Seeds of Discontent: Thoughts on the Prevention & Treatment of Cannabis Use Problems

Fraser Todd

This Is what I think I should say

Tama

Tama

16 year-old
Presented under pressure from whanau due to heavy cannabs use
Recently threatened to kill himself at home, auditory hallucination x1
Family fearful of his violence

Recent losses:

- Father incarcerated
- Uncle passed away 12 months ago

Other Stressors:

- Recent convictions for burglary, theft of motor vehicle, assault

Numerous past convictions for similar offences since age 13

Tama

Cannabis use:

- 2 ounces per week for last 4 years
- 1st use 9 years old
- Regular use daily from 10 years old
- Moderate – Severe dependence

Father and uncles strong gang connections

Father drug dealer

Violent relationship between parents

Parents separated when Tama was 6 years old

Lived with father aged 13-14 years

No school attendance since 10 years old

Prevention

Approaches to Cannabis Prevention

Drug Education

- School based education ineffective
- Most effective - multimodal, involves family, non-teacher facilitated booster sessions

Clinical Treatment

- Cannabis and related problems – moderate effectiveness
- Inconsistent services

Policy

- Legal status (little impact currently)
- Government social policy

Other Approaches to Prevention

High risk groups

- Emotional, social, academic skills
- Successful at reducing offending
- ? Cannabis use

Early Interventions

- Incredible Years
- Drivers of crime

But piecemeal, limited reach

Reasons for Using Cannabis

Reasons for Using

- Pleasure
- Experimentation
- Exploration of identity
- Social/peer influence
- Social lubricant
- Relieve stress
- Relieve boredom
- Improve mood when sad or depressed

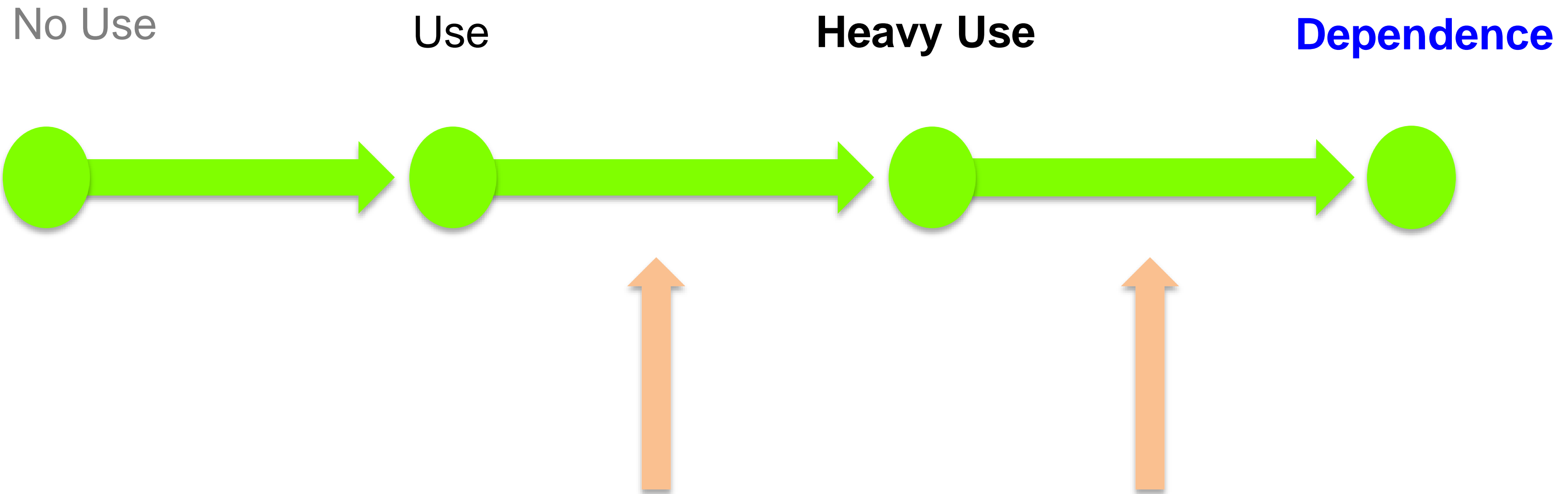
Two groups roughly equal:

1. Pleasure and social
2. Coping
3. 17% both

Reasons for not Using

- Fear of negative effects
- Fear of letting parents down

Use to Use Disorders



Early age of onset
Alcohol and nicotine use
Impulsivity
Externalising problems
Family problems and SUDS
Peer influence
Socioeconomic disadvantage
Early life events (abuse, trauma)

Quantity and frequency of use
Using to cope with stress
Negative life events
Dyscontrol
Avoidant coping
Social Anxiety
Depression

Cannabis and Coping

- Cannabis reduces negative bias and negative emotional processing in major depression
- Cannabis may reduce intrusive memories
- Cannabis is used to reduce anxiety in social anxiety disorder (but not other anxiety disorders)

Tama - Prevention

School-based education?

Legal status of cannabis?

Clinical interventions? – first contact aged 16

Early:
- Parenting skills
- Academic & Coping skills
- Emotion regulation
- Negative urgency
- Attention control (cognitive bias modification)?
- Social disadvantage
- Cultural disadvantage and disconnection
- Community interventions (gang based)
  - child drug exposure
  - domestic violence

Early Intervention and Treatment

Key Issues in Early Intervention and Treatment

- Most with cannabis dependence do not seek treatment
- Poor retention in treatment
- Treatment of cannabis dependence may not improve quality of life
- Most (50%) with cannabis dependence have other co-existing mental health and substance use problems
- Insufficient resources to deliver current treatment models to all those in need

Evidence-based Treatments for Cannabis Dependence

- Psychological:
  - CBT
  - MI+CBT
  - Family-focused interventions
    - e.g. Multi-dimensional Family Therapy
  - Contingency Management e.g. Youth Drug Court

- Pharmacological:
  - Few well studied medications
  - Dronabinol (agonist) for withdrawal
  - N-Acetyl Cysteine – withdrawal and ?anti-craving

- Emerging Pharmacotherapies:
  - Buspirone
  - Entacapone (COMT inhibitor, reduces dopamine release
  - ?SSRI's

Treatment Process

Stepped care:

1. Primary care – advice, education

2. MI+CBT
   Web based, smartphone-based
   Self-directed

3. Failure to respond/Co-existing or complex problems
   Comprehensive specialist care

Te Ariari O Te Oranga – 7 Key Principles

1. Cultural Considerations
2. Well-being
3. Engagement
4. Motivation
5. Assessment
6. Management
7. Integrated Care

Te Ariari O Te Oranga – Phases of Treatment

Pre-treatment

Early Treatment

Middle Treatment

Late Treatment

Autonomous Independence

Te Ariari O Te Oranga Framework

	1	2	3	4	5	6	7
Pre-treatment							
Early Treatment							
Middle Treatment							
Late Treatment							
Autonomous Independence							

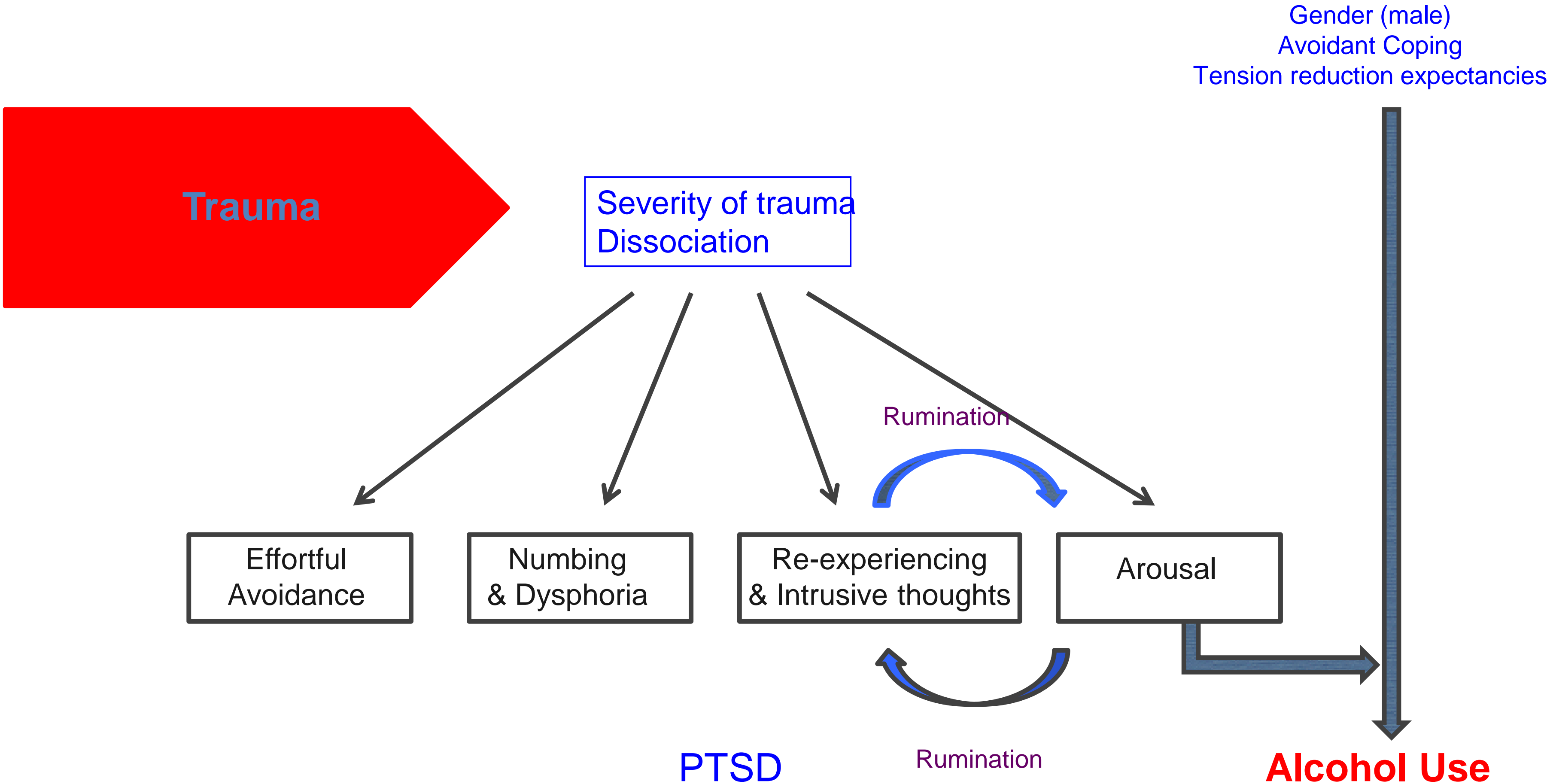
Incorporation of 7 Key Principles into goals and strategies during each phase of treatment

The Spirit of Te Ariari O Te Oranga

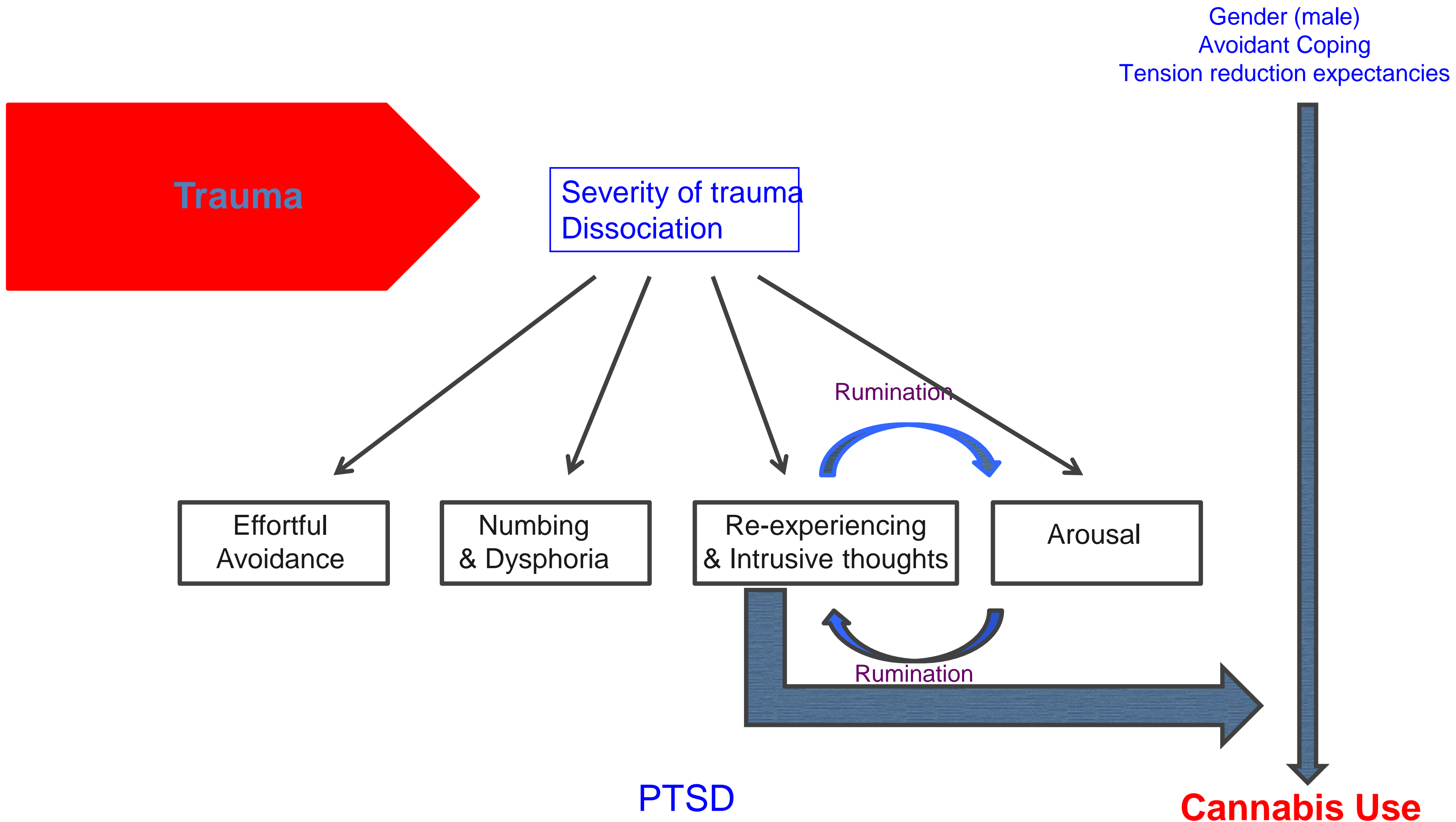
Underpinning Te Ariari is a philosophy representing a set of principles & values:

- **person-centred**
- **wellbeing orientated**
- **integrated care**
- **Walk the talk**

PTSD + Alcohol



PTSD + Cannabis



This Is what I want to say…

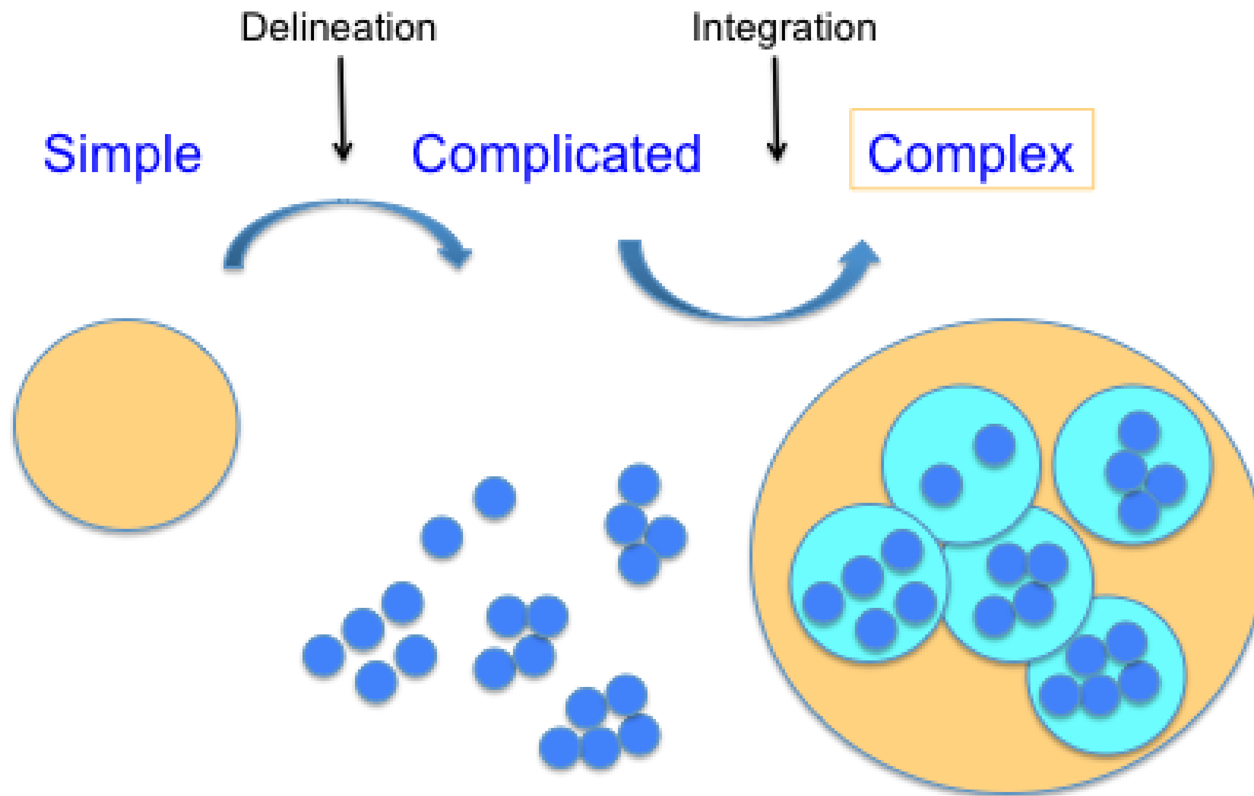
10 Questions about Preventing and Treating Problematic Cannabis Use

1. Person-focuse Care

As a clinician, I should start with people not disorders.

How do I do this in our current health system?

Simple - Complicated - Complex

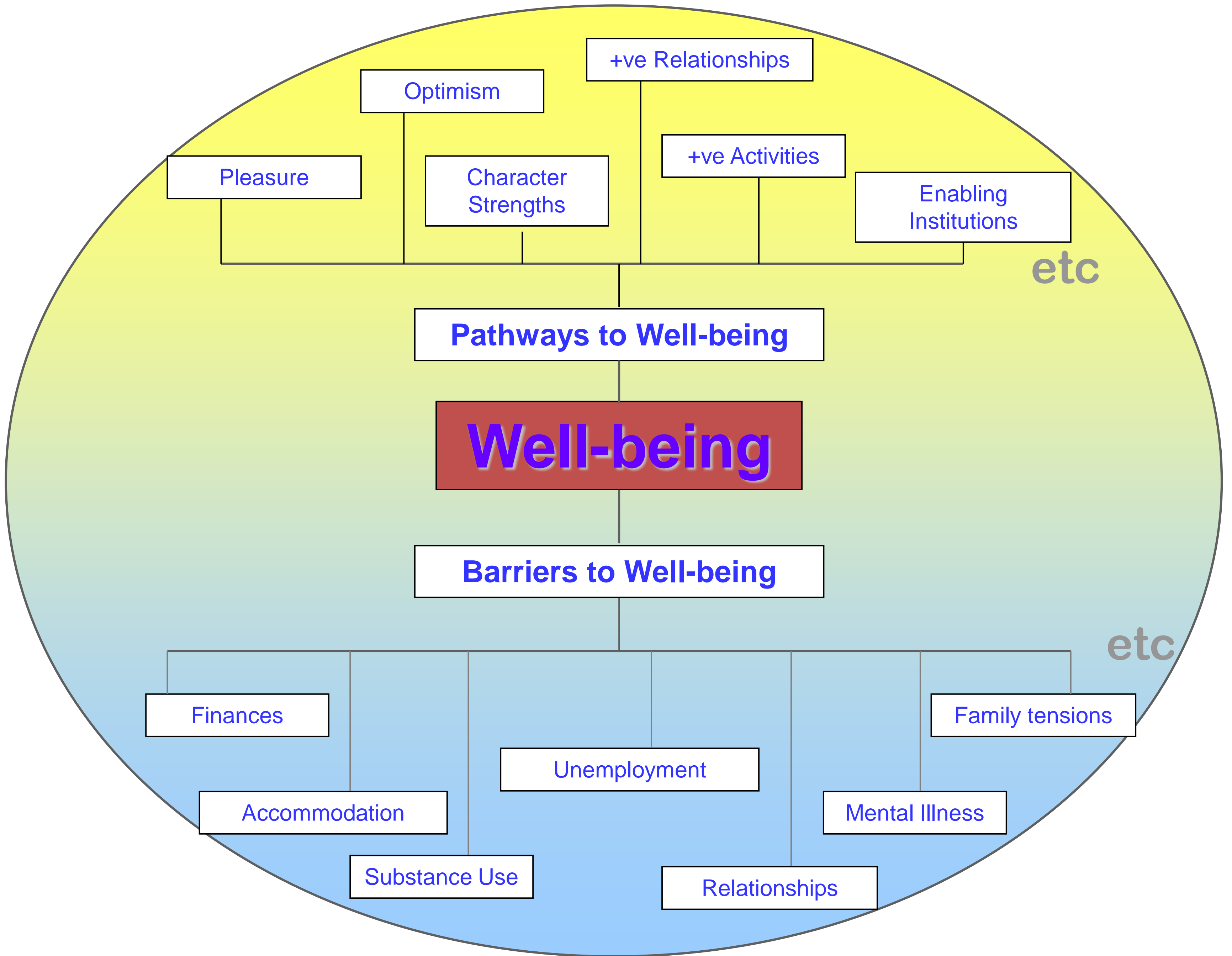


2. Well-being orientated Care

My role is to improve young peoples developmental trajectories towards optimal quality of life

… treating problems is only a part of this well being…

How do I do this in our current health system?



+ve Relationships
Optimism
+ve Activities
Pleasure
Character Strengths
Enabling Institutions
etc
Pathways to Well-being
Well-being
Barriers to Well-being
etc
Finances
Family tensions
Unemployment
Accommodation
Mental Illness
Substance Use
Relationships

3. Evidence-based Practice?

I believe in Evidence-base practice…

…but I am increasingly aware I don't know what I am doing…

What are clinicians supposed to make of clinical research?

- Our diagnostic criteria lack validity
- Significant publication bias
- Data Trawling common
- Significant undisclosed conflicts of interest
- Large amounts of research published of limited value
- Conclusions not justified by data, grow their own mythology
- Weight of evidence often more a weight of overextended speculation

4. Research and Treatment Priorities

Cannabis increases the risk of schizophrenia, but the 12-monthg prevalence of schizophrenia in NZ is <1%...

Are we overstating the importance of cannabis and schizophrenia?

12-month Prevalence Rates of MH Disorder in NZ

Te Rau Hinengaro 2006	
Overall	20.7%
Maori	29.5%
Anxiety disorders	14.8%
social phobia	5.7%
PTSD	3.0%
Mood disorders	7.9%
major depression	5.7%
bipolar disorder	2.25
Substance use disorders	3.5%
Eating disorders	0.5%
Schizophrenia***	0.3%

Rates of MH problems in those with Cannabis Dependence

Agosti 2002 National Comorbidity Survey	
Major depression	32.7%
Social phobia	29.0%
PTSD	18.5%
Generalized Anxiety	12.1%
Bipolar disorder	11.3%
Agoraphobia	11.3%
Conduct disorder	44.4%
ASPD	21.4%
Schizophrenia***	2.0%

5. Social Well-being

How important is social wellbeing to this discussion?

Social Determinants of Well-being

The Big 7 Factors Affecting SWB:

1. Family relationships - *divorce rates*

2. Financial situation - relative income, social comparison

3. Work - unemployment

4. Community and friends – *social cohesion, level of trust*, *membership of non-religious organizations*

5. Health

6. Personal freedom *(Quality of Government)*
   - rule of law, violence, corruption, effectiveness of government services, opportunity

7. Personal values - care about others v care about self, belief in God

Explains 80% of variance in SWB between countries
Explains 57% of variance in suicide rates between countries

Social Determinants of Well-being: Family

Family relationships

Divorce rates – 30% of those married in 1986 divorced by 2012

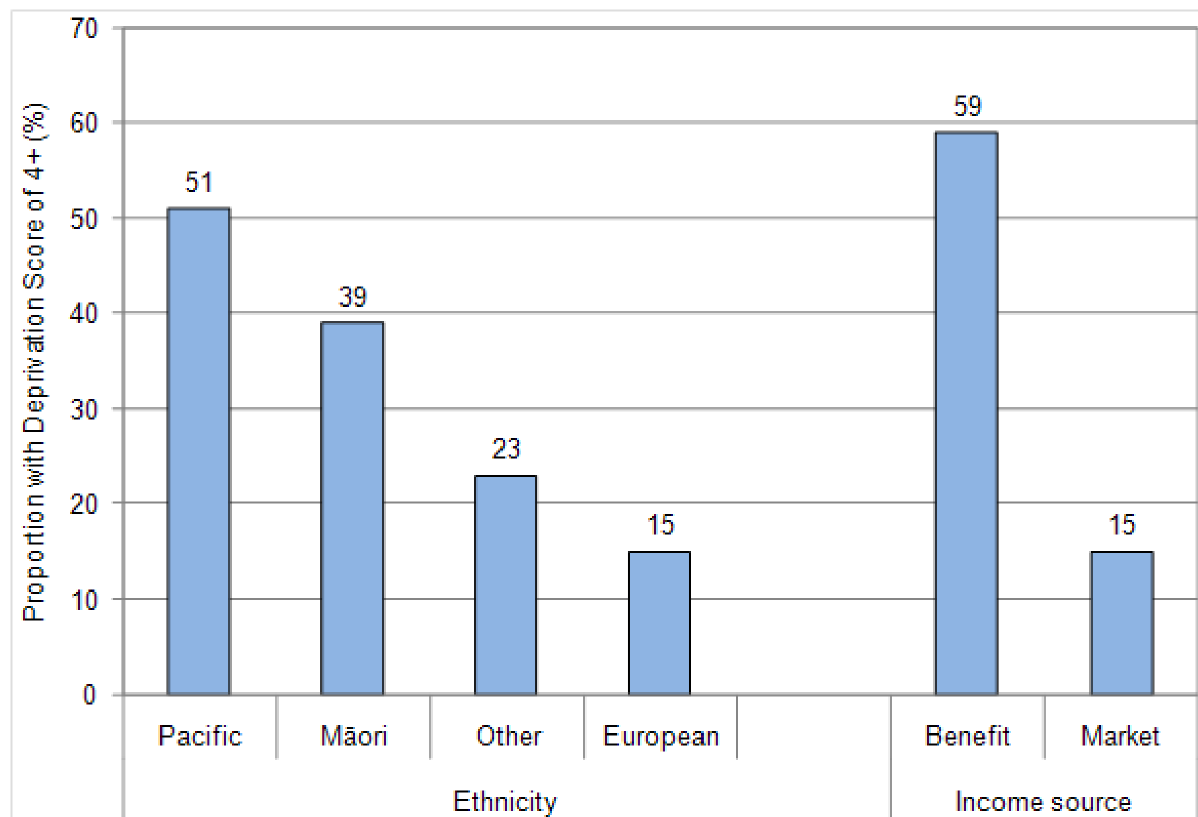
Domestic violence

Child abuse

Social Determinants of Well-being: Financial

Financial situation

- Poverty
- Relative income
- Social comparison

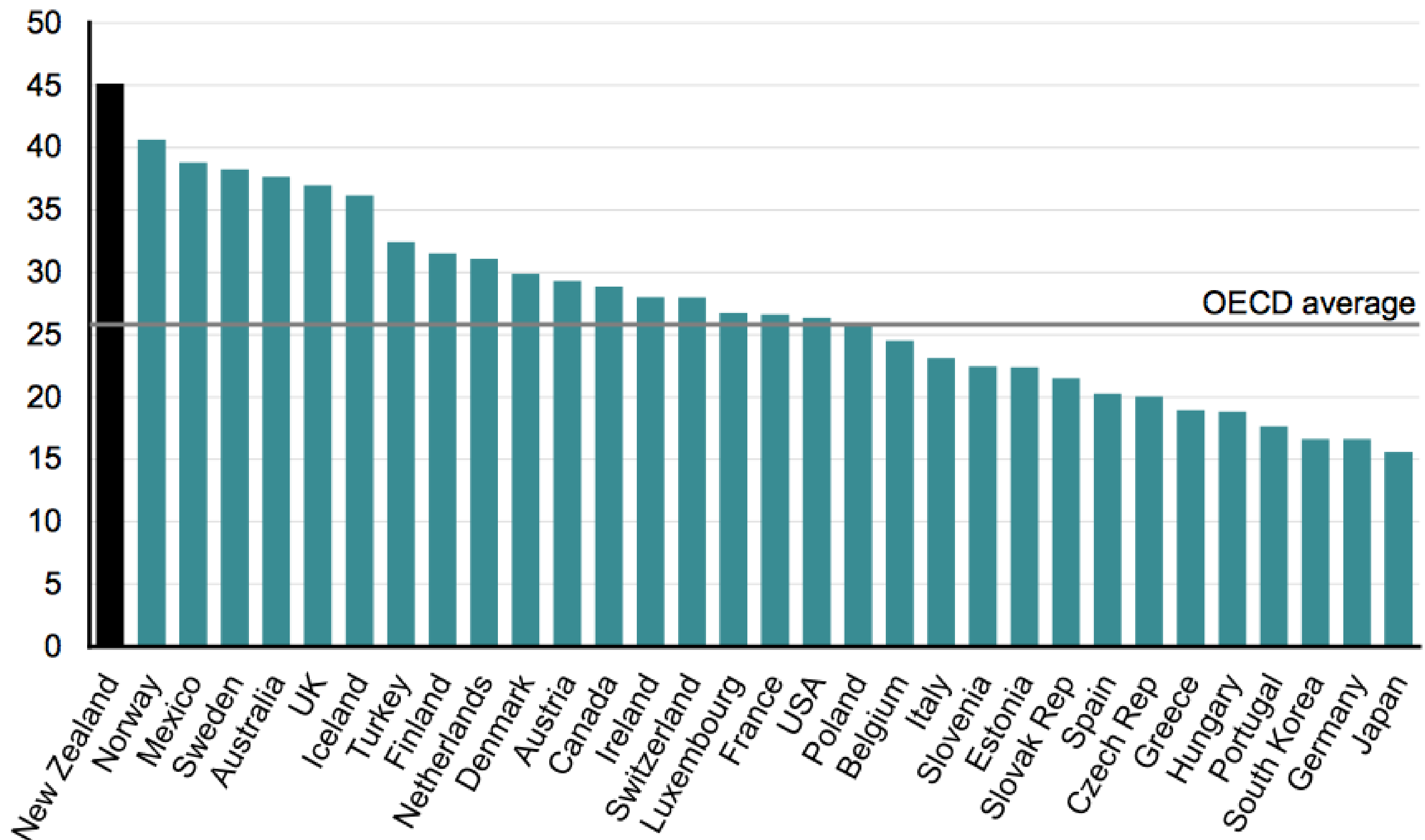


Social Determinants of Well-being: Financial

Poverty is not an accident. Like slavery and apartheid, it is man-made and can be removed by the actions of human beings.

- Nelson Mandela

Social Determinants of Well-being: Employment



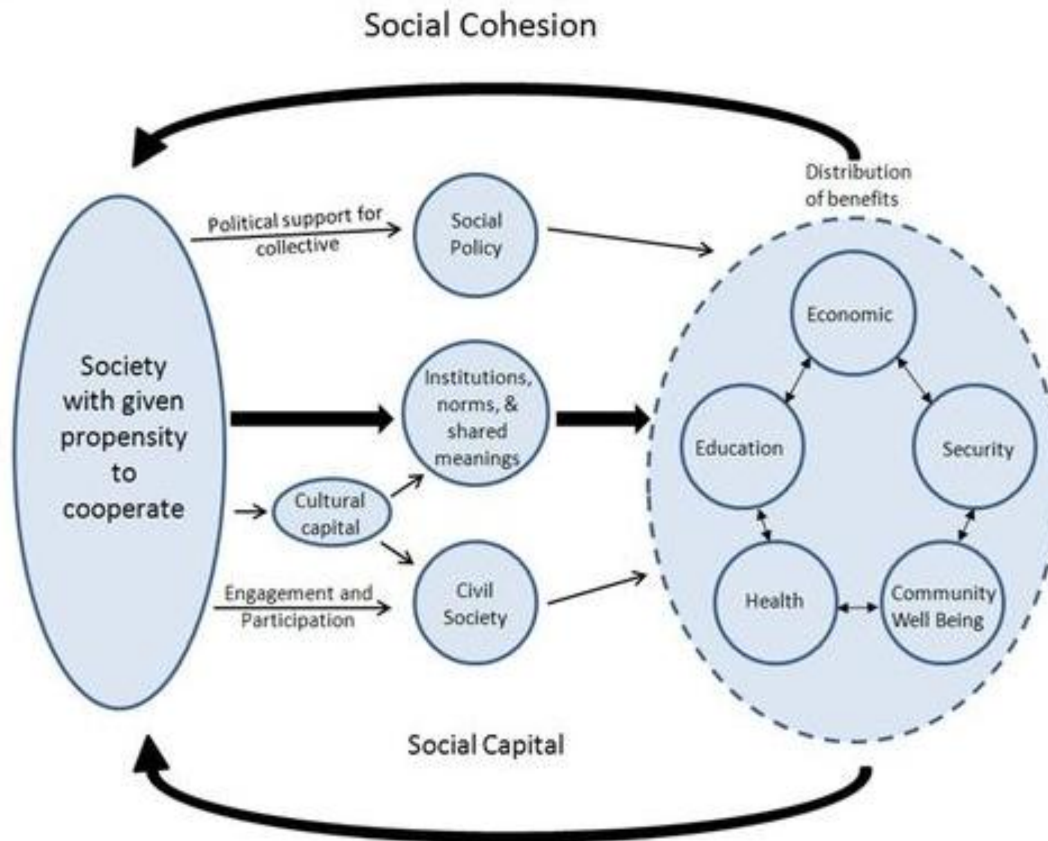
Source: OECD (2010).

Social Determinants of Well-being: Personal Freedom

Personal freedom *(Quality of Government)*

- rule of law
- violence,
- corruption
- effectiveness of government services
- opportunity

Social Determinants of Well-being: Social Cohesion



http://leadinganswers.typepad.com/leading_answers/2010/09/traditional-and-agile-pm-integration-pains-a-positive-sign.html

6. Individual Well-being

The risk and causal factors for many mental health problems are much the same

Why don't we address them more effectively ?

Note: Risk Factors for Offending

Table 1: 'Top Ten' Risk and Protective Factors for Future Offending*

'Domain'	Risk Factors – under age 13 yrs	Risk factors – adolescents 13 yrs+	Protective factors
Individual	• Behaviour problems (anti-social, conduct disorder, contact with law before 12) • Use of tobacco, alcohol and drugs before age 12 • Male gender • Impulsivity, poor self-control • Hyperactivity, poor attention • Aggression, fighting, violence before age 12	• Prior offences (more prior offences, higher the risk) • Aggression, fighting, violence • Impulsivity, poor self-control • Hyperactivity, poor attention • Tendency towards anxiety, stress • Length of first incarceration (longer period, higher risk)	• Higher self-esteem • Greater cautiousness and self-control
Social (Family)	• Low family income • Both parents unemployed or in unskilled or low-skilled jobs • Neither parent has school qualification • One or both parents has history of anti-social behaviour	• Poor supervision by parents / caregivers • Low level of warmth, affection, closeness between parent(s) and young person	• Greater supervision and monitoring by parents; reasonable and consistent rules and consequences • Greater emotional attachment and closeness to parents by young person • Lower levels of family adversity (social and economic disadvantage, family dysfunction, marital conflict)
Social (Community)		• Few friends and social / recreational activities • Contact with anti-social / criminal peers	• Greater ties and associations with pro-social peers • Lower levels of contact with delinquent peers • Good academic performance at school • Staying longer at school • Positive adult-youth relationships in the community

*As identified in the Christchurch and Dunedin longitudinal studies.
(Source: New Zealand Criminal Justice Sector Outcomes Report, Ministry of Justice, June 2008)

Risk Factors for Alcohol Dependence in Men

Kenneth S. Kendler, Charles O. Gardner, and Carol A. Prescott

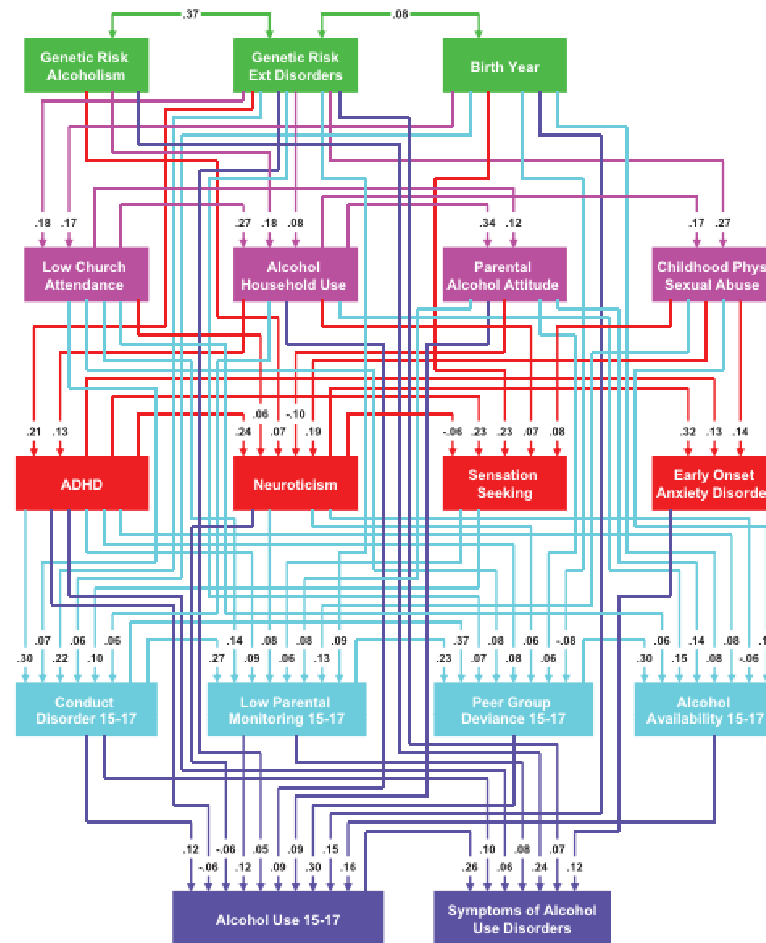


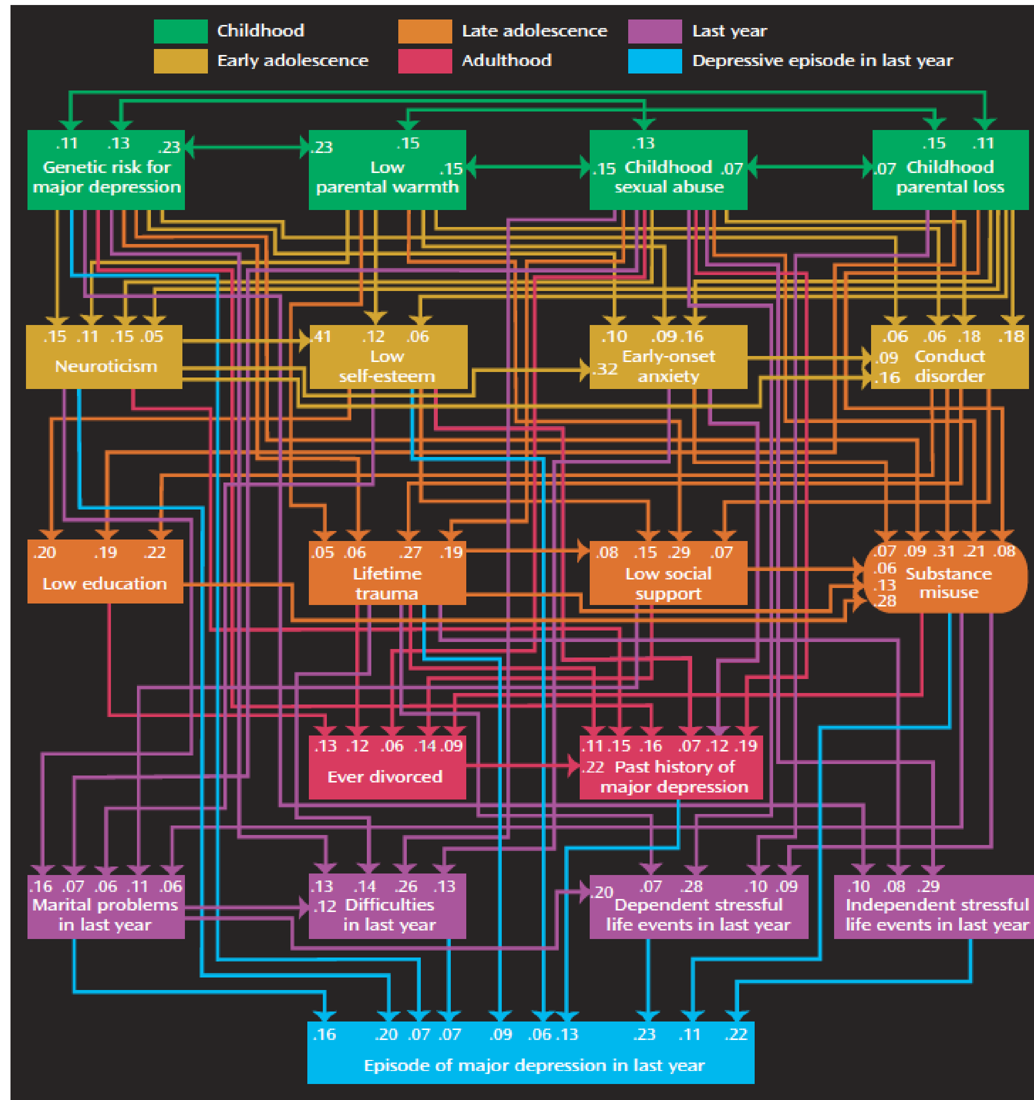
FIGURE 1

Results of our best fit model for the prediction of level of alcohol use at ages 15–17 and lifetime symptoms of Alcohol Use Disorders (DSM-IV Alcohol Abuse and Dependence).

Note: Two-headed arrows represent correlation coefficients while one-headed arrows represent path coefficients or standardized partial regression coefficients. 'ADHD' stands for symptoms of attention deficit hyperactivity disorder. 'Ext Disorders' stands for externalizing disorders. All variables have estimated residual variance that is not depicted in the figure. See text for a description of each variable. The variables are chosen and positioned to approximate a developmental process.

Risk Factors for Major Depression in Men

FIGURE 1. Results of the Best-Fit Model for the Prediction of an Episode of Major Depression in the Last Year Among 2,935 Men in Male-Male Twin Pairs[a]



Kendler et al 2006 Am J Psychiatry 163:115–124)

Risk Factors: Alcoholism & Depression in Men

- Genetic risk for alcoholism
- Genetic risk for externalising disorders
- Child Physical/Sexual Abuse
- Child Parental loss
- Neuroticism
- ADHD
- Sensation seeking
- Early onset anxiety
- Conduct disorder
- Low parental monitoring
- Peer group
- Alcohol availability

- Genetic risk for major depression
- Low parental warmth
- Child Sexual Abuse
- Child Parental loss
- Neuroticism
- Low self-esteem
- Early onset anxiety
- Conduct disorder
- Low education
- Trauma
- Low social support
- Substance misuse
- Divorce
- Marital problems
- Stressful life events

Unpacking Risk Factors

MENTAL HEALTH PROBLEMS

Externalising

Internalising

Thought disorder
Somatisation

Poor Attention Control

Negative Emotionality

Impulsivity

Negative Emotionality

Poor Inhibitory Control

Negative Urgency

Sensation Seeking

Sadness

Fear

Rumination

Avoidant coping

ADHD

Conduct

Substance
Use Disorders

Bipolar

Depression

Anxiety

Education – what is needed for the future?

Ministry of Education:

"The Ministry of Education's policy and strategy efforts …

… focus is on building a world-leading education system that equips all New Zealanders with the knowledge, skills and values to be successful citizens in the 21st century"

Resilience?
Emotion regulation skills?
Problem solving skills?
Attention control?
Mindfulness?
Cognitive enhancement?

7. Early Interventions and ‘Prevention’

Can we intervene with these risk factors?

YES!

Interventions for Risk Factors

Factor	Intervention
Attention control	Cognitive enhancement, Mindfulness
Impulsivity	Emotion regulation
Negative urgency	Mindfulness, distress tolerance
Poor inhibitory control	Self-regulation skills
Negative emotionality	CBT
Rumination	Mindfulness, CBT
Avoidant coping	Mindfulness, de-fusion
Anxiety proneness	Coping skills
Academic and social	Academic and social skills training
Family dysfunction	Family therapies

Trailer before the Truck?

Still not enough research evidence about specific interventions

BUT:

We know enough to put structure in place, and tweak the details as evidence emerges:

- Widespread work with families
- Computer assisted approaches for all young people around attention control
- Widespread self-regulation skills training
- Screening for learning disabilities

8. So why don’t we?

Christchurch Youth Drug Court

10+ Years

Good outcomes

Attempted in Auckland unsuccessfully

Not implemented elsewhere

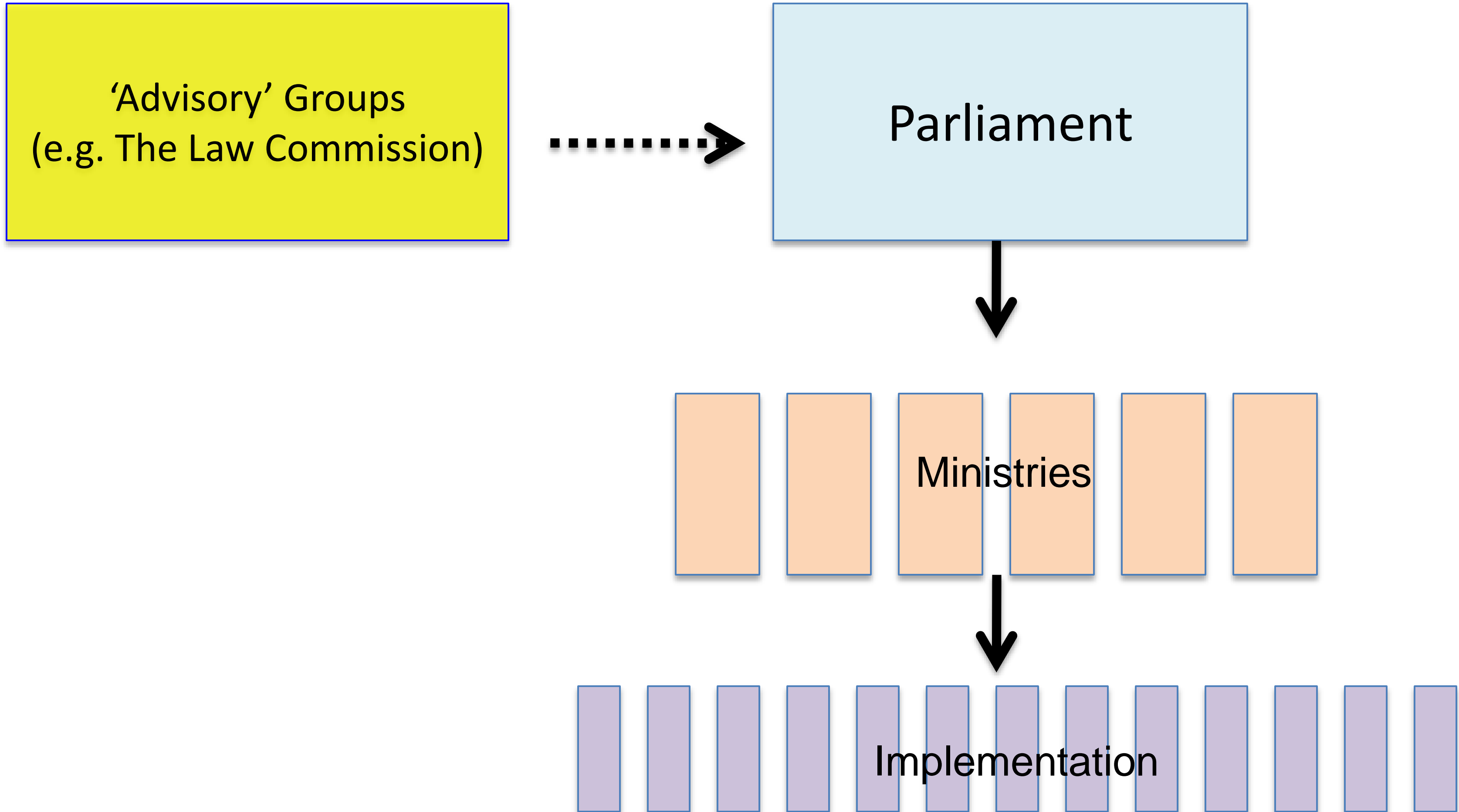
Possible Issues

- Lack of focus on people and their problems
- Lack of over-arching leadership
- Lack of a coherent plan across all Ministries and agencies
- Piecemeal approach
- Small underfunded projects in response to Minisitry directives

9. Who should lead?

Is Parliament the best organisation to be responsible for the well-being of society?

?



‘Advisory’ Groups
(e.g. The Law Commission)
Parliament
Ministries
Implementation

10. Are we worth what we cost?

Do you think the money the tax pay pays me (and you) would be more effectively spent…

Reducing poverty?
Reducing youth unemployment?
Increasing welfare benefits?
Supporting family relationships?
Building social cohesion and trusting communities?
Reforming education?