NATURAL RECOVERY OF PEOPLE WITH CANNABIS USE AND PSYCHOSIS

Dr Shane Rebgetz
Team Leader
Redcliffe-Caboolture Child & Youth Mental Health Service
Metro North MHS

Primary Supervisor: Professor David Kavanagh
Associate Supervisors: Dr Leanne Hides
Dr Anand Choudhary
We acknowledge the traditional custodians of the land on which we meet today and pay respect to Elders past, present and emerging.

We also extend that respect to other Aboriginal and/or Torres Strait Islanders who are joining us here today.
BACKGROUND

NR in SU & Psychosis

NR in Control Groups

NR in SU

Reasons for Use

Relapse

Impact of SU

Psychosis & CU
Psychosis & Cannabis Use

- Higher rates of SU than general population
- Younger group more SU in general population, higher in FEP
- SU widespread among people with psychosis
- Cannabis is the most used illicit substance
Impact of Substance Use

- SU can trigger onset of psychosis
  - 1.4X more likely to develop psychosis

- CU with psychosis
  - Younger age of onset
  - Greater number of positive sx
  - Increased depression

- Impacts greatly on social, occupational, health and treatment outcomes in this population
REASONS FOR USE

- Cannabis
  - Decrease depression & anxiety
  - Relieve boredom
  - More relaxed
  - FEP – thoughts, hallucinations, suspiciousness

- Differences between age groups

- Increases positive symptoms of psychosis

- Minimal relief from symptoms

- ? Continued use – inadequate understanding of this process
CURRENT TREATMENT APPROACHES

- **Clear need** for treatment of CU in people with psychosis – limited studies

- MI – independent impact (reduction in quantity)

- Clinical trials – **weak results** - potential short-term effects but poor long term effects

- Mechanisms of change **poorly understood**

- **Understanding** of these mechanisms may increase the effectiveness of interventions
Relapse context differ bet SU & non-SU
  • Require different relapse prevention strategies

- Recovery is highly variable & fluctuating

- Few studies
NATURAL RECOVERY IN SUBSTANCE USE

- Natural recovery of SU in people with psychosis is still not well understood.

- In people without psychosis, evaluation of costs & benefits of use appears important.
  - Greater knowledge of factors motivating changes in people with psychosis is needed.
EXTENT OF NATURAL RECOVERY IN CONTROL GROUPS OF TREATMENT TRIALS

- Substance users with psychosis in control groups have similar reductions in SU to those receiving active treatment.

- Some people stop use without formal treatment & perhaps before the onset of psychosis.

- Tx studies have found a significant proportion of individuals with psychosis & SU will reduce or cease SU without receiving specific SU tx (Control Groups).
A better understanding of processes underpinning change may need qualitative data.
Review of Naturalistic Recovery in Psychosis

- Research is in its infancy
- NR reflects individual change processes
- There are similarities & differences in SU alone/SU + psychosis
- A series of natural recovery studies could play a vital role
- Approach should be inductive in nature, exploring triggers for change and strategies that aid its maintenance
THESIS AIMS

- **Explore** NR from CU in people with psychosis
- **Identify** the variables & processes involved in cessation/reduction of CU in people with psychosis
- Specifically:
  - Triggering contexts & perceived reasons for initiating a change in CU
  - Predictors of a longer duration of successful control of CU, from contexts & reasons for change
  - Common contexts for lapses in control, & strategies most commonly used to regain control
**THESIS STRUCTURE**

- **Highlight Issue – in-depth systematic review**
  - Chapter 1-4

- **Factors associated with substance cessation/reduction**
  - Chapter 5

- **Factors predictive of cessation of cannabis use**
  - Chapter 6

- **Retrospective exploration of reasons for cessation/reduction of cannabis use**
  - Chapter 7

- **Prospective exploration of natural recovery of cannabis use**
  - Chapter 8

- **Thesis by published papers**

- **2 existing data sets**

- **2 new data sets**

- **7 papers**
Can exploring natural recovery from substance misuse in psychosis assist with treatment? A review of current research

Highlight Issue

Factors associated with substance cessation/reduction

Factors predictive of cessation of cannabis use

Retrospective exploration of reasons for cessation/reduction of cannabis use

Exploration of natural recovery of cannabis use

What does the current research evidence tell us about natural recovery from substance use in psychosis?

Progress to date: Published Addictive Behaviors 2015
Overview

- Conduct a systematic review of the current literature
  - What information can we learn from current treatment studies
  - Reviewing literature on NR in psychosis
  - Comparison of NR
## Comparison of NR Between Groups

<table>
<thead>
<tr>
<th>Psychosis</th>
<th>Non-Psychosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health-related</td>
<td>Health-related</td>
</tr>
<tr>
<td>Finance-related/work related</td>
<td>Finance-related/work related</td>
</tr>
<tr>
<td>Related to significant other/family related</td>
<td>Related to significant other/family related</td>
</tr>
<tr>
<td>Negative personal effects</td>
<td>Negative personal effects</td>
</tr>
<tr>
<td>Related to legal issues</td>
<td>Related to legal issues</td>
</tr>
<tr>
<td>Changes in living arrangements/social environment</td>
<td>Changes in living arrangements/social environment</td>
</tr>
<tr>
<td>Viewed substance use/self different (Decisional Balance/cognitive change)</td>
<td>Viewed substance use/self different (Decisional Balance/cognitive change)</td>
</tr>
<tr>
<td>Religious/spiritual reasons</td>
<td>Religious/spiritual reasons</td>
</tr>
<tr>
<td>Social related</td>
<td>Social related</td>
</tr>
<tr>
<td>Lifestyle change</td>
<td>Lifestyle change</td>
</tr>
<tr>
<td>Treatment for Mental Illness/Worsening of Mental Health Symptoms/Being</td>
<td></td>
</tr>
<tr>
<td>Paranoid/Confused</td>
<td></td>
</tr>
<tr>
<td>Doctor disapproves</td>
<td></td>
</tr>
<tr>
<td>Medication</td>
<td></td>
</tr>
<tr>
<td>New Year’s Resolution</td>
<td></td>
</tr>
</tbody>
</table>
Conclusion

Current limited research with methodological limitations and clinical limitations

- Use of 1 vs multiple substances
SYSTEMATIC ANALYSIS OF CHANGES IN CANNABIS USE AMONG CONTROL CONDITIONS OF RANDOMISED CONTROLLED TRIALS

Highlight Issue

Factors associated with substance cessation/reduction

Factors predictive of cessation of cannabis use

Retrospective exploration of reasons for cessation/reduction of cannabis use

Exploration of natural recovery of cannabis use

What is the amount of change in control groups of treatment trials of CU interventions

Progress to date: Published Addictive Behaviors Reports 2015
Method
- Reductions in days of CU in the control groups of RCTs on treatment of CUD

Results
- 8 studies
- Reduction in CU days/month 24.5-19.9
- Meta-analysis – 0.442 SD
- Methodological issues
Conclusions:

- Modest reductions – avg 1 day/week
- Evidence of NR
- Estimates extent of change to detect treatment effects
Changes in Cannabis Use Among Psychotic Clients Without Specialised Substance Use Treatment

Highlight Issue

Factors associated with substance cessation/reduction

Factors predictive of cessation of cannabis use

Retrospective exploration of reasons for cessation/reduction of cannabis use

Exploration of natural recovery of cannabis use

What is the amount of change in control groups of treatment trials of CU interventions in people with psychosis

Progress to date: Published Schizophrenia Research 2016
Method
- A systematic search was conducted to identify SU treatment studies in people with psychosis
- Increase studies to include all SU

Results
- 8 studies
- Reduction in days/month 13.2-10.6
- Meta-analysis – 0.3-0.4SD
Conclusions:

- Modest but maintained

- Only smaller than effects with CU only (& lower baseline use)

- Detailed understanding of strategies that are perceived to assist self-control
Predictors of Substance Use Reduction in an Epidemiological First-Episode Psychosis Cohort

Highlight Issue

Factors associated with substance cessation/reduction

Factors predictive of cessation of cannabis use

Retrospective exploration of reasons for cessation/reduction of cannabis use

Exploration of natural recovery of cannabis use

What factors predict a decline in or cessation of substance use in the FEPOS sample at 18 months’ follow-up

Progress to date: Published Early Intervention in Psychiatry 2014
Objective

- Add to the current literature of NR from SU in psychosis & assist in the development of future research (i.e., Study 6 and 7)

Methods

- Context and Sample
- Diagnostic Assessment
- Assessment of SUD
- Assessment of baseline, treatment & outcome variables
- Data Analysis
Results

- **Participants**
  - 72.7% male
  - 71.5% affective psychosis
  - 61.3% decreased/ceased use

- **Univariate Predictors**
  - Multiple drug use at baseline
  - Education
  - Premorbid GAF
  - Vocation
  - Premorbid SOFAS
  - Type of psychotic diagnosis
  - Accommodation
  - Age at duration of untreated psychosis
Results cont.

- Multivariate binary logistic regression
  - Correctly classifying 66.7% of cases

- Multivariate Predictors
  - Multiple drug use at baseline – strongest – odds ratio 1.62
  - Premorbid SOFAS
Conclusions:

- May indicate more severe substance use problems
- Addressing functional goals may prevent long-standing problems
- Longitudinal research needed

Limitations
- Assessment of SU (SU combined)
- Frequencies and amount of substances
- Lack of distinction cessation/reduction
A PROSPECTIVE STUDY OF NATURAL RECOVERY FROM CANNABIS USE IN EARLY PSYCHOSIS

Highlight Issue

Factors associated with substance cessation/reduction

Factors predictive of cessation of cannabis use

Retrospective exploration of reasons for cessation/reduction of cannabis use

Exploration of natural recovery of cannabis use

What factors predict cessation of cannabis use over 6 months’ follow up

Progress to date: Published European Journal of Psychiatry 2014
Objective

- Existing data set to explore factors that predicted cessation of cannabis use over 6-months

- **Frequent & precise** measurement – compared to Study 4
  - **Cannabis** as a measure not all substances
  - Identification of subtle changes in cannabis use
Methods

- Sample & Context

- Baseline Measures

- Monitoring measures

- Assessment at BL
  - Weekly for 3M then fortnightly for 3M
  - Cannabis outcome – nil use over 6M

- Data Analysis
  - 4 categories – demographics, health, social, cannabis
Results

Participannts
- 24.5 years mean age
- 78% male
- 71.6% schizophrenia/schizophreniform
- 28% ceased cannabis use

Multivariate binary logistic regression
- Correctly classifying 81% of cases

Multivariate Predictors
- Stable private accommodation – strongest
- Receiving an income
Conclusions:

- Optimal SU outcomes could be achieved by addressing the accommodation and employment needs of patients
NATURAL RECOVERY FROM CANNABIS USE IN PEOPLE WITH PSYCHOSIS: A QUALITATIVE STUDY

Highlight Issue

Factors associated with substance cessation/reduction

Factors predictive of cessation of cannabis use

Retrospective exploration of reasons for cessation/reduction of cannabis use

Exploration of natural recovery of cannabis use

Progress to date: Published Journal of Dual Diagnosis 2015

Reasons for cannabis cessation, strategies that maintain cessation and relapse contexts in a group of individuals with early episodes of psychosis

Study 6

Paper 6
Objective

- Utilising qualitative methodology to retrospectively explore
  - Perceived triggers for cannabis change
  - Processes involved in attempts to control cannabis use
  - Triggers for return to cannabis use
  - Coping strategies used in difficult situations

- Address gaps in literature & assist further research
Method

- 10 subjects age 18-40
  - Past psychotic disorder & cannabis use
  - AMHS

- Semi-structured interview

- Demographics

- Diagnosis
Method cont.

- Use of timeline
- Qualitative questions
  - Tell me about the last time you stopped using cannabis. What was happening around then? Why did you stop using it that time?
  - When you weren’t using cannabis, were there times when that was hard? (How did you cope with that?)
  - If participant has used cannabis again, What was happening when you went back to using cannabis?

- Data Analysis - Interpretative phenomenological analysis (IPA)
  - Themes
  - Preliminary themes and patterns of use
  - Recognition of new themes
  - Supervisory team to discuss coding & interpretations
Results cont.

- Mean age 23 years
- Commenced cannabis 13.7 years
- Abstained for 7.9 months

- Negative impact of SU across multiple domains & presence of social support
- Utilization of a combination of coping strategies
- Maintenance strategies - related to increased mental health symptoms
- Ability to address pressure from substance using peers was commonly mentioned
Conclusions:

- Focus on eliciting a range of benefits
- Developing overarching goals
- Further research - comparing perceived effective strategies
- Limitations – retrospective nature
  - replication and further refinement
PROSPECTIVE RECOVERY OF CANNABIS USE IN A PSYCHOTIC POPULATION: A QUALITATIVE ANALYSIS

Highlight Issue

Factors associated with substance cessation/reduction

Factors predictive of cessation of cannabis use

Retrospective exploration of reasons for cessation/reduction of cannabis use

Exploration of natural recovery of cannabis use

Progress to date: Submitted Addictive Behavior Reports 2016

Reasons for cannabis cessation, strategies that maintain cessation and relapse contexts in a group of individuals with early episodes of psychosis
Objective

- Utilising qualitative methodology to prospectively explore
  - Perceived triggers for cannabis change
  - Processes involved in attempts to control cannabis use
  - Triggers for return to cannabis use
  - Coping strategies used in difficult situations

- Assessment at BL and monthly for 3M
  - Improvement on Study 6
  - Tracking over time
  - Obtain recent experiences
  - Tracking motivation
Method

- 22 recruited, 16 completed to 3M
- 13 reduced/ceased
- Semi-structured interview (as Study 6)
  - Qualitative questions
    - Tell me about the last time you stopped using cannabis. What was happening around then? Why did you stop using it that time?
    - When you weren’t using cannabis, were there times when that was hard? (How did you cope with that?)
    - If participant has used cannabis again, What was happening when you went back to using cannabis?

Data Analysis - IPA

- Themes
- Preliminary themes and patterns of use
- Recognition of new themes
- Supervisory team to discuss coding & interpretations
Results cont.

- Less negative symptoms at Baseline & only cannabis
- Worsening mental health, relationship and lifestyle difficulties
- Effective strategies - psychological, relationship lifestyle & medication
- Relapse - substance-using peers, relationship difficulties & problems with negative emotions
Conclusions:

- High rate of maintained reductions
- Benefits across multiple life domains
- Negative symptoms, multiple substance use, dysphoria & pressure from substance-using peers
- Further research is required to replicate these findings on a larger scale
**GENERAL CONCLUSIONS**

1. **Current treatment** approaches for people with psychosis and CU have limited impact (Paper 1)
2. People with psychosis and CU can recover from CU **without formal treatment** (Paper 1-7)
3. There is a **substantial gap** in the literature on ‘natural recovery’ of CU in people with psychosis (Paper 1)
4. There was the **need** to explore this gap to enhance current treatment approaches (Paper 1-7)
WHAT TRIGGERS A DECISION TO CHANGE

- Stable psychotic symptoms, close connections (Paper 1)
- 1 substance to address, global functioning, premorbid social & occupational functioning (Paper 4)
- Private accommodation, receiving an income (Paper 5)
- Health, finances, employment, social pressure, mental health problems, dissatisfaction with cannabis, legal issues, relationships, lifestyle (Papers 6 and 7)
- Effective strategies included psychological ones, relationship/connection, social changes, medication
What maintains cannabis cessation among substance users with psychosis?

- Improvement in self-concept
- Change of friends
- Change in social life
- Avoidance of social situations
- Support from significant others
- Change in drug use
- Change of address
- Employment change

- Maintenance strategy domains generally similar to reasons for initial change

- Slight differences
What predicts lapses in control, and what strategies are most commonly used to regain control among substance users with psychosis?

- Relapse contexts were highly consistent with theories and research on relapse

- Negative emotional states (including ones from interpersonal conflict) & social pressure as common triggers for relapse (Papers 6 & 7)
GENERAL LIMITATIONS

- Lack of large mixed-methods study
- Personal bias
- Lack of definition
  - Cessation/reduction
  - Follow-up durations
- Self-report of SU
CLINICAL IMPLICATIONS

Motivators
- Endorsed use of MI
- Mental health symptoms & emotional wellbeing
- Use of CBT strategies important

Maintenance strategies similar to motivators

Relapse interventions likely to benefit psychosis group
FUTURE CONSIDERATIONS

- Integrative role of CBT, MI, family intervention & employment/educational support

- Schema theory is an integrative approach that could assist in conceptualising psychotic & SU symptoms

- Relationship & Connection was a common theme found in our research which is addressed in schema therapy (ST)
**Schema Therapy (ST)**

- Integrative therapeutic approach

- Combines aspects of cognitive, behavioural, psychodynamic, attachment & Gestalt models - considers itself to be a truly integrative model that also continues to evolve

- Cognitive & behavioural techniques are at the core of treatment, however ST gives equal weight to emotion-focused work, experiential techniques & the therapeutic relationship; which fits with the above results (i.e., emotional connection) on SU & psychosis
ST & Psychosis

EMS are involved in the development & maintenance of psychotic symptoms:
- vulnerability to harm,
- emotional inhibition,
- social isolation/alienation,
- defectiveness/shame
- unrelenting standards/hypercriticalness.

- Other EMS that may be involved include mistrust/abuse, abandonment/instability, approval-seeking/recognition-seeking, subjugation, & entitlement/grandiosity
ST & SU

- SU as an avoidant coping style – try to arrange their lives so that the schema is never activated

- Decreased schema activation = decreased SU

- Close connections & a stable mental state = decreased schema activation

- Having only one substance to address (rather than poly-SUDs), better global functioning and better premorbid social and occupational functioning = better coping
ST & SU Cont.

- Private accommodation & receiving an income = increase in sense of safety & self-esteem

- Addressing health, finances and employment, social pressure, mental health problems, dissatisfaction with cannabis, legal issues, relationships and lifestyle = less schema triggering = less psychotic sx = less SU
CONCLUSION

- Schema theory can enhance the quality & depth of case formulation when working with psychosis & SU. As ST is an integrative model it allows for responsive integration of current evidence-based interventions such as CBT, MI, self-control techniques, social & problem solving skills training, relapse-prevention training, family intervention, & contingency management.

- Given the evidence for the efficacy of these various treatment components, there appears significant advantages to an integrative model that allows therapists to draw judiciously on the range of interventions available to them. We purport that schema theory provides an integrative framework to inform this process.
Final Comment