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Mechanisms of action and outcomes for students in Recovery Colleges

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Abstract

Objective

Recovery Colleges are widespread, with little empirical research on how they work and outcomes they produce. This study aimed to co-produce a change model characterising mechanisms of action and outcomes for mental health service users attending as students at a Recovery College.

Methods

A systematised review identified all Recovery College publications. Inductive collaborative data analysis by academic researchers and co-researchers with lived experience of ten key papers informed a theoretical framework for mechanisms and outcome for students, which was refined through deductive analysis of 34 further publications. A change model was co-produced and then refined through stakeholder interviews (n=33).

Results

Three mechanisms of action for Recovery College students were identified: empowering environment (safety, respect, supporting choices), enabling different relationships (power, peers, working together) and facilitating personal growth (e.g. co-produced learning, strengths, celebrating success). Outcomes were change in the student (e.g. self-understanding, self-confidence) and changes in the student's life (e.g. occupational, social, service use). A co-produced change model mapping mechanisms of action to outcomes was created.

Conclusions

The key features identified as differentiating Recovery Colleges from traditional services are an empowering environment, enabling relationships and growth orientation. Recovery Colleges may benefit most attenders, but mental health

service users to particularly encourage to enrol may include those who lack confidence, those who services struggle to engage with, those who will benefit from exposure to peer role models, and those lacking social capital. The change model provides the first testable characterisation of mechanisms and outcomes, allowing formal evaluation of Recovery Colleges.

Introduction

An orientation in mental health services towards supporting recovery is recommended internationally (1), and central to national policy in many countries (2-5). Interventions involving collaborations between mental health professionals and peer providers are particularly effective at increasing recovery, hope and empowerment (6). Recovery Colleges have been described as a “radical” embodiment of recovery-oriented services (7).

Recovery Colleges involve supporting people living with mental health problems through adult education rather than through treatment (8). The concept of ‘recovery education’ – supporting recovery in relation to mental health problems through education – was developed in Boston and Phoenix in the 1990s. In the past decade a model of Recovery Colleges has emerged in the United Kingdom, with a greater emphasis on co-production and co-learning. The first Recovery College opened in London, England in 2009, and there are now over 80 in the United Kingdom (9), despite the first mention of Recovery Colleges in national policy being made only in 2017 (10). This roll-out has been supported by the national recovery transformation programme in England called Implementing Recovery through Organisational Change (ImROC), which identified recovery education centres as central to the development of a recovery orientation (11).

The Recovery College model developed in England has been widely replicated internationally. Sometimes called ‘Discovery centres’ or ‘Empowerment Colleges’ or ‘Recovery Academies’, Recovery Colleges are now open in Australia, Bulgaria, Canada, Hong Kong, Ireland, Italy, Japan, Netherlands, Norway, Poland and

Uganda, among others (12), and an international community of practice has been established (13). Most colleges are funded by health services, although there is an increasing movement towards a wider range of funding, including from employment and education departments of national government, international sources (e.g. European Union Regional Development Fund) and non-governmental organisations.

Recovery Colleges are based on pedagogical principles from adult education rather than clinical or therapeutic models (8). Defining features of Recovery Colleges are that they are collaborative, strengths-based, person-centred, inclusive and community-focused (14). People who use mental health services and attend Recovery Colleges are known as students instead of patients or service users. Others, including family members and mental health professionals, also attend as students. After registration, students attend self-selected courses co-delivered by peer trainers (people with personal experience of mental ill-health and recovery) and non-peer trainers (e.g. clinicians or topic experts).

A key feature of Recovery Colleges is the emphasis on co-production, i.e. people with lived experience co-produce all aspects of the college including curriculum development, quality assurance and delivering courses alongside a trainer with professional or topic-specific expertise. Recovery Colleges typically directly employ a small team of peer and mental health practitioners, with a larger group of peer trainers and practitioner trainers from mental health services and community agencies who are used on a sessional basis. Courses vary from brief, one-hour, introductory sessions to a day per week for a term (10 weeks) (12). As they are locally co-produced, curricula vary from College to College, but courses offered will typically cover:

understanding different mental health issues and treatment options; rebuilding life with mental health challenges; developing life skills and confidence to either rebuild life outside services or get the most out of services; capacity building and developing the peer workforce; and helping people to provide support for family members and friends who experience mental health challenges. Recovery Colleges are emerging internationally as a central feature of system transformation towards a recovery orientation (15).

There is preliminary evidence that Recovery Colleges are popular, support goal achievement, improve wellbeing and reduce service use (12, 16-19) yet almost no robust evaluative research has addressed how they work and what outcomes they produce for students. The lack of empirical evidence for an approach which is being implemented at scale in many countries is an important scientific knowledge gap.

The aim of this study was to develop a testable change model for Recovery Colleges, characterising the mechanisms of action and the outcomes produced for mental health service user students attending a Recovery College.

Method

This research was undertaken from February to November 2017 as part of the Recovery Colleges Evaluation, Characterisation and Testing (RECOLLECT) Study (researchintorecovery.com/recollect). Ethical Committee approval was obtained (Nottingham REC 1, 18.1.17, 16/EM/0484). All participants provided informed consent.

Design

In summary, we conducted a systematised review involving collaborative analysis of included papers, followed by qualitative interviews with stakeholders. To reduce bias arising from a research team characterising mechanisms and outcomes based on clinical priorities, we formed a Lived Experience Advisory Panel (LEAP) of mental health service user Recovery College students, non-student service users, and family members (n=9) from the three study sites. LEAP members were involved as co-researchers throughout the study, including providing primary data, undertaking collaborative data analysis to produce the theoretical framework, co-producing the change model and co-authoring this paper.

Setting

Primary study sites were Recovery Colleges in Leicestershire, London and Sussex in England.

Procedures

A systematised review (20) was conducted. Inclusion criteria were: relating primarily to Recovery Colleges; online publication date 2016 or earlier; available in electronic form; English-language. Exclusion criterion: College prospectus, i.e. course lists for a specific College. Publications were collated from five sources: a repository collating published peer-reviewed academic publications (researchintorecovery.com/rcrg); expert consultation with the Implementing Recovery through Organisational Change (ImROC) national transformation programme Director and consultants (n=5), international experts (n=7) and the Recovery College International Community of Practice (n=54); conference abstracts (Refocus on Recovery 2010/2012/2014/2017, ENMESH 2011/2013/2015) with author contact; publications citing included articles

(using Web of Science); reference lists of included publications. All included papers were reviewed, and a sub-set were identified by the research team as papers of relevance to the research question.

The LEAP met to identify candidate mechanisms of action and outcomes from their own experiences. Four research team analysts independently used inductive coding of key papers, incorporating LEAP data as *a priori* codes, to identify themes relating to mechanisms of action and outcomes. Themes were refined in collaboration with two expert qualitative researchers to develop an initial coding framework. The LEAP then met to undertake collaborative data analysis (21). LEAP members offered alternative perspectives to challenge researcher assumptions, commented on the content and language of the initial coding framework, and addressed ambiguities and differences of interpretation identified by the research team. Issues were explored and where possible reconciled. After the meeting, minutes, flipchart outputs, photographs of visual representations and researcher field notes were used by the research team to finalise the theoretical framework for the change model, which was sent to LEAP co-researchers for review.

Remaining papers from the systematised review were deductively coded by the research team using superordinate categories from the theoretical framework. Coding involved identification and allocation of text relating to the theoretical framework, enabling related text to be grouped and compared, allowing identification of themes occurring within and across sources, and with regular discussions between analysts to explore how mechanisms of action and outcomes were expressed and related to each other, allowing lower order themes to be recognised

(22). This process developed candidate components for inclusion in the change model. The LEAP met to develop a preliminary change model from these components. Using a change model relating to peer worker interventions as a template (23), LEAP members organised the components into a diagram characterising the preliminary change model.

Stakeholders from the three study sites were identified, comprising: people directly involved with Recovery Colleges, i.e. students, peer trainers with lived experience, trainers with professional or topic-specific expertise, Recovery College managers; community-based and mental health service-based partners; and commissioners. Semi-structured interviews were conducted to obtain proposed refinements to the theoretical framework and the preliminary change model, with a topic guide using open questions and probing. As the focus was on refinement, a proportionate analysis approach was used. Recordings and field notes were reviewed by the research team to identify refinements producing the final theoretical framework and model of change.

Results

Forty four publications relating to Recovery Colleges were identified (online appendix). Included publications comprised non-data opinion pieces (n=12) and mixed-methods (n=14), qualitative (n=10) and quantitative (n=8) studies. The majority (n=36) were from the United Kingdom, followed by Australia (n=5). Studies reporting data were mainly single-site and all non-experimental designs involving either cross-sectional or pre-post designs. Positive claims were made both frequently and without robust empirical justification, e.g. "it was personal narratives that

impacted on the room with such potency. Images of possibilities, evidence of human achievement...” (p.40) (24).

Ten publications (#1 to #10 in online appendix) were identified as key papers of high relevance, spanning theory, development, evaluation and best practice. The LEAP identified ten mechanisms of action (e.g. learning from others; learning together; making social connections; participating in a group / activity rather than receiving a transactional service; inclusion) and seven outcomes (e.g. self-confidence; empowerment; meaning and purpose). Inductive analysis by researchers of key papers developed an initial theoretical framework comprising four mechanisms of action (increased agency, transformed relationships, identity development, personal growth) and two outcomes (change in the student, change in the student’s life) (online appendix).

The collaborative data analysis workshop identified refinements, including recommended deletion of the superordinate category ‘identity development’ because it implied an inferior or defective identity held by a person prior to joining a Recovery College. The resulting co-developed theoretical framework (online appendix) comprised three mechanisms of action (empowering environment, enabling different relationships, facilitating personal growth) and two outcomes (change in the student, change in the student’s life).

The deductive coding of the remaining 34 papers identified new codes for mechanisms (e.g. language, community links) and outcomes (e.g. leisure, service use), shown with definitions and exemplar text in online appendix. All mechanisms

and outcomes were identified as positive contributors, and no harms from Recovery Colleges were reported. The five superordinate categories were all coded in at least 21 (range 21-27) of the 34 papers, indicating coding framework validity. LEAP developed a formative model of change hypothesising causal relationships between mechanisms and outcomes.

Stakeholders interviewed were students who also use secondary care mental health services (n=12), peer (n=4) and clinician (n=3) trainers, Recovery College managers (n=3), mental health commissioners (n=1), Trust clinicians (n=2) and managers (n=1) and local community partners (n=7). Only minor refinements to wording and order were made, to produce the final theoretical framework for mechanisms of action (Box 1) and outcomes (Box 2), and the final co-produced change model (Figure 1).

Box 1 here

Box 2 here

Figure 1 here

The change model hypothesises that an empowering environment provides the context for a student's experience, and involves the creation of a physical place, emotional space and workforce which is friendly and welcoming. The emphasis on personal growth arises from the use of adult learning approaches – "College is knowledge" as one peer trainer put it. Different relationships from traditional clinical

interactions arise from this educational approach, both through more active interactions with peers and through relating in new ways to clinicians (as trainers and as students) in the Recovery College – “the ‘Us and Them’ culture is being questioned in the Recovery College classroom” (24). Relationships and personal growth are mediated both by the environment and by power balances. The emphasis on shifting the balance of power arises from the co-productive culture of Recovery Colleges, which “emphasises reciprocal relationships where users of public services are recognised as active agents with positive capabilities rather than passive beneficiaries” (14). Relationships, growth and power interact, with more empowered students relating differently to others and having higher expectations about self-efficacy.

These processes lead to changes in the student’s inner world and to self-initiated changes in their interactions with the outside world. A LEAP member noted, “recovery is about transformation” which happens within the student. Changes in identity were proposed, including improved self-esteem, self-knowledge and wellbeing. Along with increased confidence, skills and resilience, students become more optimistic and confident about dealing with the challenges of living well. A LEAP member also noted “wellness is about living, not about being symptom-free”, and changes in students led to, and were reinforced by, observable changes in their life. Key domains of change were in lifestyle choices, and social and occupational engagement. An impact on service use was identified, either in the direction of less use through increasing independence or more use through increasing engagement with services.

Discussion

A theoretical framework and testable change model for Recovery Colleges were co-produced. The four identified mechanisms (environment, power, relationships, growth-orientation) were contrasts from traditional mental health services. The two categories of outcome – change in the student and change in the student's life – were located as mutually reinforcing processes of re-connection with self and re-engagement in life in new ways. A paired paper reports a study to characterise the key components of Recovery Colleges. Together these provide a theory of change for Recovery Colleges, characterising what they do (paired paper) and their impact on mental health service user students (this paper).

The emphasis on an empowering environment reflects the importance placed on context. In part this aligns with existing clinical recommendations regarding experience of people using services, such as engaging people in a '*warm...respectful and professional manner*' on arrival (p.67) (25). However, the Recovery College environment was framed as an active part of the support, with an emphasis on hospitality and the built environment. The emphasis on choice was consistent with the importance attached to shared decision-making in mental health services (26), but went further in focussing on giving opportunities for choice at every interaction, such as through registration by self-referral (most Recovery Colleges do not allow referral by clinicians) and course choice (students choose their own courses). This approach is consistent with empirical studies showing optimal outcomes from active rather than shared decision-making (27). It also accords with the move away from 'nonadherence' (28) towards community engagement (29).

Power is a difficult issue to discuss in mental health systems. Given the emerging evidence of incompatibility between ratified human rights legislation and compulsion-related practice (30), there is a credible case for re-examining current power arrangements. Recovery Colleges provide a context in which support is provided with no compulsion, and active efforts are made to reduce power differentials, e.g. by having peer and clinician trainers co-deliver courses. This modelling of interactions between people with service use experience and clinical expertise as equals is a key feature of Recovery Colleges.

Relationships are recognised as central in mental health services (31), because “*better therapeutic relationship predicts better outcomes*” (p.517) (32). However, this instrumental focus differs from the Recovery College emphasis on mutuality – the idea that both parties in a dyadic relationship will be changed (33). Both peer and non-peer Recovery College workers are expected to be open to personal change and growth. Further blurring of the roles occurs through an organisational culture supporting ‘disclosure comfort’ (34) of personal experiences by workers, and active support for existing students to take on responsibility (e.g. as a course tutor or a mentor for new students), all of which reduce distinctions between students and workers in a Recovery College.

Finally, the focus on growth builds on the co-production and adult education / pedagogical approaches which are central to Recovery Colleges. This is informed by a number of resource-oriented approaches in mental health (35). Areas of emphasis in Recovery Colleges include: celebrating success such as graduation ceremonies after course completion; independent learning including through book libraries and

online access to learning materials; and active support for students to move on to mainstream education and occupation.

Outcome categories were changes in the student and changes in their life. The co-produced change model indicated an interaction between these two outcome categories, which is consistent with findings from psychological therapy that neither cognitive nor behavioural changes are individually sufficient for sustained transformation. These two outcome categories align with the CHIME framework (Connectedness, Hope, Identity, Meaning, Empowerment) of recovery processes (36-38), although with a stronger emphasis on increasing self-knowledge and self-confidence, which perhaps differs from traditional services. Randomised controlled trial evaluations of peer support interventions have tended to use primary outcomes relating to intrapsychic processes (39), and our study highlights the need for evidence of recovery-supporting interventions on social and occupational outcomes.

This study has developed the first theoretically-grounded change model for Recovery Colleges. Several approaches were used to reduce bias, including the triangulation of data sources (LEAP, publications, interviews), the use of multiple analysts and collaborative data analysis methodology to develop the coding framework, co-production with lived experience advisors of the change model, and the involvement of multiple stakeholder perspectives in the change model validation.

A non-systematic search strategy was used to identify publications, because the existing online repository of academic publications is likely to be complete since 'Recovery College' is the agreed term. However, other related approaches are

emerging, such as Recovery Education Centres, Discovery Colleges and Empowerment Colleges. A second limitation is the use of field notes rather than formal transcript analysis. The aim of the interviews was to refine an existing model rather than develop new theoretical understanding, but more detailed analysis may have captured more information about suggested refinements. A final limitation is the use of only three Recovery Colleges, all of which were very informed by ImROC in their development, which limits their diversity.

Conclusions

This study has three implications. First, it can inform clinician judgment about which people from their caseload to particularly encourage to attend a Recovery College. The change model characterises how Recovery Colleges may provide transitional support towards increased community participation and development of a more layered identity beyond being someone with mental health problems. Indeed, an explicit principle of Recovery Colleges is that they are 'open to all' (12). From this perspective, anyone using mental health services may benefit from attending a Recovery College. Therefore, general encouragement to all service users to consider enrolling as a student is indicated. However, based on the identified candidate mechanisms of action and outcomes, four specific sub-groups of mental health service users can be identified whom clinicians may particularly want to encourage to register as Recovery Colleges students. First, service users who are early in their recovery journey and not yet confident in making choices about their life may benefit from an enabling environment in which choice is supported and positive growth is expected. Second, people with whom mental health services struggle to engage may benefit from a nurturing and safe environment in which different

relationships are possible and where there is an emphasis on shifting the balance of power. Third, service users who have high self-stigma or do not believe recovery is possible for them may benefit from exposure to peer trainers and other students who are 'credible role models of recovery' (40). Finally, service users whose lives lack social capital and who live in a 'virtual institution' (41) where their social environment (social network, place of living, how time is spent) is primarily or exclusively indexed on mental health may benefit from the social connectedness and wider community connections offered in Recovery Colleges. Establishing the validity of these recommendations, and identifying if there are sub-groups for whom Recovery Colleges may be less beneficial, is an important future research focus.

Second, the identified mechanisms of action have implications for organisational culture within mainstream mental health services. There may be lessons to learn from a more established pro-recovery innovation – the introduction of peer support workers into the workforce. A recent review identified a number of implementation barriers relating to peer support workers, including the lack of credibility of peer support worker roles, professionals' negative attitudes, tensions with service users, struggles with identity construction, cultural impediments, poor organisational arrangements, and inadequate overarching social and mental health policies (42). It is feasible to anticipate that similar challenges may arise as Recovery Colleges become more established. The extent to which the culture of mental health systems is compatible with mechanisms such as empowerment through active decision-making, mutuality, supporting student-directed learning and community participation is unclear, not least because of the ongoing conceptual debates about the core purpose of mental health and social care systems (43). This suggests that sustained

implementation of Recovery Colleges may impact on, and be impacted by, organisational culture within health and social care systems.

Finally, current evidence (12, 16, 44) suggests Recovery Colleges are popular with students and produce a range of positive outcomes. However, the evidence base is not yet scientifically robust. Randomised controlled trial evaluation of Recovery Colleges should be a research funder priority, both to investigate the effectiveness and experience of using Recovery Colleges, and to establish likely return on investment. The development of a testable change model will support formal evaluation of whether, and how, Recovery Colleges support recovery.

References

1. World Health Organization. Mental Health Action Plan 2013-2020. Geneva: WHO; 2013.
2. HM Government. No health without mental health. Delivering better mental health outcomes for people of all ages. London: Department of Health; 2011.
3. Mental Health Commission of Canada. Changing directions, changing lives: The mental health strategy for Canada. Calgary: Mental Health Commission of Canada; 2012.
4. Department of Health. The Fifth National Mental Health and Suicide Prevention Plan. Canberra: Commonwealth of Australia; 2017.
5. Mental Health Commission. Strategic Plan 2016 - 2018. Dublin: Mental Health Commission; 2017.
6. Thomas E, Despeaux, K., Drapalski, A., Bennett, M. Person-Oriented Recovery of Individuals With Serious Mental Illnesses: A Review and Meta-Analysis of Longitudinal Findings. *Psychiatr Serv.* 2018;69:259-67.
7. Perkins R, Repper, J. When is a “recovery college” not a “recovery college”? *Mental Health and Social Inclusion.* 2017;21:65-72.
8. Perkins R, Repper, J., Rinaldi, M., Brown, H. *ImROC 1. Recovery Colleges.* London: Centre for Mental Health; 2012.
9. Anfossi A. The current state of Recovery Colleges in the UK: final report. Nottingham: ImROC; 2017.
10. Care Quality Commission. The state of care in mental health services 2014 to 2017. Newcastle upon Tyne: CQC; 2017.
11. Sainsbury Centre for Mental Health. *Implementing Recovery. A new framework for organisational change.* London: Sainsbury Centre for Mental Health; 2010.

12. Perkins R, Meddings S, Williams S, Repper J. Recovery Colleges 10 Years On. Nottingham: ImROC; 2018.
13. McGregor J, Brophy. L, Hardy D, Hoban D, Meddings S, Repper J, et al. Proceedings of June 2015 Meeting: Recovery Colleges International Community of Practice (RCICoP); 2016.
14. McGregor J, Repper J, Brown H. "The college is so different from anything I have done". A study of the characteristics of Nottingham Recovery College. *Journal of Mental Health Training, Education and Practice*. 2014;9:3-15.
15. Larsen C, Lange, M., Jørgensen, K., Kistrup, K., Petersen, L. Coteaching Recovery to Mental Health Care Professionals. *Psychiatr Serv*. 2018;69:620-2.
16. Australian Healthcare Associates. Literature review to inform the development of Recovery Colleges in Western Australia. Melbourne: AHA; 2018.
17. Meddings S, McGregor J, Roeg W, Shepherd G. Recovery colleges: quality and outcomes. *Mental Health and Social Inclusion*. 2015;19:212-21.
18. Zabel E, Donegan G, Lawrence K, French P. Exploring the impact of the recovery academy: a qualitative study of Recovery College experiences. *Journal of Mental Health Training, Education and Practice*. 2016;11:162-71.
19. Newman-Taylor K, Stone N, Valentine P, Hooks Z, Sault K. The Recovery College: a unique service approach and qualitative evaluation. *Psychiatric Rehabilitation Journal*. 2016;39:187-90.
20. Grant MJ, Booth A. A typology of reviews: an analysis of 14 review types and associated methodologies. *Health Info Libr J*. 2009;26(2):91-108.
21. Jennings H, Slade M, Bates P, Munday E, Toney R. Best practice framework for Patient and Public Involvement (PPI) in collaborative data analysis of

- qualitative mental health research: methodology development and refinement. *BMC Psychiatry*. 2018;18:213.
22. Bazeley P. *Qualitative Data Analysis, Practical Strategies*. London: Sage; 2013.
 23. Gillard S, Gibson S, Holley J, Lucock M. Developing a change model for peer worker interventions in mental health services: a qualitative research study. *Epidemiology and Psychiatric Sciences*. 2015;24:435-45.
 24. Skipper L, Page K. Our recovery journey: two stories of change within Norfolk and Suffolk NHS Foundation Trust. *Mental Health and Social Inclusion*. 2015;19:38-44.
 25. National Institute for Health and Clinical Excellence. *Service user experience in adult mental health: improving the experience of care for people using adult NHS mental health services*. CG136. London: National Institute for Health and Clinical Excellence; 2011.
 26. Slade M. Implementing shared decision making in routine mental health care. *World Psychiatry*. 2017;16:146-53.
 27. Clarke E, Puschner B, Jordan H, Williams P, Konrad J, Kawohl W, et al. Empowerment and satisfaction in a multinational study of routine clinical practice. *Acta Psychiatr Scand*. 2015;131:369-78.
 28. Roe D, Davidson, L. Noncompliance, Nonadherence, and Dropout: Outmoded Terms for Modern Recovery-Oriented Mental Health. *Psychiatr Serv*. 2017;68:1076-8.
 29. Brown L, Townley, G. Determinants of Engagement in Mental Health Consumer–Run Organizations. *Psychiatr Serv*. 2015;66:411-7.
 30. Newton-Howes G, Ryan, C. The use of community treatment orders in competent patients is not justified. *Br J Psychiatry*. 2017;210:311-2.

31. Gilbert H, Slade M, Rose D, Lloyd-Evans B, Johnson S, Osborn D. Service users' experiences of residential alternatives to standard acute wards: qualitative study of similarities and differences. *Br J Psychiatry*. 2010;197:s26-s31.
32. McCabe R, John, P., Dooley, J., Healey, P., Cushing, A., Kingdon, D., Bremner, S., Priebe, S. Training to enhance psychiatrist communication with patients with psychosis (TEMPO): cluster randomised controlled trial. *Br J Psychiatry*. 2017;209:517-24.
33. Mead S. *Intentional Peer Support: an alternative approach*. Plainfield, NH Shery Mead Consulting; 2005.
34. Henderson C, Robinson, E., Evans-Lacko, S., Thornicroft, G. Relationships between anti-stigma programme awareness, disclosure comfort and intended help-seeking regarding a mental health problem. *Br J Psychiatry*. 2017;211:316-22.
35. Priebe S, Omer S, Giacco D, Slade M. Resource-oriented therapeutic models in psychiatry – A conceptual review. *Br J Psychiatry*. 2014;204:256-61.
36. Leamy M, Bird V, Le Boutillier C, Williams J, Slade M. A conceptual framework for personal recovery in mental health: systematic review and narrative synthesis. *Br J Psychiatry*. 2011;199:445-52.
37. Slade M, Leamy M, Bacon F, Janosik M, Le Boutillier C, Williams J, et al. International differences in understanding recovery: systematic review. *Epidemiology and Psychiatric Sciences*. 2012;21:353-64.
38. Bird V, Leamy M, Tew J, Le Boutillier C, Williams J, Slade M. Fit for purpose? Validation of the conceptual framework of personal recovery with current mental health service users. *Aust N Z J Psychiatry*. 2014;48:644-53.

39. Pitt V, Lowe D, Hill S, Pictor M, Hetrick SE, Ryan R, et al. Consumer-providers of care for adult clients of statutory mental health services. *Cochrane Database of Systematic Reviews*. 2013(3).
40. Davidson L, Bellamy, C., Guy, K., Miller, R. Peer support among persons with severe mental illnesses: a review of evidence and experience. *World Psychiatry*. 2012;11:123-8.
41. Priebe S, Badesconyi A, Fioritti A, Hansson L, Kilian R, Torres-Gonzales F, et al. Reinstitutionalisation in mental health care: comparison of data on service provision from six European countries. *BMJ*. 2005;330(7483):123-6.
42. Vandewalle J, Debyser, B., Beeckman, D., Vandecasteele, T., Van Hecke, A., Verhaeghe, S. Peer workers' perceptions and experiences of barriers to implementation of peer worker roles in mental health services: A literature review. *Int J Nurs Stud*. 2016;60:234-50.
43. Priebe S, Burns T, Craig TK. The future of academic psychiatry may be social. *Br J Psychiatry*. 2013;202(5):319-20.
44. Slade M, McDaid D, Shepherd G, Williams S, Repper J. ImROC Briefing Paper 14. Recovery: the Business Case. Nottingham: ImROC; 2017.

Figure 1: Co-produced change model for Recovery Colleges

Box 1: Theoretical framework for mechanisms of action for Recovery College students

1. Empowering environment

- 1.1 Providing a nurturing environment
 - 1.1.1 Providing a safe space
 - 1.1.2 Providing a respectful space
- 1.2 Offering opportunities to make choices
 - 1.2.1 Students choose to enrol at a Recovery College
 - 1.2.2 Students choose the courses they wish to join
 - 1.2.3 Students choose how much support they need
- 1.3 Language is empowering and recovery-focused

2 Enabling different relationships

- 2.1 Shifting the balance of power
 - 2.1.1 Relationships with other students
 - 2.1.2 Relationships with peer trainers
 - 2.1.2 Relationships with workers
- 2.2 Connecting with peers
 - 2.2.1 Making friends
 - 2.2.2 Developing empathic relationships with other students
 - 2.2.3 Peer trainers offering inspiration and encouragement to students
- 2.3 Working together
 - 2.3.1 Designing and delivering the Recovery College as a whole
 - 2.3.2 Designing courses

3 Facilitating personal growth

- 3.1 Shared / co-produced learning
 - 3.1.1 Students learn from each other
 - 3.1.2 Students learn from peer trainers
 - 3.1.3 Students learn from professionals
 - 3.1.4 Students contribute their lived experiences to the learning of others
 - 3.1.5. Students have an active role in shaping the learning experience (with reference to their personal experiences and existing knowledge)
 - 3.2 Learning and applying knowledge and practical skills
 - 3.3 Building on strengths
 - 3.4 Supporting students to make personal progress
 - 3.6.1 Support offered by staff
 - 3.6.2 Support offered by other students
 - 3.5 Celebrating success
 - 3.6 Independent learning
 - 3.7 Connecting students with people and places in the wider community
 - 3.8 Becoming a student
 - 3.9 Working towards goals
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Box 2: Theoretical framework for outcomes for Recovery College students

1. Changes in the student

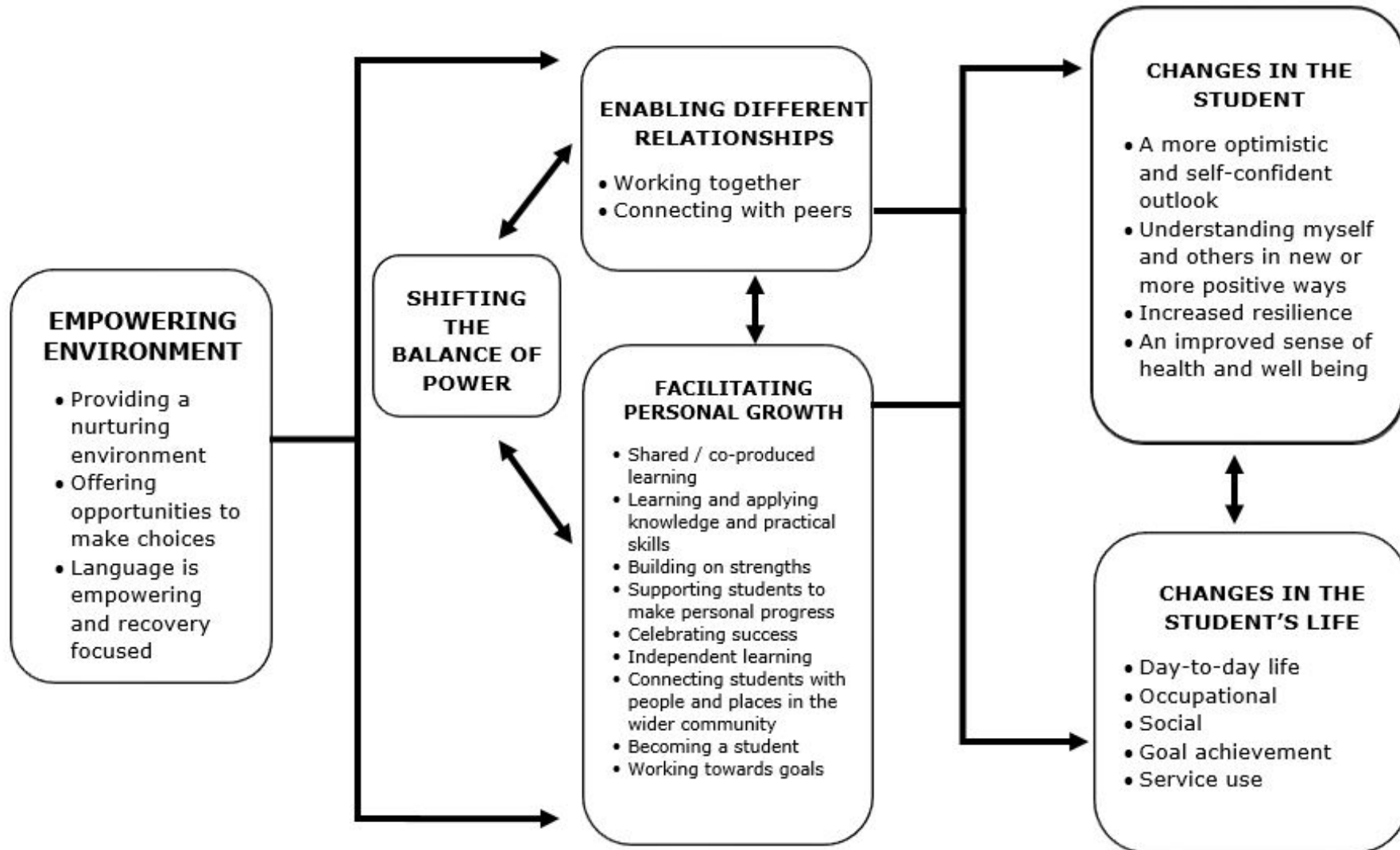
- 1.1 A more optimistic and self-confident outlook
 - 1.1.1 Increased hope for the future
 - 1.1.2 Greater purpose and motivation
 - 1.1.3 An acquired sense of empowerment and control
 - 1.1.4 Improved confidence
- 1.2 Understanding myself and others in a new or more positive way
 - 1.2.1 Seeing beyond my “illness”
 - 1.2.2 Improved self-esteem
 - 1.2.3 Feeling positive about who I am
 - 1.2.4 Reducing anticipated stigma
 - 1.2.5 Greater compassion for myself and others
- 1.3 Increased resilience
 - 1.3.1 Deeper understanding of who I am
 - 1.3.2 (Re)discovering what motivates
- 1.4 An improved sense of health and wellbeing
 - 1.4.1 Positive impact on personal wellbeing
 - 1.4.2 Improved knowledge and self-management skills for wellbeing and symptoms.
 - 1.4.3 Improved physical health

2. Changes in the student's life

- 2.1 Day-to-day life
 - 2.1.1 Healthy lifestyle choices
 - 2.1.2 Daily routine
 - 2.1.3 Having interests and leisure activities
 - 2.2 Occupational
 - 2.2.1 Moving to paid employment
 - 2.2.2 Moving to mainstream education
 - 2.2.3 Engaging in volunteering
 - 2.2.4 Becoming a peer trainer
 - 2.3 Social
 - 2.3.1 Expanded social networks
 - 2.3.2 Improved existing relationships
 - 2.3.3 More collaborative and less hierarchical relationships with people who have professional training / expertise
 - 2.3.4 Reduced social isolation
 - 2.3.5 Attaining socially valued roles, e.g. becoming a student or fulfilling the role like partner, parent or carer.
 - 2.4 Goal achievement
 - 2.5 Service use
 - 2.5.1 Use of medication
 - 2.5.2 Use of primary care services
 - 2.5.3 Use of community services
 - 2.5.4 Use of in-patient services
-

CHANGE MECHANISMS

OUTCOMES



Online Appendix

Included publications (n=44)

#	Full reference	Peer-reviewed?	Presents empirical data?	Author perspective	Method	Participants	Sample size	Setting	Number of Recovery Colleges article is based on
KEY PAPERS									
1	Frayn E, Duke J, Smith H, Wayne P, Roberts G (2016) <i>A voyage of discovery: setting up a recovery college in a secure setting</i> , Mental Health and Social Inclusion, 20 , 29-35.	Y	N	Staff	Mixed methods	Students, Staff (with and without lived experience)	8	UK	1
2	Perkins R, Repper J (2017) <i>When is a “recovery college” not a “recovery college”?</i> , Mental Health and Social Inclusion, 21 , 2, 65-72.	Y	N	Staff	N/A (Not applicable)	N/A	N/A	UK	N/A
3	Meddings S, Campbell E, Guglietti S, Lambe H, Locks L, Byrne D, Whittington A (2015) <i>From service user to student: the benefits of Recovery Colleges</i> , Clinical Psychology Forum, 268 , 32-37.	Y	Y	Staff and Student	Quantitative	Students	35	UK	2
4	Taggart H, Kempton, J (2015) <i>The route to employment: the role of mental health recovery colleges</i> , London: CentreForum.	N	N	Staff	N/A	N/A	N/A	UK	N/A
5	North Essex Research Network (2014) <i>Evaluation of the Mid Essex Recovery College October –December</i> , Essex.	N	Y	Mental health researchers, Service User Research Group	Mixed methods	Students	47 (17)	UK	1
6	The Dorset Wellbeing and Recovery	N	N	Clinicians and	N/A	N/A	N/A	UK	N/A

	Partnership (WaRP) (2016) <i>WaRP Magazine</i> , http://www.dorsetmentalhealthforum.org.uk/pdfs/WaRP%20Magazine%20September%202016.pdf Accessed 24.04.2017.			peer workers					
7	McGregor J, Repper J, Brown H (2014) <i>"The college is so different from anything I have done". A study of the characteristics of Nottingham Recovery College</i> , Journal of Mental Health Training, Education and Practice, 9 , 3-15.	Y	Y	Manager, Staff, Researcher	Mixed methods	Students, peer support workers, volunteers, staff	N/A	UK	1
8	Oh H (2013) <i>The pedagogy of recovery colleges: clarifying theory</i> , Mental Health Review Journal, 18 , 240.	Y	N	Researcher	N/A	N/A	N/A	UK	N/A
9	Skipper L, Page K (2015) <i>Our recovery journey: two stories of change within Norfolk and Suffolk NHS Foundation Trust</i> , Mental Health and Social Inclusion, 19 , 1, 38 – 44.	Y	N	Trust project lead, student, peer support worker	Qualitative	Trust Project Lead, Student and PSW	2	UK	2
10	Watson E (2013) <i>What Makes a Recovery College? A Systematic Literature Review of Recovery Education in Mental Health</i> , Nottingham: MHSC Dissertation.	N	N	Postgraduate researcher	Qualitative	N/A	N/A	UK	N/A
OTHER INCLUDED PAPERS									
11	Kelly J, Gallagher S, McMahon J (2017) <i>Developing a recovery college: a preliminary exercise in establishing regional readiness and community needs</i> , Journal Of Mental Health, 26 , 150-155.	Y	Y	MH Researchers	Mixed methods	Staff, service users, allied professionals, family and friends, volunteers	254	UK	N/A
12	Dunn E A, Chow J, Meddings S, Haycock L J (2016) <i>Barriers to attendance at Recovery Colleges</i> , Mental Health and Social Inclusion, 20 , 4, 238-246.	Y	Y	Staff (Clinicians/Professionals working at Health organisations)	Mixed methods	Students	16	UK	1

13	Hall T, Brophy L, Jordan H (2016) <i>A report on the preliminary outcomes of the Mind Recovery College</i> , The University of Melbourne, Centre for Mental Health.	N	N	Researchers	Mixed methods	Students, families, carers, staff member	54	Australia	1
14	Hall T, Brophy L, Jordan H, Hardy D, Belmore S, Scott A, Thompson H (2016) <i>Co-Producing The Journey To Recovery: The Mind Recovery College</i> , Australia: TheMHS Conference 2016 Book of Proceedings.	Y	Y	Evaluation team	Mixed methods	Students, families, carers, community stakeholders	54	Australia	1
15	McGregor J, Brophy L, Hardy D, Hoban D, Meddings S, Repper J, Rinaldi M, Roeg W, Shepherd G, Slade M, Smelson D, Stergiopoulos V, RCICoP Group (2016) <i>Proceedings of June 2015 Meeting</i> , Recovery Colleges International Community of Practice (RCICoP).	N	N	Recovery College stakeholders	N/A	N/A	N/A	UK	Multiple
16	Mind (2016) <i>Australasian Recovery College Community of Practice Inaugural Meeting</i> , Victoria: Mind.	N	N	Recovery College Staff	N/A	N/A	N/A	Australia	N/A
17	Newman-Taylor K, Stone N, Valentine P, Hooks Z, Sault K (2016) <i>The Recovery College: A unique service approach and qualitative evaluation</i> , Psychiatric Rehabilitation Journal, 39 , 2, 187-190.	Y	Y	NHS Staff	Qualitative	Students	11	UK	1
18	Shepherd G, McGregor J (2016) <i>Recovery Colleges – Evolution or Revolution?</i> , Ghent, November 9.	N	N	Senior Consultants (ImROC)	N/A	N/A	N/A	UK	N/A
19	Sussex Recovery College (2016) <i>Performance and Evaluation Report (Summer Term 2016)</i> , Brighton: Sussex Partnership NHS Foundation Trust.	N	Y	?	Quantitative	Students	Varies per analysis	UK	2
20	Thornhill H, Dutta A (2016) <i>Thematic paper: Are recovery colleges socially acceptable?</i> , BJPsych International, 13 , 6-	Y	N	NHS Staff	N/A	N/A	N/A	UK	N/A

	7.								
21	Zabel E, Donegan G, Lawrence K, French P (2016) <i>Exploring the impact of the recovery academy: a qualitative study of Recovery College experiences</i> , Journal of Mental Health Training, Education and Practice, 11 , 162-171.	Y	Y	Research and NHS staff	Qualitative	People with lived experience, family members, staff and health professionals	21	UK	1
22	Burhouse A, Rowland M, Niman H M, Abraham D, Collins E, Matthews H, Denney J, Ryland H (2015) <i>Coaching for recovery: a quality improvement project in mental healthcare</i> , BMJ Quality Improvement Reports, 4 , doi: 10.1136/bmjquality.u206576.w2641.	Y	Y	NHS Staff	Mixed methods	Students	50	UK	2
23	Central and North West London NHS Foundation Trust (2015) CNWL Recovery & Wellbeing College Annual Report April 2014 - July 2015.	N	Y	Recovery College staff	Mixed methods	Recovery College students, staff and supporters	16 (Staff), 53 (service user and supporters) telephone survey, 1274 (evaluation forms)	UK	1
24	Kaminskiy E, Moore S (2015) <i>South Essex Recovery College Evaluation</i> , Cambridge: Anglia Ruskin University.	N	Y	Psychology Lecturers	Mixed methods	Students	41	UK	1
25	King T (2015) <i>An exploratory study of co-production in recovery colleges in the UK</i> , Sussex: University of Brighton.	N	Y	MSc Student	Quantitative	Recovery College staff	23	UK	10
26	Meddings S, McGregor J, Roeg W, Shepherd G (2015) <i>Recovery colleges: quality and outcomes</i> , Mental Health and Social Inclusion, 19 , 212-222.	Y	Y	NHS and Recovery College staff	Qualitative	Literature	N/A	UK	N/A
27	Gill K (2014) <i>Recovery Colleges. Co-Production in Action: The value of the lived experience in "Learning and Growth for Mental Health"</i> , Health Issues, 113 , 10-14.	N	Y	Researcher	Qualitative	Recovery College staff and students	6	Australia	1
28	McCaig M, McNay L, Marland G, Bradstreet S, Campbell J (2014)	Y	Y	Researchers and Recovery	Qualitative (narrative)	N/A	N/A	UK	1

	<i>Establishing a recovery college in a Scottish University, Mental Health and Social Inclusion, 18, 92-97.</i>			College staff	account)				
29	McMahon J, Wallace N, Kelly J, Egan E (2014) <i>Recovery Education College: A Needs Analysis</i> , Limerick: University of Limerick.	N	Y	University researchers	Mixed methods	Service users, staff, carers, general public	260 responded to survey, 20 in focus group, 8 in interviews and 7 in community consultations.	Ireland	1
30	Meddings S, Byrne D, Barnicoat S, Campbell E, Locks L (2014) <i>Co-Delivered and Co-Produced: Creating a Recovery College in Partnership</i> , Journal of Mental Health Training, Education and Practice, 9, 16-25.	Y	Y	NHS and Recovery College staff, community partners	Mixed methods	Recovery College Staff	7	UK	1
31	Meddings S, Guglietti S, Lambe H, Byrne D (2014) <i>Student perspectives: recovery college experience</i> , Mental Health and Social Inclusion, 18, 142-150.	Y	Y	Recovery College and NHS staff	Qualitative	Students	40	UK	1
32	Rennison J, Skinner S, Bailey A (2014) <i>CNWL Recovery College Annual Report April 2013 - March 2014</i> , London: Central and North West London NHS Foundation Trust.	N	Y	Recovery College staff	Quantitative	Students	44 (interviews)442 (feedback forms)	UK	1
33	Zucchelli F, Skinner S (2013) <i>Central and North West London NHS Foundation Trust's (CNWL) recovery college: the story so far...</i> , Mental Health and Social Inclusion, 17, 183-189.	Y	N	Freelancer, NHS and Recovery College staff	Qualitative	Students, Recovery College and NHS staff	N/A	UK	1
34	Mind (2012) <i>Establishment of the Mind Recovery College</i> , Heidelberg: Mind Australia.	N	N?	?	N/A	N/A	N/A	Australia	1
35	Perkins R, Repper J, Rinaldi M, Brown H (2012) <i>Recovery Colleges</i> , London: Implementing Recovery Through Organisational Change.	N	N	IMROC	N/A	N/A	N/A	UK	2 (mentioned)

36	Rinaldi M, Morland M, Wybourn S (2012) <i>Annual Report 2011 – 2012 South West London Recovery College</i> , London, South West London and St George's Mental Health NHS Trust.	N	Y	NHS Staff	Quantitative	Students	1,260	UK	1
37	Rinaldi M, Suleman M (2012) <i>Care co-ordinators' attitudes to self-management and their experience of the use of the South West London Recovery College</i> , London: South West London and St George's Mental Health NHS Trust.	N	Y	NHS Staff	Quantitative	Care-coordinators	47	UK	1
38	Rinaldi M, Wybourn S (2011) <i>The Recovery College Pilot in Merton and Sutton: longer term individual and service level outcomes</i> , London: South West London and St. Georges Mental Health NHS Trust.	N	Y	NHS Staff	Quantitative	Students	174	UK	1
39	Bourne, Meddings, Cooper, Locks & Whittington (2016) <i>An evaluation of service use outcomes in Sussex Recovery College</i> . Sussex NHS Trust.	N	Y	NHS Staff	Quantitative	Students	199 (but varies per analysis)	UK	2
40	Bristow (2015) <i>An annual report of Lincoln Recovery College</i> . Lincolnshire Partnership NHS Foundation Trust.	N		Recovery College staff	Mixed methods	Students	154	UK	1
41	Martina (2015) <i>Poetry for recovery: Peer trainer reflections at Sussex Recovery College</i> . Clinical Psychology Forum 268 (April).	Y	Y	Recovery College staff	Qualitative	Students	8	UK	1
42	SRC (2014) Solent Recovery College, Our first year – Outcomes.	N		Recovery College staff	Mixed methods	Recovery College students and staff	64 students, 17 trainers	UK	1
43	Barton (?) South West Yorkshire Partnership NHS Foundation Trust Recovery College, ppt.	N	N	Recovery College staff	N/A	N/A	N/A	UK	1
44	Sault, Garner and Gatherer (?), Southern Health Recovery College, ppt.	N	N	Recovery College staff	N/A	N/A	N/A	UK	1

				and students					
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**Initial theoretical framework developed by academic research team through inductive analysis of
10 key papers**

MECHANISMS OF ACTION

1. Increased agency

1.1 Open to all

1.2 Nurturing environment

1.2.1 Safety

1.2.2 Respect

1.3 Opportunity to make choices

1.3.1 Students choose to come to the Recovery College

1.3.2 Students choose their courses

1.3.3 Students decide how much support they need

1.4 Raised expectations

2. Transformed relationships

2.1 Co-production

2.1.1 Co-production of administration

2.1.2 Co-production of courses

2.1.3 In-class co-production

2.2 Reduced 'them and us' distinctions

2.2.1 Equality in relationships

2.2.2 Relationship with other students

2.2.3 Relationship with peer tutor

2.2.4 Relationship with workers

3. Identity development

3.1 Becoming a 'student'

3.2 Connecting with others

4. Personal growth

4.1 Adult Learning

4.1.1 Learning new knowledge

4.1.2 Learning practical skills

4.1.3 Undertaking research

4.2 Learning from lived experience

4.3 Building on strengths

4.4 Support to make progress

4.4.1 Support from staff

4.4.2 Support from other students

4.4.3 Support from Recovery College environment

4.5 Goal striving

4.6 Celebrating success

OUTCOMES

1. Change in the student

1.1 Emotional change

1.1.1 Hope for the future

1.1.2 Purpose and motivation

1.1.3 Empowerment and control

1.1.4 Confidence

1.2 Wellbeing

1.2.1 Sense of personal wellbeing

1.2.2 Mental health difficulties

1.2.3 Knowledge and skills for managing wellbeing

1.2.4 Use of wellness tools

1.3 Self-awareness

1.3.1 Understanding of own mental health

1.3.2 Rediscovering interests

1.3.3 Awareness of triggers and early warning signs

1.4 Identity change

- 1.4.1 Rediscovering an identity beyond “illness”
- 1.4.2 Self-worth
- 1.4.3 Becoming more “themselves”
- 1.4.4 Recognising potential
- 1.4.5 Anticipated stigma

2. Change in the student’s life

2.1 Social change

- 2.1.1 Social networks
- 2.1.2 Existing friendships
- 2.1.3 Relationship with professionals
- 2.1.4 Social isolation
- 2.1.5 Attaining socially valued roles

2.2. Occupational change

- 2.2.1 Employment
- 2.2.2 Education
- 2.2.3 Volunteering
- 2.2.4 Training as a peer

2.3. Daily life change

- 2.3.1 Daily activity
- 2.3.2 Sleep
- 2.3.3 Goal attainment

2.4 Change in service use

- 2.4.1 Use of mental health services
 - 2.4.2 Use of other services
-

Co-developed theoretical framework

MECHANISMS OF ACTION

1 Empowering environment

1.1 Providing a nurturing environment

1.1.1 Providing a safe space

1.1.2 Providing a respectful space

1.2 Offering opportunities to make choices

1.2.1 Students choose to enrol at a Recovery College

1.2.2 Students choose the courses they wish to join

1.2.3 Students choose how much support they need

2 Enabling different relationships

2.1 Working together

2.1.1 Designing and delivering the Recovery College as a whole

2.1.2 Designing courses

2.2 Shifting the balance of power

2.2.1 Relationships with other students

2.2.2 Relationships with peer trainers

2.2.2 Relationships with workers

2.3 Connecting with peers

2.3.1 Making friends

2.3.2 Developing empathetic relationships with other students

2.3.3 Peer tutors offering inspiration

3 Facilitating personal growth

3.1 Becoming a student

3.2 Shared / co-produced learning

3.2.1 Students learn from each other

3.2.2 Students learn from peer trainers

3.2.3 Students learn from professionals

3.2.4 Students contribute their lived experiences to the learning of others

3.2.5 Students have an active role in deciding the structure and content of learning once in the classroom: together they (students and trainers) decide what to learn and how to learn

3.3 Independent learning

3.4 Learning and applying practical skills

3.5 Building on strengths

3.6 Supporting students to make personal progress

3.6.1 Support offered by staff

3.6.2 Support offered by other students

3.7 Working towards goals

3.8 Celebrating success

OUTCOMES

1. Changes in the student

1.1 A more optimistic and self confident outlook

1.1.1 Increased hope for the future

1.1.2 Greater purpose and motivation

1.1.3 An acquired sense of empowerment and control

1.1.4 Improved confidence

1.2 An improved sense of health and wellbeing

1.2.1 Positive impact on personal wellbeing

1.2.2 Reduction in symptoms

1.3 Increased resilience

1.3.1 Deeper understanding of own mental health

1.3.2 (Re)discovering what motivates

1.3.3 Acquired knowledge and skills for managing wellbeing

1.4 Understanding myself in a new or more positive way

1.4.1 Developing an identity beyond “illness”

1.4.2 Feeling more worthwhile

1.4.3 Adopting a preferred identity

1.4.5 Reducing anticipated stigma

2. Changes made by the student in his/her life

2.1 Social

2.1.1 Expanded social networks

2.1.2 Improved existing friendships

2.1.3 More collaborative and less hierarchical relationships with people who have professional training / expertise

2.1.4 Reduced social isolation

2.1.5 Attaining socially valued roles

2.2 Occupational

2.2.1 Moving to paid employment

2.2.2 Moving to mainstream education

2.2.3 Engaging in volunteering

2.2.4 Becoming a peer trainer

2.3 Day-to-day life

2.3.1 Physically active

2.3.2 Daily routine

2.4 Goal achievement

Coding Framework for mechanisms of action developed through deductive analysis of remaining 34 papers

MECHANISMS OF ACTION

1 Empowering environment

1.1 Providing a nurturing environment

1.1.1 Providing a safe space

1.1.2 Providing a respectful space

1.2 Offering opportunities to make choices

1.2.1 Students choose to enrol at a Recovery College

1.2.2 Students choose the courses they wish to join

1.2.3 Students choose how much support they need

1.3 Language is empowering and recovery-focused

2 Enabling different relationships

2.1 Working together

2.1.1 Designing and delivering the Recovery College as a whole

2.1.2 Designing courses

2.2 Shifting the balance of power

2.2.1 Relationships with other students

2.2.2 Relationships with peer trainers

2.2.2 Relationships with workers

2.3 Connecting with peers

2.3.1 Making friends

2.3.2 Developing empathetic relationships with other students

2.3.3 Peer tutors offering inspiration

3 Facilitating personal growth

3.1 Becoming a student

3.2 Shared / co-produced learning

3.2.1 Students learn from each other

3.2.2 Students learn from peer trainers

3.2.3 Students learn from professionals

3.2.4 Students contribute their lived experiences to the learning of others

3.2.5 Students have an active role in deciding the structure and content of learning once in the classroom

3.3 Independent learning

3.4 Learning and applying practical skills

3.5 Building on strengths

3.6 Supporting students to make personal progress

3.6.1 Support offered by staff

3.6.2 Support offered by other students

3.7 Working towards goals

3.8 Linking students with the wider community

3.9 Celebrating success

Definitions and exemplar text for mechanisms of action

Code	Definition	Exemplar text (publication number)
1 Empowering environment	The Recovery College environment supports students to develop confidence and control in managing their lives	
1.1 Providing a nurturing environment	Recovery Colleges provide a safe, confidential space to talk and a non-judgemental approach, combined with a warm and respectful attitude.	Part of the Centre's appeal is that it feels like a separate entity from the hospital, where people can be more open... and be themselves. (1) There is empathy, warmth and a welcome and you do not have to explain yourself... the contribution that everyone can make is recognised and valued. (7)
1.2 Offering opportunities to make choices	Students have as much choice as possible at every stage of their Recovery College experience.	The prospectus outlines opportunities for learning and puts you in control. You choose what might help you. That is empowering. (3) Recovery Colleges hold to the belief that students can articulate for themselves what they want to learn and what works well for them in managing and living with mental illness. (8)
1.3 Language is empowering and recovery-focused	Recovery Colleges use language which conveys messages of hope and belief in the students' strength and potential. It avoids jargonistic, overly medical or deficit-focused language.	The main themes included... Recovery language and communication. (32)
2 Enabling different relationships	Students experience new types of relationships through their interactions	-

	with different types of people in the Recovery College.	
2.1 Working together	People who have lived experience of mental health work alongside people with professional training / expertise to develop and deliver the Recovery College.	[Peers] have been involved in the Discovery Centre at all levels, from preparing the premises and debating the programme to designing publicity materials and facilitating sessions. (1) Co-production emphasises reciprocal relationships where users of public services are recognised as active agents with positive capabilities rather than passive beneficiaries. (7)
2.2 Shifting the balance of power	The power balance between people experience mental health issues and who offer support is challenged. Recovery Colleges promote equality. No one is more important/powerful than anyone else.	...perhaps more tricky for him [a student], to develop a different relationship work on a more equal footing after I'd been his responsible clinician for many years. (1) The "Us and Them" culture is being questioned in the Recovery College classroom. (9)
2.3 Connecting with peers	Making links with peer trainers and other students offers both social support and friendship, but also the opportunity to learn from one another.	Experience from fellow students creates an extra supportive dimension and opportunity for friendships to develop. (3) I think there is something quite cathartic about being in a group with other people going through similar challenges, not always the same but similar challenges in their lives, and the sense of belonging to a community. (5)
3 Facilitating personal growth	Students are encouraged to adopt alternative / additional roles (like 'student') and come to understand themselves and their worlds in new ways.	
3.1 Becoming a student	The role of student may be transformational ("I am now a student,	... enables people to take control of their symptoms and challenges, the way these are treated, and their life a whole, by accessing

	not a patient or service user"), or develop alongside previous ones ("I am now a student as well as a service user").	relevant courses and through becoming a college student. (7) The identity shift from being a patient to occupying a valued role as student is immensely healing. (10)
3.2 Shared / Co-produced learning	Students are provided with information about different aspects of their recovery by both experts by experience (peer trainers and students) and experts by professional training / experience.	I did the Bi-polar course and I thought it was good how they talked about the history of it... It was interesting how they started diagnosing stuff. It's nice to know where things have come from rather than it just happened. (5) However, it is not assumed that all expertise rests with course designers and facilitators, it also rests with the learners in the room. "We learn from each other and we inspire each other..." (2)
3.3 Independent learning	Recovery Colleges support students to do self-initiated research relevant to their recovery.	If people do not have access to the literature, resources and computers they need to do their own research then they are dependent on the facilitators to provide all information. (2) ... a library where people can do their own research. (7)
3.4 Learning and applying practical skills	Students learn strategies and coping skills which they can apply to their daily lives.	They have given me the techniques that I need to deal with [my anxiety]. You are gaining coping mechanisms, learning about things you are going to have to face in the future. (5) ... the acquisition of knowledge and an increased ability to self-manage, provides a springboard for students at the Recovery College to accelerate their recovery. (10)
3.5 Building on strengths	Students experience an environment which highlights and builds on their strengths rather than focussing on their deficits.	For all students and staff, achievements, strengths, skills and qualities are identified, built upon and rewarded. (2) I liked the idea that it was Recovery. It sounded positive... It's going from always being told what you can't do because of your illness to

		being positive... Perhaps this will tell me what I can do. (5)
3.6 Supporting students to make personal progress	Students receive individualised practical and emotional support from staff, tutors and other students in order to make changes in their lives that are meaningful to them.	[Students] discuss their previous education experience, goals and are assisted in identifying potential opportunities and deciding on courses. The ILP is reviewed as the student progresses through their engagement with the college. (7) Everyone in the groups I have experienced roots for each other... Everybody in the group was really supportive and to me that was worth more than the course itself. (5)
3.7 Working towards goals	The support, courses and approach adopted in a Recovery College are all focused on helping students to make progress towards their chosen goals.	The tutor made me realise I could do it. Helped me to work out what courses might help me to achieve my goals. (2) It is axiomatic in the college that students work towards their own goals and to overcome personal challenges identified. (7)
3.8 Linking students with the wider community	Students are given information and guidance about local opportunities beyond the college (services, training, leisure, etc.) to support their ongoing recovery.	...linking students with other community supports and resources – including further education and/or employment services for those who want this. (34) Signposting – progression... Links up to something after the course finishes. Being able to find out how to become a peer trainer. (31)
3.9 Celebrating success	Praise and certificates to recognise achievement are given for the completion of courses and the attainment of goals.	The graduation is a special occasion which marks group and personal achievement and success. (3) I remember getting my first certificate after attending a wellness planning course. I attended more courses and my confidence grew. (9)

Coding Framework for outcomes developed through deductive analysis of remaining 34 papers

1. Changes in the student

1.1 A more optimistic and self confident outlook

- 1.1.1 Increased hope for the future
- 1.1.2 Greater purpose and motivation
- 1.1.3 An acquired sense of empowerment and control
- 1.1.4 Improved confidence

1.2 An improved sense of health and wellbeing

- 1.2.1 Positive impact on personal wellbeing
- 1.2.2 Reduction in symptoms

1.3 Increased resilience

- 1.3.1 Deeper understanding of own mental health
- 1.3.2 (Re)discovering what motivates
- 1.3.3 Acquired knowledge and skills for managing wellbeing

1.4 Understanding myself in a new or more positive way

- 1.4.1 Developing an identity beyond “illness”
- 1.4.2 Feeling more worthwhile
- 1.4.3 Adopting a preferred identity
- 1.4.5 Reducing anticipated stigma

2. Changes made by the student in his/her life

2.1 Social

- 2.1.1 Expanded social networks
- 2.1.2 Improved existing friendships
- 2.1.3 More collaborative and less hierarchical relationships with people who have professional training / expertise
- 2.1.4 Reduced social isolation
- 2.1.5 Attaining socially valued roles

2.2 Occupational

- 2.2.1 Moving to paid employment
- 2.2.2 Moving to mainstream education
- 2.2.3 Engaging in volunteering

2.2.4 Becoming a peer trainer

2.3 Day-to-day life

2.3.1 Physically active

2.3.2 Daily routine

2.3.3 Having interests and leisure activities

2.4 Goal achievement

2.5 Service use

2.5.1 Medication

2.5.2 Use of primary care services

2.5.3 Use of community services

2.5.4 Use of in-patient services

Definitions and exemplar text for outcomes

Code	Definition	Exemplar text (publication number)
1. Changes in the student	This refers to the internal changes a student may experience in terms of how they think and feel.	
1.1 A more optimistic and self confident outlook	Students are more hopeful and optimistic about their future and have more self-confidence in their abilities and in interacting with others.	<p>The place has given me a lot of hope for the future, it was great to meet some ex-patients who are doing well in the community... made me feel less anxious about the future. (1)</p> <p>It's going from doing nothing... this gives you confidence, self-confidence to help you get out there. (5)</p>
1.2 An improved sense of health and wellbeing	Students experience improved wellbeing and quality of life.	<p>... through an educational approach to recovery there is a greater focus on wellbeing and quality of life. (4)</p> <p>The "outcomes" of engagement with the college may be measured... However, it is likely that more subjective processes are equally significant, for example gaining an enhanced feeling of wellbeing or access to an improved quality of life. (7)</p>
1.3 Increased resilience	Students gain new skills and greater self-awareness and understanding of their experiences, helping them to self-manage more effectively.	<p>The skills will be helpful when I'm out in the community. (1)</p> <p>They have helped me cope with my illness more. I think I understand my illness better than I did. The anxiety I understand a bit better, and I can control that a bit better. (5)</p>
1.4 Understanding myself in a new or more positive way	Students undergo a change in identity, away from someone who is "ill" to someone who has worth and potential.	It has certainly made me feel more worth-while, I had a problem with that. Staying at home all the time when every other 'worthy' person is out doing something. It gave me a

		<p>bit more self-worth to say that's what I did, I did that. (5)</p> <p>It enables them to redefine their personal experience of mental health issues, (re)create an identity beyond their illness. (7)</p>
2. Changes made by the student in his/her life	This refers to the external changes a student may experience in terms of behaviours displayed and engagement in activities.	
2.1 Social	Students gain a richer social life and experience more positive relationships with people.	<p>I also made so many friends. I feel included, not alone. (3)</p> <p>Overcoming the impact of stigmatisation and consequent social isolation may be addressed through the development of social networks and learning communities and the support for pathways to meaningful roles. (7)</p>
2.2 Occupational	Recovery Colleges give students the opportunity for progression to paid work, volunteering, education, and training.	<p>Recovery colleges also appear to have impacted on employment outcomes with up to 70 per cent of students going on to find work, become mainstream students or become a volunteer. (4)</p> <p>[Recovery Colleges] may equip people to move into mainstream education/training opportunities that could provide the qualifications recognised by employers (if that is the person's choice). (2)</p>
2.3 Day-to-day life	Students are more active and achieve more in their day-to-day lives.	<p>I've been able to do more in the day. (3)</p> <p>The sense of purpose and motivation provided by having a reason to leave the house... "A big part was it gave me a purpose to get up, get sorted and leave the house". (5)</p>
2.4 Goal achievement	Students work towards things that are important to them.	<p>The recovery college uses a recovery based approach to help people... do the things they want to do in life. (4)</p> <p>After attending, students feel... more able to achieve their</p>

		goals. (3)
2.5 Service use	There are changes in students' use of primary care, in-patient and community services, and medication.	Findings also suggest that those who attended more than 70% of their scheduled sessions showed a significant reduction in use of community mental health services. (29) However, there is also anecdotal evidence that a minority of students (about 20 per cent) actually increase service use in the first few months of attending, perhaps due to raised awareness of support options. (26)