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BRIEF CLINICAL REPORT

Acceptability and feasibility of recovery-oriented group acceptance and commitment therapy for psychosis in routine practice: an uncontrolled pilot study

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Abstract

Background: Personal recovery is a persisting concern for people with psychotic disorders. Accordingly, mental health services have adopted frameworks of personal recovery, prioritizing adaptation to psychosis alongside symptom remission. Group acceptance and commitment therapy (ACT) for psychosis aims to promote personal recovery alongside improved mood and quality of life.
Aims: The objectives of this uncontrolled, prospective pilot study were to determine whether 'Recovery ACT' groups for adults are a feasible, acceptable and safe program within public mental health services, and assess effectiveness through measuring changes in personal recovery, wellbeing, and psychological flexibility.
Method: Program feasibility, acceptability and safety indicators were collected from referred consumers ($n = 105$). Adults ($n = 80$) diagnosed with psychotic disorders participated in an evaluation of 'Recovery ACT' groups in Australian community public mental health services. Participants completed pre- and post-group measures assessing personal recovery, wellbeing, and psychological flexibility.
Results: Of 101 group enrollees, 78.2% attended at least one group session ($n = 79$); 73.8% attended three or more, suggesting feasibility. Eighty of 91 first-time attendees participated in the evaluation. Based on completer analyses ($n = 39$), participants' personal recovery and wellbeing increased post-group. Outcome changes correlated with the linear combination of psychological flexibility measures.
Conclusions: 'Recovery ACT' groups are feasible, acceptable and safe in Australian public mental health services. 'Recovery ACT' may improve personal recovery, wellbeing, and psychological flexibility. Uncontrolled study design, completer analyses, and program discontinuation rates limit conclusions.

Keywords: Acceptance and commitment therapy; Group; Personal recovery; Psychosis

Introduction

Recovery from psychosis is variable: the course of disorder is typically recurring, and clinical and social recovery varies. Importantly, in that context, living a satisfying life in the community requires a process of *personal* recovery – finding identity, purpose and hope in the context of mental illness (Glover, 2012).

Acceptance and commitment therapy (ACT) is a contextual cognitive behavioural therapy that aims to increase psychological flexibility, the ability to adapt to changing situations and be open,

aware and committed to behaviours congruent with values. ACT has previously been adapted to the needs of consumers[1] hospitalized with acute psychotic symptoms (Bach *et al.*, 2013) and further developed in the UK to support personal recovery in a four-session group-based program ('ACT for Life'; Johns *et al.*, 2016; O'Donoghue *et al.*, 2018).

Based on early results from the 'ACT for Life' program, clinicians and academics in Australia adapted and implemented the group manual into a program called 'Recovery ACT' (R-ACT) (Gates *et al.*, 2021). This pilot program was offered to consumers by local clinicians in public mental health out-patient settings. This study aims to: (1) assess feasibility, acceptability and safety of the R-ACT program, as delivered in routine clinical practice to consumers diagnosed with a psychotic disorder, and (2) consider signals of effectiveness on personal recovery, wellbeing, and symptom measures, and explore measurement of theoretical mechanisms, specifically, psychological flexibility processes. We report the main findings here: an extended report including participant feedback is available in the Supplementary material.

Method

Recovery ACT group program

The R-ACT program encourages engagement in values-based actions while relating to psychotic symptoms and other internal experiences with openness and curiosity. Program methods include use of a central metaphor, mindfulness training, values identification and values-based SMART goals development. R-ACT involves seven weekly 90-minute core group sessions and a booster session. We developed a manual (accessible from https://osf.io/7bwgp) for training and treatment fidelity.

Participants

There were 105 program referrals; 101 consumers enrolled and were invited to participate in the evaluation. Of these, 90 consented, 11 declined, and one had incomplete consent documentation. Nine consumers completed the program and evaluation for a second time; one consumer enrolled three times. Participants were adults aged 18 to 60 years, with a psychotic disorder file diagnosis, accessing NorthWestern Mental Health Integrated Community Teams, and engaged in a R-ACT group for the first time. There were no exclusion criteria.

Procedure

Facilitators sought referrals at their workplace. Interested consumers attended an individual engagement session with a facilitator. Consumers who enrolled in the program were eligible for the evaluation. Written informed consent was obtained. There was no financial compensation for participation. Participants completed measures pre- and post-group. Demographic and clinical information were extracted from participants' electronic medical records.

Measures

Feasibility

Recruitment indicators included: (1) number of referrals, (2) number of groups conducted, (3) group size median and range, and (4) number of clinicians serving as facilitators.

Engagement

Indicators were: (1) initial engagement (i.e. defined as attending at least one session), and (2) attendance rates (three or more sessions considered a minimum to benefit).

[1]In Australia, 'consumer' refers to 'people accessing services for their mental health'.

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Acceptability

Indicator was discontinuation rates.

Safety

Facilitators reported serious adverse reactions and serious adverse events.

Personal recovery and *wellbeing*, the primary outcomes, were measured using the Questionnaire about the Process of Recovery (22-item version) and the CORE-10.

Psychological flexibility indictors were: *engagement in committed action* (Valuing Questionnaire-Progress factor); *mindfulness* (Southampton Mindfulness Questionnaire); *cognitive defusion* (Cognitive Fusion Questionnaire); and *experiential avoidance* (Acceptance and Action Questionnaire-II).

Data analyses

Feasibility, acceptability, and safety data were based on program records [recruitment ($n = 105$) and engagement ($n = 101$)] and are reported prior to analysis of data from those consenting to the evaluation ($n = 90$). Data analysis used SPSS software, version 25. For participants who repeated the program ($n = 10$), only data from their first group were analysed. Descriptive statistics were used for feasibility, acceptability and safety indicators. Analyses were run for all participants who had pre-group and post-group data ('completers', $n = 39$), regardless of number of sessions attended. Completers and non-completers did not significantly differ in any demographic, clinical or baseline measures. Paired samples *t*-tests were conducted to determine presence of significant change from pre-group to post-group for all measures. We calculated a reliable change criterion per measure and classified those who scored above the criterion as 'reliably improved', and those who scored below the criterion as 'reliably deteriorated'. We conducted multiple linear regressions to explore associations between change in process measures and outcome measures.

Results

Feasibility, acceptability and safety

The 105 separate referrals led to 101 enrolments in one of nine groups run at three out-patient services from 2015 to 2019. One consumer declined to enrol initially; another two withdrew prior to commencement. Median group size was 10 (range = 3–13). Seventy-nine consumers (78.2%) initially engaged with the program; program attendance records (for $n = 65$) showed 73.8% attending three or more sessions. Nine trained facilitators led groups in pairs, supported by at least two clinical supervision sessions during the course of each group offered by an ACT expert (attendance was not formally recorded).

Program drop-out rates include 22 who did not engage with the program, and 21 who discontinued (76.2% after the first session). There were four serious untoward clinical events. None was related to the program or evaluation.

Sample characteristics

The 78 participants in the evaluation were mostly unemployed men (57.7%) ranging in age from 18 to 58 years. Modal education level was late secondary school. Most were diagnosed with schizophrenia or schizoaffective disorder ($n = 48$) and had at least one prior psychiatric admission ($n = 63$, range 1–9).

Pre–post change

Table 1 reports paired *t*-tests and reliable change frequencies for the variables. From pre-group to post-group, participants on average experienced significant increases in personal recovery,

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Table 1. Descriptive statistics, paired *t*-test and reliable change for outcome and process measures

				Paired differences					Reliable change		
		Time 1 (pre-group)	Time 2 (Post-group)	*d* (T2 – T1)					Reliably improved	No reliable change	Reliably deteriorated
Outcomes	*n*	*M* (*SD*)	*M* (*SD*)	Mean diff (*SD*)	Std error	95% CI	*t*	Cohen's *d*	*n* (%)	*n* (%)	*n* (%)
CORE-10	38	16.87 (7.25)	14.18 (7.18)	−2.68 (7.07)	1.15	−5.01, −0.36	−2.34*	0.38	5 (13.2)	32 (84.2)	1 (2.6)
QPR	38	53.76 (13.24)	58.72 (11.00)	4.96 (12.70)	2.06	0.79, 9.13	2.41*	0.39	8 (21.1)	27 (71.1)	3 (7.9)
VQ progress	37	16.41 (7.48)	19.45 (5.60)	3.04 (6.38)	1.05	0.91, 5.17	2.90**	0.48	11 (29.7)	25 (67.6)	1 (2.7)
SMQ	38	42.71 (16.67)	49.99 (11.15)	7.28 (15.47)	2.51	2.19, 12.36	2.90**	0.47	8 (21.1)	28 (73.7)	2 (5.3)
AAQ-II	39	29.42 (9.19)	26.94 (8.12)	−2.49 (7.73)	1.24	−4.99, 0.02	−2.01[a]	0.32	—	—	—
CFQ	39	31.60 (10.13)	29.03 (8.80)	−2.58 (8.77)	1.40	−5.42, 0.27	−1.84[a]	—	—	—	—

Notes. Completers' analysis. [a]$p<0.08$; *$p<0.05$; **$p<0.01$. CORE-10, Clinical Outcomes in Routine Evaluation; QPR, Questionnaire about the Process of Recovery; VQ, Valuing Questionnaire; SMQ, Southampton Mindfulness Questionnaire; AAQ-II, Acceptance and Action Questionnaire-II; CFQ, Cognitive Fusion Questionnaire.

wellbeing (small effect sizes), mindfulness, committed actions (medium effect sizes), and decreases in experiential avoidance (small effect size). Over 20% of participants demonstrated reliable improvement in personal recovery, committed actions, mindfulness, and 13% in wellbeing.

Regression analyses

Two multiple regression analyses were conducted, one using change in personal recovery as the criterion and the other change in wellbeing, and both using change in process measures as the predictors (entered simultaneously).

The equation for the model associated with change in personal recovery was significant, $R^2 = 0.503$, $F_{4,31} = 7.847$, $p < .001$. Only change in committed action was a significant predictor, accounting for 40% of the variance. The equation for the model associated with change in wellbeing was also significant, $R^2 = 0.612$, $F_{4,31} = 12.200$, $p < .001$. Change in mindfulness was the only significant predictor, accounting for 53% of the variance.

Discussion

This single-group real-world study demonstrated that R-ACT can be a feasible, acceptable and safe program to conduct in routine out-patient public mental health care for adults diagnosed with a psychotic disorder. Over 95% of referred consumers enrolled in the program, with 78% initially engaging with the program; most discontinuation was unrelated to the program; and there were no reported serious adverse reactions. Uncontrolled pilot data are consistent with the program's potential effectiveness in improving personal recovery and wellbeing.

We observed consistent indicators that the program was feasible to implement and acceptable to consumers, facilitators and mental health services. Nine groups were conducted by nine facilitators over three years at three services. Nearly all referred consumers attended an engagement session and over 95% enrolled in a group (some more than once). Engagement in groups was sufficient for program viability: 78% attended at least one session (including all completers); all completers with attendance data (74.4%) attended more than three sessions suggesting our *a priori* minimum dose could be achieved. Furthermore, no serious adverse reactions were reported, indicating that R-ACT is likely safe.

Reasons for program discontinuation included anxiety about the group format, and mental state deterioration unrelated to the group. Discontinuation of psychosocial interventions for these reasons is not unexpected for consumers recovering from psychotic disorders, and the rates did not threaten program viability. Nonetheless, future exploration of strategies to support attendance such as further case manager or peer supports, and taster sessions, may be fruitful.

Our data revealed statistically significant signals of change in outcomes. Participants who completed the program had significant increases in personal recovery and wellbeing by the end of the 7-week program, with about one-fifth of participants demonstrating reliable improvement in personal recovery. These outcome signals, when considered alongside the feasibility and acceptability data, suggest more definitive trialling of R-ACT is warranted.

More broadly, these results build on evaluations of another uncontrolled study in Turkey (Burhan and Karadere, 2021) and 'ACT for Life' (Johns *et al.*, 2016) which, taken together, suggest that group-based ACT is an acceptable out-patient program for adults diagnosed with psychosis, building core ACT skills, and possibly increasing personal recovery, functioning and wellbeing. Our choice of a well-recognized measure of personal recovery as the primary outcome measure was intended to capture this construct more comprehensively than previous studies. The outcome signal from this measure was in the range of effect sizes for psychological interventions for psychosis.

Importantly, our results were consistent with the therapeutic processes of ACT being active ingredients in the process of recovery. Change in psychological flexibility correlated with change

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in personal recovery and wellbeing. Engagement in committed action was associated with increased personal recovery; increased mindfulness was associated with improved wellbeing. These results provide increasing confidence that group ACT supports greater personal recovery and wellbeing.

Strengths and limitations

The uncontrolled study design is a primary limitation. It is possible that changes in outcomes may be attributed to non-intervention factors (e.g. natural course, other treatments); however, changes in ACT-specific processes were probably due to program participation and some were associated with outcomes. Involvement of facilitators in program implementation and evaluation probably supported the evaluation regarding measure selection, evaluation engagement, and measure completion. Although assessments were conducted by facilitators and thus were not blind, all measures were self-reports, and were scored and analysed by a research assistant. Nonetheless, the possibility of a favourable bias in participants' responses cannot be ruled out. Another limitation in estimating program feasibility is missing attendance data.

We chose completer analyses rather than intention-to-treat, to seek treatment efficacy signals for those exposed to the intervention; results may have favoured the treatment as one-third discontinued the program. However, there were no significant baseline differences between those completing post-group measures and those who did not.

Conclusion

This first study of group-based ACT targeting personal recovery from psychosis adapted to the Australian context suggests that the program has potential to deliver its target outcomes. Our finding that increases in psychological flexibility processes were associated with gains in personal recovery and wellbeing suggests that these may be active change processes. While conclusions are tentative, the evidence indicates a controlled trial is warranted. Such a study is now underway (ANZCTR no. 12620000223932).

Supplementary material. The supplementary material for this article can be found at https://doi.org/10.1017/S1352465823000589

Data availability statement. The data are not publicly available as the authors do not have research participants' permission to share data.

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Author contribution. **John Farhall:** Conceptualization (equal), Formal analysis (equal), Funding acquisition (lead), Methodology (equal), Project administration (lead), Resources (equal), Supervision (equal), Visualization (equal), Writing – original draft (equal), Writing – review & editing (equal); **Marilyn Cugnetto:** Data curation (equal), Formal analysis (lead), Visualization (lead), Writing – original draft (equal), Writing – review & editing (equal); **Eliot Goldstone:** Conceptualization (equal), Investigation (equal), Resources (equal), Writing – review & editing (equal); **Jesse Gates:** Conceptualization (equal), Data curation (equal), Investigation (equal), Methodology (equal), Project administration (equal), Writing – review & editing (equal); **Jacinta Clemente:** Investigation (equal), Writing – original draft (supporting), Writing – review & editing (equal); **Eric Morris:** Conceptualization (equal), Resources (equal), Supervision (equal), Writing – review & editing (equal).

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Competing interests. The authors declare none.

Ethical standards. The study received Quality Assurance approval from the Royal Melbourne Hospital's Human Research Ethics Committee (QA 2015.151). Research conformed to the Declaration of Helsinki. Participants provided written informed consent to participate.

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