or SU	N = 194 [ns] attended 2-day training; N = 59 [ns] attended 5-day training	22
[7]	Meehan and Glover (2009)	Australia	Quasi-experimental design (pretest/posttest, non-equivalent control group)	Inpatient & outpatient mental health services / Mental health staff	IG: N = 114 [53.9%] staff receiving training; CG: N = 64 [ns] staff from different district attending different training	20
[8]	Peebles et al. (2009)	USA	Pretest/posttest design & Quasi-experimental design (non-equivalent control group)	Academic medical institutions (MCG & USC)/ Doctoral trained mental health professionals (i.e. psychologists & psychiatrists)	IG: N = 46 [28.3%] practitioners from MCG; CG: N = 34 [0%] practitioners from USC	29
[9]	Pollard et al. (2008)	Israel	Randomised controlled trial	Acute & chronic psychiatric inpatient units / Mental health staff	IG: N = 28 [ns]; CG: N = 27 [ns] wait-list	19
[10]	Repique et al. (2016)	USA	Quant component: Pretest/posttest design	Private psychiatric inpatient units / nurses	N = 42 [25%]	28
[11]	Salgado et al. (2010)	Australia	Pretest/posttest design	Government & non-government mental health organisations / Mental health staff	N = 103 [27.2%]	30
[12]	Walsh et al. (2017)	Ireland	Pretest/posttest design	Mental health organisations (e.g. community &/ inpatient)/ Mental health staff	N = 101 [28.7%]	31
[13]	Wilrycx et al. (2012)	The Netherlands	Quasi-experimental: Two-group multiple intervention interrupted time-series design	The department for long-term mentally ill people (inpatient & outpatient settings) / Mental health staff	N = 210 [54.3%]	30
[14]	Wilrycx et al. (2015)	The Netherlands	Repeated measurement design with six measurement occasions	The department for long-term mentally ill people (inpatient & outpatient settings) / SU rated outcomes of training for mental health staff	N = 142 [nc] SU	32
[15]	Young et al. (2005)	California	Quant component: Quasi-experimental design (pretest/posttest, non-equivalent control group)	Community mental health organisations / Mental health staff	IG: N = 151 [22.5%]; CG: N = 118 [33.9%] clinicians from a different mental health organisation	25
[16]	Zuaboni et al. (2017)	Switzerland	Quasi-experimental design (pretest/posttest, non-equivalent control group)	Acute psychiatric inpatient units / nurses & SU	IG: N = 73 [11%] SU & N = 43 [11.6%] nurses; CG: N = 29 [51.7%] patients from different wards & N = 19 [52.6%] nurses from different wards	29
[17]	Slade et al. (2015)	UK	Randomised controlled trial	Community-based adult mental health	IG: N = 14 teams, 153 patients [57] CG: N = 13 teams, 144 patients [49] Overall attrition 17% for teams and 7% for service users	35

N: number of participants; IG: Intervention Group; CG: Control Group; ns: not stated; nc: not clear; SU: Service-Users; Quant: Quantitative.

**Table 2**  
Training programme characteristics.

[Study Number]	Authors	Title/Contents	Training Attendance / Delivery style	SU &/ Carer Involvement	Duration
[1]	Chang et al. (2013)	<ul style="list-style-type: none"> <li>Recovery-oriented Cognitive Therapy (CT-R) milieu training: CT-R formulations &amp; strategies to inform treatment planning (engagement, collaboration, goal setting, crisis de-escalation, treatment non-adherence &amp; relapse prevention); techniques for avoiding staff burnout</li> <li>Self Learning Program (Part 1): Basic recovery concepts; the tension-practice-consequence model framework (8 core competencies)</li> <li>Group Learning Program (Part 2): Two modules (encouraging participation' &amp; 'strength-based practice) applying the 4-D cycle of Appreciative Inquiry to manage clinical dilemmas</li> <li>The Collaborative Recovery Training Program (Oades et al., 2005): Recovery as an individual process; change enhancement; collaborative needs identification &amp; goal striving; collaborative task striving and monitoring</li> </ul>	Mandatory / Lectures, discussions, visual aids & interactive exercises (skill practice, role plays & establishing action plans)	Design: ns; Delivery: ns	8-h (2-h weekly sessions over 4 weeks)
[2]	Chen et al. (2014)	<ul style="list-style-type: none"> <li>Wellness Recovery Action Plan (WRAP) Workshop: Basic recovery concepts; medical care and how to manage medications; developing a set of 'tools' to enhance 'wellness'; identifying triggers and symptoms; developing personal crisis plans</li> <li>Developed by researchers (no title stated): Introduction to recovery; elements that constitute a recovery approach; an established recovery training package (Psychosis revisited - a psychosocial approach to recovery; Basset et al., 2007); assessment &amp; care planning from SU perspectives; social inclusion/vocational activities; carer perspectives; personal values, strengths-based approaches &amp; the role of hope; incorporating recovery concepts within individual teams</li> </ul>	Voluntary / User manual & interactive lesson on DVD	Design: ns; Delivery: no	Self-paced learning
[3]	Crowe et al. (2006)	<ul style="list-style-type: none"> <li>Recovery as an individual process; change enhancement; collaborative needs identification &amp; goal striving; collaborative task striving and monitoring</li> </ul>	Voluntary / Group discussion & action planning	Design: ns; Delivery: ns	6 sessions over 6 weeks
[4]	Doughty et al. (2008)	<ul style="list-style-type: none"> <li>Wellness Recovery Action Plan (WRAP) Workshop: Basic recovery concepts; medical care and how to manage medications; developing a set of 'tools' to enhance 'wellness'; identifying triggers and symptoms; developing personal crisis plans</li> <li>Developed by researchers (no title stated): Introduction to recovery; elements that constitute a recovery approach; an established recovery training package (Psychosis revisited - a psychosocial approach to recovery; Basset et al., 2007); assessment &amp; care planning from SU perspectives; social inclusion/vocational activities; carer perspectives; personal values, strengths-based approaches &amp; the role of hope; incorporating recovery concepts within individual teams</li> </ul>	ns / ns	Design: ns; Delivery: ns	2 days
[5]	Gilbert et al. (2013)	<ul style="list-style-type: none"> <li>Recovery as an individual process; change enhancement; collaborative needs identification &amp; goal striving; collaborative task striving and monitoring</li> </ul>	Voluntary / Didactic presentation, small group discussion & sharing of recovery experiences	Design: yes; Delivery: yes	1 or 2 days
[6]	Higgins et al. (2012)	<ul style="list-style-type: none"> <li>Recovery as an individual process; change enhancement; collaborative needs identification &amp; goal striving; collaborative task striving and monitoring</li> </ul>	Mandatory / Didactic, experiential learning, SU accounts & reflecting on practice	Design: yes; Delivery: yes	4 days training & 1 half-day in-team consolidation meeting
[7]	Meehan and Glover (2009)	<ul style="list-style-type: none"> <li>Recovery as an individual process; change enhancement; collaborative needs identification &amp; goal striving; collaborative task striving and monitoring</li> </ul>	Voluntary / Didactic presentation & collaborative discussion	Design: ns; Delivery: ns	2 or 5 days
[8]	Peebles et al. (2009)	<ul style="list-style-type: none"> <li>Recovery as an individual process; change enhancement; collaborative needs identification &amp; goal striving; collaborative task striving and monitoring</li> </ul>	ns / Didactic lectures, problem solving in small groups, demonstrations & role plays	Design: yes; Delivery: yes	3 days (1 day each month over a period of 3 months)
		<ul style="list-style-type: none"> <li>Recovery as an individual process; change enhancement; collaborative needs identification &amp; goal striving; collaborative task striving and monitoring</li> </ul>	Voluntary / Didactic presentations, experiential exercises, role-playing, prepared discussions, SU accounts, panel discussions & question-and-answer sessions	Design: yes; Delivery: yes	2 workshops (1 × 3-h workshop & 1 × 2-h workshop delivered 1 month later)

(continued on next page)

**Table 2** (continued)

[Study Number] Authors	Title/Contents	Training Attendance / Delivery style	SU &/ Carer Involvement	Duration
[9] Pollard et al. (2008)	<ul style="list-style-type: none"> <li>Rehabilitation Program Training: Theoretical knowledge (introduction to the 'recovery mission'; the importance of hope), understanding SU experiences; increasing knowledge of evidence-based practices; emphasising the importance of applying evidence-based practices; increasing knowledge about community services</li> <li>Additional component: A forum of representatives from all disciplines to maintain contact, disseminate information &amp; provide in-service training</li> </ul>	ns / Didactic lectures, video of a lecture, SU accounts, experiential elements, group discussions & staff presentations	Design: ns; Delivery: yes	6 × 2-h sessions & 6 × 4-h community visits
[10] Repique et al. (2016)	<ul style="list-style-type: none"> <li>Recovery to Practice (SAMHSA, 2010): Application of recovery principles in acute care settings: patient engagement models; trauma systems theory; restraint reduction strategies; integration of peer-to-peer services in psychiatric treatment; outcomes of randomised trial of consumer-managed alternative treatment programs</li> <li>The Collaborative Recovery Training Program (Oades et al., 2005):</li> </ul>	Voluntary / Group online webinar: didactic	Design: ns; Delivery: no	1-h
[11] Salgado et al. (2010)	<ul style="list-style-type: none"> <li>Contents: as stated above for Crowe et al. (2006)</li> <li>Advancing Recovery in Ireland (ARI) training workshop: Defining the concept of recovery; exploring recovery principles and how they can be adopted into clinical practice</li> <li>Recovery and recovery-oriented care: Module 1 (intervention A): Focused on the basics of recovery &amp; recovery-oriented care</li> <li>Module 2 (intervention B): Focused on the recovery-oriented attitude &amp; competency of the professional</li> </ul>	ns / ns	Design: ns; Delivery: ns	2 days
[12] Walsh et al. (2017)	<ul style="list-style-type: none"> <li>Staff Supporting Skills for Self-Help: Scientific presentation on self-help &amp; recovery; structured dialogues (focusing on barriers to self-help &amp; recovery, &amp; experiences that create hope); rehabilitation readiness (skills to help SU set goals &amp; develop coping strategies); strategies for independence; professional skills supporting self-help (how to support self-help without being intrusive); detailing (continuing to meet with clinicians as needed)</li> <li>Additional component: Technical assistance for SU to set up mutual support groups</li> </ul>	Mandatory / Group work, individual work, conversations, SU & carer accounts, & reflective practice (individual & team perspective)	Design: yes; Delivery: yes	4-h
[13] Wilrycx et al. (2012)	<ul style="list-style-type: none"> <li>Contents: as stated above for Wilrycx et al. (2012)</li> <li>Staff Supporting Skills for Self-Help: Scientific presentation on self-help &amp; recovery; structured dialogues (focusing on barriers to self-help &amp; recovery, &amp; experiences that create hope); rehabilitation readiness (skills to help SU set goals &amp; develop coping strategies); strategies for independence; professional skills supporting self-help (how to support self-help without being intrusive); detailing (continuing to meet with clinicians as needed)</li> <li>Additional component: Technical assistance for SU to set up mutual support groups</li> </ul>	Mandatory / ns	Design: yes; Delivery: yes	4 days (2 days per module)
[14] Wilrycx et al. (2015)	<ul style="list-style-type: none"> <li>Contents: as stated above for Wilrycx et al. (2012)</li> <li>Staff Supporting Skills for Self-Help: Scientific presentation on self-help &amp; recovery; structured dialogues (focusing on barriers to self-help &amp; recovery, &amp; experiences that create hope); rehabilitation readiness (skills to help SU set goals &amp; develop coping strategies); strategies for independence; professional skills supporting self-help (how to support self-help without being intrusive); detailing (continuing to meet with clinicians as needed)</li> <li>Additional component: Technical assistance for SU to set up mutual support groups</li> </ul>	Mandatory / ns	Design: yes; Delivery: yes	4 days (2 days per module)
[15] Young et al. (2005)	<ul style="list-style-type: none"> <li>Contents: as stated above for Wilrycx et al. (2012)</li> <li>Staff Supporting Skills for Self-Help: Scientific presentation on self-help &amp; recovery; structured dialogues (focusing on barriers to self-help &amp; recovery, &amp; experiences that create hope); rehabilitation readiness (skills to help SU set goals &amp; develop coping strategies); strategies for independence; professional skills supporting self-help (how to support self-help without being intrusive); detailing (continuing to meet with clinicians as needed)</li> <li>Additional component: Technical assistance for SU to set up mutual support groups</li> </ul>	Voluntary / Didactic education, small group discussions, role-playing techniques, clinician-SU dialogues & on-going technical assistance (individual advice as needed)	Design: yes; Delivery: yes	5 group components delivered over a 1-year period & opportunities to receive individual advice as needed
[16] Zauboni et al. (2017)	<ul style="list-style-type: none"> <li>Mental Health Nursing Training-Programme: Personal recovery &amp; social inclusion (session 1); basics of Motivational Interviewing, development of therapeutic relationships &amp; coaching techniques (sessions 2 &amp; 3); goal attainment strategies &amp; scaling (session 4); implementation of training concepts in care process &amp; documentation, &amp; interdisciplinary exchange (session 5)</li> </ul>	Voluntary / ns	Design: ns; Delivery: no	5 half-day training sessions

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Table 2 (continued)

[Study Number] Authors	Title/Contents	Training Attendance / Delivery style	SU &/ Carer Involvement	Duration
[17] Slade et al. (2015)	REFOCUS team intervention programme. The programme has behavioural and interpersonal components. The behavioural component comprises three desired behaviours by staff called working practices: Working practice 1 was focussed on understanding service users' values and identity beyond being a service user and placing their preferences at the centre of care planning, working practice 2 was focussed on assessing service users personal and social strengths with a standard approach to identify existing and potential resources upon which they can build, working practice three focussed on supporting service users in striving for goals of value to them. Staff were also trained in coaching skills recognising the interpersonal context in which the working practices are fulfilled.	ns/ns Additional support provided in terms of intervention briefing meetings for service users and staff (separately), telephone support and optional booster sessions related to coaching training, 6 team manager externally facilitated reflective sessions to support culture change, six team reflection groups, three of which were externally facilitated three internally facilitated, and the use of a reflective practice tool in individual supervision	Design: ns Delivery: yes	3 × 4 h training sessions in personal recovery 1 × 8 h and 2 × 4 h training in recovery coaching

SU: Service-Users; ns: not stated.

### 3.4. Recovery-oriented staff outcomes

#### 3.4.1. Assessment tools

To investigate the effects of recovery training on staff outcomes, a range of self-report questionnaires were used, seven of which were developed as part of the study. Two studies (3, 11) measured staff hopefulness using the Staff Attitudes to Recovery Scale (STARS; Crowe, Deane, Oades, Caputi, & Morland, 2006), one (11) measured provider optimism with the Therapeutic Optimism Scale (TOS; Byrne, Sullivan, & Elsom, 2006), and one (15) measured staff competencies using the Competency Assessment Instrument (CAI; Chinman et al., 2003). Six studies measured recovery-consistent attitudes, one (8) using the Recovery Attitudinal Pre-Post Survey (Cook, Jonikas, & Razzano, 1995) and five (3, 6, 11, 12, 13) using versions of the Recovery Attitudes Questionnaire (RAQ; Borkin et al., 2000). To measure levels of stigma and staff attitudes, one study (8) used the Attribution Questionnaire-27 (AQ-27; Corrigan, Watson, Warpinski, & Gracia, 2004), another (1) included a measure of Attitudes Towards Working with People with Psychosis (McLeod, Deane, & Hogbin, 2002) and one (17) used the Mental Illness: Clinicians' Attitudes (MICA; Gabbidon et al., 2013). One study (17) additionally used two non-standardised scales, one, the Participation Scale, to measure attendance and engagement in the training, and the other called the Recovery Practice Scale to assess self-rated skills, behavioural intent, behaviour in relation to coaching, values, strengths, striving to achieve goals and partnership relationships.

Three studies concurrently measured recovery attitudes and knowledge: two (4, 6) using the Beliefs about Recovery and WRAP questionnaire (Doughty, Tse, Duncan, & McIntyre, 2008) and one (9) the Practitioners' Beliefs, Goals and Practices in Psychiatric Rehabilitation (PBGPPR; Casper, Oursler, Schmidt, & Gill, 2002). To measure recovery knowledge, eight studies (2, 7, 8, 10, 11, 12, 13, 17) used the Recovery Knowledge Inventory (RKI; Bedregal, O'Connell, & Davidson, 2006), one (6) used the Recovery Knowledge Questionnaire (RKQ; Higgins et al., 2012), another (3) used the Collaborative Recovery Knowledge Scale (Crowe et al., 2006), and a further study (8) used the Project GREAT Recovery Knowledge Measure (Peebles et al., 2009).

#### 3.4.2. Overview of findings

Overall, fourteen studies evaluated the effects of recovery training on staff outcomes. One such study (11) showed positive effects on provider optimism and two (3, 11) showed positive effects on levels of staff hopefulness. Three studies (11, 12, 13) reported that staff training had positive effects on staff attitudes towards recovery. Study 3 found mixed effects, reporting significant improvements in recovery attitudes for MHPs from the government health sector, but not for those working in non-government organisations. Furthermore, study 6 reported that the recovery attitudes of MHPs, carers and service-users improved significantly after a 2-day training course, but not after an extended 5-day course. Authors acknowledged a potential ceiling effect of the RAQ-7 in relation to this finding. Study 8 also reported mixed effects: recovery attitudes of psychologists and psychiatrists improved to a statistically significant level, but only after the second phase of the training programme. However, this phase of training was specifically designed to target attitudes. Study 17 found no significant changes in attitudes to mental illness after the training and REFOCUS intervention at one year follow up.

Study 15 found that when compared with a control group, clinicians who received recovery training showed significantly higher scores on a range of clinical competencies at one-year follow-up. However, stigma was found to worsen in both groups. To account for this finding, the authors acknowledged that national attention had been given to violent incidents committed by people with mental health difficulties during the study period. A further two studies (1, 8) also reported that recovery training had no effect on levels of stigma.

**Table 3**  
Training evaluation outcomes.

[Study Number]	Authors	Evaluated Outcome	Assessment Tool	Evaluation time points	Findings
[1]	Chang et al. (2013)	<ul style="list-style-type: none"> <li>Perceptions of CT-R</li> <li>Beliefs about the therapeutic milieu</li> <li>Attitudes</li> </ul>	The CT-R Interview Views on Therapeutic Environments (VOTE); Laker et al., 2012 Attitudes Toward Working with People with Psychosis (McLeod et al., 2002)	Pre and 6-months post-training Pre and 6-months post-training Pre and 6-months post-training	(↑*) (i.e. greater familiarity) (↓*) (i.e. improvement in attitudes) (→) (↓) from 19 to 7 (↑*) post part 1 of training (→) post part 2 of training High satisfaction (4.21 out of 5) Government group: (↑*) Non-Government group: (↑*) Government group: (↑*) RAQ-7 first factor (↑*) AQ-7 s factor (↑*) Non-Government group: RAQ-7 first factor (→) RAQ-7 s factor (→) Government group: (↑*) Non-Government group: (↑*) (↑*) no significant differences between scores for: • 1-day & 2-day course • SU & staff (no statistics reported) CG vs. IG post-training: • IG had significantly more changes in care plan topics covered; no clear trend in topic changes • IG had significantly more changes in the attributed responsibility for actions; changes related to whether staff took sole responsibility for actions (33% CG; 25% IG) or shared responsibility with consumers (33% CG; 58% IG) (↑*) for 2-day training (→) for 5-day training (↑*) for 2-day training (→) for 5-day training 2-day training: Positive statements (↑*) Negative statement (↓*) 5-day training Positive statements (↑*) Negative statement (→) IG: (↑*) at 6-months post-training CG vs. IG at 6-month post training: IG scores increased significantly more than CG scores CG vs. IG: IG scores significantly higher than CG scores IG: (↑*) post workshop 1 CG vs. IG: IG scores significantly higher than CG scores CG vs. IG: IG scores significantly higher than CG scores CG vs. IG: IG scores significantly higher than CG scores IG: (→) post workshop 1; (↑*) post workshop 2 CG vs. IG: IG scores significantly higher than CG scores IG: (→) post workshop 1; (→) post workshop 2 CG vs. IG: IG scores significantly lower (i.e. less stigmatising attitudes towards SU) than CG scores (continued on next page)
[2]	Chen et al. (2014)	<ul style="list-style-type: none"> <li>Incidents of seclusion &amp; restraint</li> <li>Recovery knowledge</li> </ul>	Recovery Knowledge Inventory (RKI); Bedregal et al., 2006	4-months pre and 4-months post-training Pre-training, post part 1 of training & post part 2 of training Post part 2 of training Pre and post-training	
[3]	Crowe et al. (2006)	<ul style="list-style-type: none"> <li>Group learning experience</li> <li>Recovery knowledge</li> <li>Recovery attitudes</li> </ul>	The collaborative recovery knowledge scale (developed for this study) Recovery Attitudes Questionnaire (RAQ-7); Borkin et al., 2000	Pre and post-training Pre and post-training	
[4]	Doughty et al. (2008)	<ul style="list-style-type: none"> <li>Recovery hopefulness</li> <li>Recovery knowledge &amp; attitudes</li> </ul>	Staff Attitudes to Recovery Scale (STARS); developed for this study Beliefs about Recovery and WRAP questionnaire (developed by authors)	Pre and post-training Pre and post-training	
[5]	Gilburt et al. (2013)	<ul style="list-style-type: none"> <li>SU care plans</li> </ul>	Care plan audit: change in topics covered & change in responsibility of action	Pre and 3-months post-training	
[6]	Higgins et al. (2012)	<ul style="list-style-type: none"> <li>Recovery knowledge</li> <li>Recovery attitudes</li> <li>WRAP beliefs</li> </ul>	Recovery Knowledge Questionnaire (RKQ); developed for this study RAQ-7 (Borkin et al., 2000) Beliefs about Recovery and WRAP questionnaire (Doughty et al., 2008)	Pre and post-training Pre and post-training Pre and post-training	
[7]	Meehan and Glover (2009)	<ul style="list-style-type: none"> <li>Recovery knowledge</li> </ul>	RKI (Bedregal et al., 2006)	Pre-training, post-training and 6-months post-training	
[8]	Peebles et al. (2009)	<ul style="list-style-type: none"> <li>Recovery knowledge</li> <li>Recovery attitudes</li> <li>Stigma</li> </ul>	The Project GREAT Recovery Knowledge Measure (developed for this study) RKI (Bedregal et al., 2006) Recovery Attitudinal Pre-Post Survey (Cook et al., 1995) Attribution Questionnaire-27 (AQ-27); Corrigan et al., 2004	IG: pre-training and post-workshop 1 CG: 2-months post-workshop 2 IG: pre-training and post-workshop 1 CG: 2-months post-workshop 2 IG: pre-training, post-workshop 1 and post-workshop 2 CG: 2-months post-workshop 2 IG: pre-training, post-workshop 1 and post-workshop 2 CG: 2-months post-workshop 2	

Table 3 (continued)

[Study Number]	Authors	Evaluated Outcome	Assessment Tool	Evaluation time points	Findings
[9]	Pollard et al. (2008)	<ul style="list-style-type: none"> <li>• Knowledge &amp; attitudes</li> </ul>	Practitioners' Beliefs, Goals and Practices in Psychiatric Rehabilitation Questionnaire (PBGPQR; Casper et al., 2002)	IG: pre and post-training	IG: (→) on factor 1 (consumer-driven paradigm); (↑*) on factor 2 (staff-directed paradigm); (↑*) on factor 3 (evidenced-based practices); (→) on factor 4 (standardised service); (→) on factor 5 (recovery mission); (↑*) on total score CG vs. IG: IG score significantly higher than CG scores (→) on all four domains of RKI
[10]	Repique et al. (2016)	<ul style="list-style-type: none"> <li>• Recovery knowledge</li> <li>• Aggregated restraint rates</li> </ul>	RKI (Bedregal et al., 2006)	CG: pre and post-training Pre-training and post-intervention phase	Average restraint episodes per 1000 patient days: Q1 = 1.33; Q2 = 1.63; Q3 = 2.33; Q4 = 2.29
[11]	Salgado et al. (2010)	<ul style="list-style-type: none"> <li>• Recovery knowledge</li> <li>• Recovery attitudes</li> <li>• Recovery hopefulness</li> <li>• Provider optimism</li> </ul>	Average restraint rate: Line graph  RKI (Bedregal et al., 2006) RAQ-7 (Borkin et al., 2000) STARS (Crowe et al., 2006) Therapeutic Optimism Scale (TOS; Byrne et al., 2006) RKI (Bedregal et al., 2006)	Quarterly restraint rates over a one-year period: pre-training (Q1 and Q2), during the 3-month intervention period (Q3), and post-training (Q4) Pre and post-training Pre and post-training Pre and post-training	(↑*); no interaction with dispositional hope observed (↑*)
[12]	Walsh et al. (2017)	<ul style="list-style-type: none"> <li>• Recovery knowledge</li> <li>• Recovery attitudes</li> <li>• Confidence in using the recovery model of care</li> <li>• Recovery knowledge</li> </ul>	RKI (Bedregal et al., 2006) RAQ-16 (Borkin et al., 2000) Ordinal ratings converted to mean confidence ratings Dutch version of the RKI (Bedregal et al., 2006) Dutch version of the RAQ (Borkin et al., 2000)	Pre and 6-months post-training  Pre and 6-months post-training Pre and 6-months post-training	(↑*) on all four domains of RKI  (↑*) on both factors of the RAQ-16 (↑*)
[13]	Wilrycx et al. (2012)	<ul style="list-style-type: none"> <li>• Recovery knowledge</li> <li>• Recovery attitudes</li> </ul>	Dutch version of the RKI (Bedregal et al., 2006) Dutch version of the RAQ (Borkin et al., 2000)	Six measurement occasions:  Pre-training baseline (Time 0); Post intervention A -delivered to half the staff sample (Time 1); Post intervention A -delivered to second half of the staff sample (Time 2); Post intervention B -delivered to half the staff sample (Time 3); Post intervention B -delivered to second half of the staff sample (Time 4); 1-year post Time 4 (Time 5)	(↑*) post intervention A (→) post intervention B The positive effect of intervention A reduced following intervention B (↑*) post intervention A (↑*) post intervention B Intervention B had a larger effect than intervention A
[14]	Wilrycx et al. (2015)	<ul style="list-style-type: none"> <li>• Relationships with professionals (SU perceptions)</li> <li>• Experienced empowerment &amp; autonomy (SU perceptions)</li> </ul>	Dutch version of the Recovery-Promoting Relationship Scale (RPRS; Russinova et al., 2006; Wilrycx et al., 2011) Dutch version of the Mental Health Recovery Measure (MHRM; van Nieuwenhuizen et al., 2013; Young & Bullock, 2003) Competency Assessment Instrument (CAI; Chinman et al., 2003)	Six measurement occasions: As stated above for Wilrycx et al. (2012)	(→) on subscale 'Hopefulness & empowerment' (→) on subscale 'Self-acceptance'  (→) on subscale 'Self-empowerment' (→) on subscale 'Spirituality' (↑*) on subscale 'Learning & new potentials'
[15]	Young et al. (2005)	<ul style="list-style-type: none"> <li>• Clinician's competencies</li> </ul>	Competency Assessment Instrument (CAI; Chinman et al., 2003)	Pre-training and 1-year follow-up	CG vs. IG: clinicians in the IG showed significantly greater improvement in education about care, rehabilitation methods, natural supports, holistic approaches, teamwork, overall competency & recovery orientation IG & CG: (↑*) for stigma (i.e. stigma worsened) SU ratings of RSA-D: • IG: (→) on all 6 sub-scales & total score • CG vs. IG: no significant differences between outcomes of the IG and CG
[16]	Zuaboni et al. (2017)	<ul style="list-style-type: none"> <li>• SU &amp; nurses perceptions regarding the recovery-orientation of acute psychiatric wards</li> </ul>	The German version of the Recovery Self-Assessment scale (RSA-D; Zuaboni et al., 2015); Provider version & Patient version	Pre and post training (each data collection period lasted for 3 months)	Provider ratings of RSA-D: • IG: (→) on all 6 sub-scales & total score • CG vs. IG: no significant differences between outcomes of the IG and CG

(continued on next page)

Table 3 (continued)

[Study Number] Authors	Evaluated Outcome	Assessment Tool	Evaluation time points	Findings
[17] Slade et al. (2015)	<ul style="list-style-type: none"> <li>• SU assessed process of recovery</li> <li>• SU hope, quality of life, empowerment, well-being, met and unmet needs</li> <li>• SU satisfaction and recovery support</li> <li>• Staff rated SU outcomes of met and unmet needs, functioning and social disability.</li> <li>• SU symptoms</li> <li>• Service costs</li> <li>• Staff recovery knowledge, attitudes to mental illness, recovery practice and recovery participation</li> </ul>	<p>Questionnaire about the Process of Recovery (QPR; Neil et al., 2009)</p> <p>Herth Hope Scale (Herth, 1992)</p> <p>Manchester Short Assessment of Quality of Life (Preibe et al., 1999)</p> <p>Mental Health Confidence Scale (Carpiniello et al., 2000)</p> <p>Warwick-Edinburgh Mental Well-Being Scale (Tennant et al., 2007)</p> <p>Camberwell Assessment of Needs Schedule-Patient (Trauer et al., 2008)</p> <p>Client Satisfaction Questionnaire INSPIRE (Williams et al., 2015)</p> <p>Camberwell Assessment of Needs Schedule-Staff (Slade et al., 1999)</p> <p>Global Assessment of Functioning (Aas., 2010)</p> <p>Health of the Nation Outcome Scales (Wing et al., 1996)</p> <p>Brief Psychiatric Rating Scale (Overall &amp; Gorham, 1962)</p> <p>Client Service Receipt Inventory (Beecham &amp; Knapp, 2001)</p> <p>Recovery Knowledge Inventory (Bedregal et al., 2006)</p> <p>Mental Illness: Clinician Attitudes questionnaire (Gabbidon et al., 2013)</p> <p>The Participation Scale</p> <p>Recovery Practice Scale</p>	<p>Pre training and 1 year follow up</p>	<p>CG vs IG</p> <ul style="list-style-type: none"> <li>• (→) no significant changes post intervention on any of the scales with the exception of the GAF and the CANSAS-S, the latter of which did not maintain significance after Bonferroni correction.</li> <li>• (↑) significantly higher interpersonal score on QPR</li> <li>• (↑) significantly higher score on GAF (functioning)</li> <li>• (↑) significantly higher</li> <li>• No other significant differences on all other measures</li> </ul> <p>CG vs High Participation Intervention Group</p> <ul style="list-style-type: none"> <li>• (↑) significantly higher interpersonal score on QPR</li> <li>• (↑) significantly higher score on GAF (functioning)</li> <li>• (↑) significantly higher</li> <li>• No other significant differences on all other measures</li> </ul> <p>CG vs Low Participation Teams</p> <ul style="list-style-type: none"> <li>• (↑) significantly higher score on HoNOS</li> <li>• (↑) significantly higher scores on 'Behaviour' index of Recovery Practice Scale</li> <li>• No significant differences on all other measures</li> </ul> <p>High Participation vs Low Participation Teams</p> <ul style="list-style-type: none"> <li>• (↑) significantly higher scores on QPR 'Interpersonal' Scale</li> <li>• (↑) significantly higher scores on the HoNOS although did not maintain significance after Bonferroni adjustment</li> <li>• (↑) significantly higher scores on 'Behaviour' index of Recovery Practice Scale</li> <li>• No significant differences on all other measures</li> </ul>

(↑\*) Statistically significant increase in scores post-training; (↓\*) Statistically significant reduction in scores post-training; (→) No significant change in scores post-training; (↓) Reduction in scores post-training but not statistically assessed; IG: Intervention Group; CG: Control Group; SU: Service-Users.

Using a RCT, study 9 found that in comparison to a waiting-list control group, staff who received training scored significantly higher on a measure of recovery attitudes and knowledge, this was not the case in the other RCT included (17). Similarly, studies 4 and 6 reported significant improvements post-training on a measure of recovery attitudes and knowledge. However, these studies also included service-user participants and failed to provide differential statistics for the MHPs. Of the nine studies that employed outcome measures specific to recovery knowledge, five (3, 7, 8, 11, 12) reported significant improvements post-training, with study 8 confirming these findings across two separate outcome measures. In contrast, study 10 and 17 found that recovery-oriented training had no effect on the recovery knowledge of mental health professionals as measured by the RKI. A further two studies (2, 6) using the RKI found mixed effects, explaining these findings in terms of attrition and the potential for ceiling effects. Using an interrupted time-series design with a one-year follow-up, study 13 also demonstrated mixed effects: initial gains in recovery knowledge reduced after the second part of the training programme, which focused predominantly on attitudes. One RCT (17) used a non-standardised assessment, the Recovery Practice Scale, which measured skills, behaviour intent and behaviour related to recovery. They found no significant changes in skills or behaviour intent however there were significant differences in recovery related behaviour observed between the control and the low participation intervention group and also the low participation and high participation intervention groups.

### 3.5. Recovery-oriented service-user outcomes

#### 3.5.1. Assessment tools

One study (14) used two self-report questionnaires to measure service-user outcomes: the Dutch version of the Recovery-Promoting Relationship Scale (RPRS; [Russonova, Rogers, & Ellison, 2006](#); [Wilrycx, Croon, van den Broek, & van Nieuwenhuizen, 2011](#)) was used to measure service-users' perceived relationships with staff, and the Dutch version of the Mental Health Recovery Measure (MHRM; [van Nieuwenhuizen, Wilrycx, Moradi, & Brouwers, 2013](#); [Young & Bullock, 2003](#)) was used to measure service-users' perceived experience of empowerment and autonomy. One of the RCTs (17) used the Questionnaire about Process of Recovery (QPR; [Neil et al., 2009](#)) which calculates a total as well as intrapersonal and interpersonal scores. In addition secondary outcomes included hope, quality of life, well-being, empowerment and met and unmet needs and the following measures were completed with service users: Camberwell Assessment of Needs Short Appraisal Schedule- Patient (CANSAS-P; [Trauer, Tobias, & Slade, 2008](#)), Manchester Short Assessment of Quality of Life (MANSA; [Preibe et al., 1999](#)), Herth Hope Index ([Herth, 1992](#)), Mental Health Confidence Scale. ([Carpinello, Knight, Markowitz, & Pease, 2000](#)), and the Warwick-Edinburgh Mental Well-being Scale ([Tennant et al., 2007](#)), Brief Psychiatric Rating Scale (BPRS; [Overall & Gorham, 1962](#)) and INSPIRE ([Williams et al., 2015](#)) and a client satisfaction questionnaire to measure recovery support and satisfaction. Staff completed measures to rate met and unmet needs, functioning and social disability, they used the Camberwell Assessment of Needs Short Appraisal Schedule-Staff (CANSAS-S; [Slade, Thornicroft, Loftus, Phelan, & Wykes, 1999](#)), the Global Assessment of Functioning (GAF; [Aas, 2010](#)) and the Health of the Nation Outcome Scale (HoNOS; [Wing, Curtis, & Beevor, 1996](#)).

#### 3.5.2. Overview of findings

Study 14 found that recovery training for MHPs had no effect on service-users' perceived relationship with professionals nor their experienced sense of 'self-empowerment' or 'spirituality'; however it significantly improved their perceived experience of 'learning and new potentials'. Study 17 found no effect of the REFOCUS programme on any of the measures other than improvements in the GAF (functioning) and the CANSAS-S Unmet Needs Scale, the latter did not remain significant after Bonferroni adjustment. Both these measures were

completed by staff, none of the measures completed by service users showed any change after the intervention. When the REFOCUS intervention group in study 17 was split into high and low participation, service users receiving care from the high participation teams had significantly higher QPR Interpersonal scores at follow up than those receiving care from the low participation teams and control teams. High participation teams also showed improved scores on the GAF and the HoNOS but the latter did not remain significant after Bonferroni adjustment.

### 3.6. Recovery-oriented service outcomes

#### 3.6.1. Assessment tools

In total, four studies included outcome measures relating to the recovery-orientation of services. One study (5) conducted an audit of service-user care-plans and two studies (1, 10) reported on incidents of seclusion and/or restraint by displaying these rates visually as line graphs. Additionally, two self-report questionnaires were used to measure the implementation of recovery-oriented working practices: one study (1) used the Views Of the Therapeutic Environment (VOTE; [Laker et al., 2012](#)) and another (16) used the German version of the Recovery Self-Assessment scale (RSA-D; [Zuaboni, Kozel, Glavanovits, Utschakowski, & Behrens, 2015](#)), including both provider and patient versions. One study (17) measured the service cost implications using the Client Service Receipt Inventory ([Beecham & Knapp, 2001](#)).

#### 3.6.2. Overview of findings

Study 5 reported the care-plans of service-users, drawn from the caseloads of staff who had received recovery-oriented training, had significantly more changes at three months post-training when compared to a control group. However, data trends did not provide conclusive evidence for the hypothesised changes: diversification of care-plan topics and collaborative responsibility for actions were not demonstrated. Reporting on incidents of seclusion and restraint, study 1 revealed a reduction by more than half (from 19 to 7) at four-months post-training. However, these findings were not subject to statistical analysis on the basis of insufficient statistical power. Study 10 reported a slight reduction in restraint rates from the time period of the intervention (Quarter 3) to the time period following the intervention (Quarter 4). However, these results are slightly misleading. Comparing restraint rates before (Quarter 1 and 2) and after the intervention (Quarter 4), they were found to increase.

Assessing the perceived implementation of recovery-oriented practice, study 1 reported that MHPs had significantly improved beliefs about the therapeutic environment at six-months post-training. Conversely, study 16 found that when compared to control groups, training had no effect on working practices (as perceived by service-users and mental health nurses). Whilst the authors suggest a number of possible explanations for this finding, it is notable that this study did not employ a follow-up evaluation. Study 17 found that the total service use costs were lower in the REFOCUS group than the control but the difference was not significant.

## 4. Discussion

This study is the first review of quantitative evidence relating to recovery-oriented training programmes for MHPs. The main objectives were to determine the methodological quality of studies, the characteristics of training programmes being implemented, and the effects of recovery-oriented training on recovery-related outcomes.

### 4.1. Overview of training effectiveness

Only 17 studies met the inclusion criteria, highlighting the dearth of quantitative intervention research on recovery training for MHPs. The heterogeneity among research designs and training interventions

limited comparison of results, which alongside the methodological weaknesses of individual studies limited the ability to draw firm conclusions. Recovery-oriented staff outcomes were the most commonly reported measures of training effectiveness. Aggregating these results, there is some evidence to suggest that recovery training can improve the recovery-consistent knowledge, attitudes and competencies of MHPs, however this finding is not consistent across all studies. Levels of stigma seem less amenable to change. A minority of studies measured the effectiveness of recovery training on service-level outcomes and only two measured service-user outcomes. There was evidence in one study that 'functioning' as measured using the GAF showed improvements after recovery training, however, the collective results of these studies were inconclusive, providing limited evidence for staff recovery training to improve clinical practice.

The results of this review suggest that benefits in recovery-oriented staff outcomes may not necessarily translate into clinical practice. There is a wealth of evidence that acknowledges the challenges of implementing practice change, and the 'transfer of training problem' is well established (Baldwin & Ford, 1988). A review conducted by Forsetlund et al. (2009) found that educational interventions for healthcare professionals resulted in only small improvements in professional practice and patient outcomes, concluding that educational interventions alone are unlikely to change complex behaviours. Furthermore, Gee, Bhanbhro, Cook, and Killaspy (2016) acknowledged that recovery training for MHPs is unlikely to yield long-term practice change unless other cultural and organisational changes are also addressed. Unfortunately, only three of the reviewed training programmes provided additional forms of organisational support. Similarly Deane, Crowe, King, Kavanagh, and Oades (2006) highlight some of the challenges they experienced implementing recovery oriented practice into mental health services, they suggest that effective implementation requires active practitioner process management due to the autonomous nature of practitioner roles, they felt that more structure and support from the highest level of management down was necessary alongside regular reviews of progress in implementation and fidelity to the model conducted by senior management. In addition to this they recommended regular audit of files and activity records, clear and defined roles and responsibilities and the use of incentives and praise. These processes they felt may improve implementation and outcomes, although one of the papers (17) made an attempt to address some of these issues, they were largely not considered within the studies and may be useful additions to future research.

#### 4.2. Overview of training characteristics

Especially concerning, the vast majority of studies did not explicitly refer to theoretical frameworks underpinning the interventions, and only one study (17) reported the use of theory to inform the evaluation, the theory of planned behaviour informed their REFOCUS intervention. Whilst it is possible that theory was used in this way in other studies, without reporting this remains unclear. There is a recognised need to keep theory central to the process of developing and evaluating interventions (Eccles, Grimshaw, Walker, Johnston, & Pitts, 2005; Michie, Fixsen, Grimshaw, & Eccles, 2009). Theories can be used to identify constructs that are causally related to behaviour and account for change. Targeting these constructs can lead to the development of more effective interventions, and evaluations of these interventions can help develop theory further (Michie et al., 2009). There are many approaches to changing clinical practice, all of which have some value and may be useful depending on the changes needed, the target group, the clinical setting, and the specific barriers and facilitators therein (Grol, 1997). If we are to take the task of implementing recovery-oriented services seriously, then implementation interventions need to capitalise on established knowledge and guidance (e.g. French et al., 2012; Medical Research Council, 2008).

The current review also highlights the diversity of staff recovery

training programmes. This finding is perhaps reflective of attempts to make training programmes specific to populations and/or service contexts, which were disparate across the identified studies. Training programmes comprised various components and studies were inconsistent in their reporting of training characteristics, thereby limiting the ability to compare training interventions. It is however notable that the two studies to report no effects did not include service-users in the delivery of training (Repique, Vernig, Lowe, Thompson, & Yap, 2016; Zuaboni, Hahn, Wolfensberger, Schwarze, & Richter, 2017). Service-user involvement has been found to have a positive effect on staff attitudes (Cook et al., 1995) and reflective dialogue between MHPs and service-users can lead to improved quality of care (Kidd, McKenzie, & Virdee, 2014). Additionally, of the two studies to report no effects, one did not include an experiential learning component (Repique et al., 2016) and the other failed to provide this information (Zuaboni et al., 2017). Training programmes with experiential components are more successful in promoting practice change (Grol & Grimshaw, 2003; Stuart, Tondora, & Hoge, 2004). These findings point to the importance of including experiential learning and service-user involvement as part of recovery training. However, the findings of this review precluded definitive conclusions due to the large number of differing components across the training interventions. For example, the training intervention evaluated by Repique et al. (2016) also had the shortest duration and was the only intervention to rely solely on a webinar.

#### 4.3. Overview of methodological quality

The variable methodological quality of reviewed studies corroborates other reviews investigating the effectiveness of staff training in mental health (e.g. Heckemann et al., 2015; Kuske et al., 2007). Only seven studies included a control group, two of which employed randomisation. Most studies had questionable evaluative power and were limited by detection, performance and attrition biases. In addition, the studies that relied on convenience sampling may be subject to self-selection bias. Whilst this may have been less of an issue in studies that involved mandatory participation, these MHPs may have been less willing to engage in the training. Staff receptiveness to change (Gee et al., 2016) and motivation to learn (Wiley, 1997) can influence the effectiveness of training; potential differences between participants further limited comparison. Evidence for the long-term effectiveness of staff recovery training is lacking, as less than half of the reviewed studies included follow-up evaluation. One of the few studies to include a follow-up period of one year reported that initial gains in recovery knowledge decreased over time (Wilrycx et al., 2012). One explanation provided was a lack of knowledge rehearsal, which is essential for the integration of new knowledge into long-term memory and the implementation of information (Awh et al., 1999; Jonides et al., 2008). The efficacy of training interventions could therefore be supported by implementation strategies such as reminders, which are commonly employed across a range of healthcare contexts (Grimshaw et al., 2004).

The range of recovery outcome measures being used to determine training effectiveness requires further consideration. All but two of the evaluated outcomes relied on self-report measures and results may therefore be subject to social desirability bias (Holtgraves, 2004). This is particularly important considering that negative views regarding recovery may be highly taboo for MHPs. In addition, the development of five new assessment tools to measure staff outcomes raises questions regarding their reliability and validity. This finding also underlines the lack of standardised assessment tools that measure recovery-oriented staff outcomes. Whilst the RKI (Bedregal et al., 2006) and RAQ (Borkin et al., 2000) were the most commonly employed standardised measures, potential ceiling effects were acknowledged in relation to their use (Crowe et al., 2006; Higgins et al., 2012; Repique et al., 2016). Due to the greater awareness and acceptance of the recovery concept, base-line levels of recovery knowledge and attitudes may have

increased since the development of these measures (Crowe et al., 2006). Only one study (17) included measures of staff behaviour or skill development and thus it was not possible to ascertain the effect of recovery training on working practices. Furthermore, the measurement of service-user and service-level outcomes were not prioritised, despite the multitude of available measures (Burgess, Pirkis, Coombs, & Rosen, 2011; Williams et al., 2012). It is also noteworthy that studies did not report consultation with service-users to inform their research design. This represents a significant limitation from a recovery orientation, as service-user collaboration is a key feature of the recovery approach.

#### 4.4. Strengths and limitations of the review

Search terms were selected to target all recovery-oriented training programmes for MHPs. Although it is possible that the search strategy did not identify all relevant studies, this was mitigated by an additional manual search of reference lists. However, the exclusion of non-English papers and grey literature limited the totality of identified papers. Similarly, the exclusion of qualitative research precluded exploration of staff experiences regarding training effectiveness and implementation. Nevertheless, more empirical-based data is required to validate the recovery approach (Clasen et al., 2003; Wilrycx et al., 2012) and this review is the first to explore the quantitative evidence regarding recovery training for MHPs. However, due to the heterogeneity of study designs, the data were not suitable for a meta-analysis. The scoring system of methodological quality (QATSDD; Sirriyeh et al., 2012) accounted for the diversity of study designs and inter-rater reliability checks provided assurance of its rigorous application. Many of the studies included in this review had significant methodological weaknesses. Moreover, studies were heterogeneous in terms of their service contexts, participant groups, training interventions, evaluated outcomes and assessment tools. Therefore, the generalisability of findings and potential conclusions are limited. Despite these limitations, this review provides an overview of the current quantitative evidence-base of recovery-oriented training for MHPs, thereby identifying important implications for clinical practice and future research.

#### 4.5. Clinical and service implications

Given the pressing need to deliver recovery-oriented care, it is essential that all MHPs are equipped with appropriate knowledge, attitudes and competencies. Staff training interventions that provide group-based education on recovery principles and strategies appear to have some utility in this vein. Training programmes including experiential learning may have greater benefit; there may also be clinical value in service-user involvement, fundamental to the recovery approach. However, staff recovery training needs to be provided as part of wider organisational change and needs to be supported and managed at senior management levels throughout the system. Supervision, audit and monitoring of fidelity should also be an element of process management (Deane et al., 2006). Consideration should therefore be given to reinforcing or enabling strategies that promote the transfer of recovery attitudes and knowledge into clinical practice. In measuring the effectiveness of staff recovery training, services should employ a range of staff, service-user and service-level outcome measures. This information could prove valuable in identifying future staff training and/or service priorities. Consideration should also be given to recovery values during recruitment (Farkas, Gagne, Anthony, & Chamberlin, 2005; Hope, 2004; O'Hagan, 2001; Slade, 2009a), ensuring the selection of staff who demonstrate recovery-consistent competencies. Finally, further attention needs to be given to anti-stigma initiatives that reduce stigmatising attitudes amongst MHPs.

#### 4.6. Future research priorities

There is a need to improve the overall quality of research that

explores the effectiveness of recovery-oriented training for MHPs. Future research should aim to include: control groups; randomisation; long-term evaluations; sample sizes that allow adequate evaluative power; and outcome measures that capture staff, service-user and service-level indicators of effectiveness. The quality of research and consistency in reporting could be encouraged through the use of established taxonomies, for example Davidson et al. (2003). Future research should also address the current limitations of recovery-oriented assessment tools for staff outcomes. This could involve operationalising recovery-oriented clinical practice, developing measures of staff competence and skill, or re-evaluating the psychometric properties of the RKI (Bedregal et al., 2006) and RAQ (Borkin et al., 2000). Additionally, research could focus on the potential utility of various staff, service-user and service-level outcome measures, providing guidance for their routine use in clinical practice and/or research. Given the cost implications of developing new training interventions, future research should ascertain the value of tailoring specific recovery training for particular professional groups and/or service contexts, as opposed to the implementation of a standardised training programme. Furthermore, it would be useful to identify core intervention components that maximise effectiveness so they can be accurately replicated. To increase our knowledge of what works and why, greater attention should be given to theory in the development and evaluation of future training. Finally, given the need for wider organisational change to occur alongside recovery training, research could focus on the role of enabling and/or reinforcing strategies in the form of organisational support or changes.

There are no conflicts of interest in this or related to this submission

## 5. Conclusions

This review indicates that recovery-oriented training programmes have the potential to improve the recovery-consistent knowledge, attitudes and competencies of MHPs. There is however limited evidence regarding sustained change. Moreover there is limited evidence relating to service-user and service-level outcomes, suggesting that staff recovery training may have limited utility to influence clinical practice. To better implement recovery-oriented care, there is a need for training programmes to form part of wider organisational change (Deane et al., 2006). Rigorous research is needed on the effectiveness of staff training interventions, with systematic attention given to theoretical frameworks and the role of organisational factors. Future research should also aim to ascertain the long-term sustainability of effectiveness across a range of staff, service-user and service-level outcomes. Guidance on suitable outcome measures and anti-stigma initiatives would be advantageous. Aligning with the recovery approach, service-user involvement in all future endeavours is paramount.

## Declarations of interest

None.

## Supplementary materials

Supplementary material associated with this article can be found, in the online version, at [doi:10.1016/j.mhp.2019.01.005](https://doi.org/10.1016/j.mhp.2019.01.005).

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