

# Development of a new measure of resilience in adolescents

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# Notions of resilience

- Psychiatry and medicine
  - Why do people become ill?
    - Risk factors eg. genetic inheritance, poverty - water/nutrition
  - Why don't people become ill?
    - Exposed but avoid illness
- Survivor stories - holocaust, war, natural disasters

# Growing up in Kauai

- 1955 birth cohort of 698 infants
- Followed for 32 years
- Data from
  - individuals and their families
  - medical staff
  - social workers
  - teachers
  - home observation
  - community records (eg. police files)

(Werner & Smith, 1992)

# Risk setting

1/3 cohort considered at-risk due to exposure to >3 factors by two years

- poverty (>50% cohort)
- poorly educated parents
- teenage parents
- single parent families
- parental death
- divorce
- family conflict

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## Adult outcomes ...

2/3 at risk infants

- serious learning or behaviour problems at 10 years of age
- delinquency records
- mental health problems
- teenage pregnancies

1/3 “competent, confident and caring adults”

(Werner, 1990)

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## Thriving against the odds ...

- Patients with schizophrenia or manic depression
- Around half of their children showed some level of mental disorder.
- The remaining half were relatively well adjusted

# Thriving against the odds ...

- 10% of the children were:

'not simply escaping whatever genetic transmission destiny had in store for them, and not merely surviving the milieu of irrationality generated by psychotic parenting; they were apparently thriving under conditions that sophisticated observers judged to be highly detrimental to a child's psychosocial development and well-being.'

(Anthony 1987)

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## Definitions of resilience

- ‘... successful adaptation or development of competence despite high risk status or chronic stress’ (Egeland, Carlson, & Sroufe 1993)
- ‘... relatively resistant to psychosocial risk experiences’ (Rutter 1999)
- ‘... positive developmental outcomes in the face of adversity or stress’ (Masten 2001)

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# Core aspects of resilience

- Experience of adversity or stress
- Positive adaptation / outcomes

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# Resilient Young Person?

**Confidence**

**Problem solving skills**

**Intelligent**

**Optimistic**

**Social skills**



**Motivated**

**Positive sense of future**

**Sense of purpose**

**Empathy**

With help



Family

Peers

School

Community

# Resilience is...

- An ongoing process set within the context of individual development
- Multi-dimensional
- The result of risk and protective factors combining to influence outcomes in the face of adversity.
  - Personal and experiential factors influence the impact and occurrence of risk and protective factors

# Why develop a measure?

- Over 20 years of research
- Most common approach:
  - Identify risk factor (poverty, sexual abuse, genetic risk)
  - Measure competence
    - Academic?
    - Social?
    - Emotional?
    - Physical?

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## Problems with this approach

- Variability in measurement of risk
- Variability in measurement of competence
  - Different levels of competence used to classify resilience
  - Different domains

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## For example ...

Risk - Sexual abuse

Competence - Emotional & Social

– Resilient 1: Sub-clinical levels of depression and anxiety

– Resilient 2: Social competence scores on CBC at or above age norm

→ Low level of agreement Spacarelli & Kim (1995)

• Measurement tools ...

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# Resilience measures ...

- Four measures:
  - Resilience Scale (Wagnild & Young 1993)
  - Resiliency Scale (Jew, Green & Kroger 1999)
  - Connor-Davidson Resilience Scale (2003)
  - Resilience Scale for Adults (Friborg et al 2003)

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# Limitations

- Development
- Content validity
  - Individual factors
- Psychometric properties
- Population

# Too Hard?



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## How we measured resilience

All domains relevant to adolescents

- Self
- Family
- Peers
- School
- Community

Identified the relevant protective factors

# Method

- Literature Review
  - Longitudinal studies
  - Across risk groups
  - Across studies
- 5 Focus groups with adolescents living with a chronic illness (N = 24)
- ‘Expert opinion’ researchers and clinicians at CAH

# Adolescent Resilience Questionnaire

- Sub-scales including:
  - self esteem
  - optimism
  - emotional insight
  - social and problem solving skills
  - connectedness to family, peers, school, community
- Item generation
  - 5-point Likert scale

# Pilot testing ARQ

## Adolescents with a chronic illness

- Hospital and community samples
- $n = 534$
- Mean age 14.5 yrs
- 60% female

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## Pilot Testing (cont)

### Items

- distribution
- expression

### Scales

- Factor analysis
- Reliability

## ARQ V2

### Secondary school students

- Random sample government schools in Victoria
- Years 7 and 9
- $n = 451$
- Mean age 13.9 yrs
- 50% female

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## ARQ V2 (cont)

### Items

- distribution
- expression

### Scales

- Factor analysis
- Reliability

# ARQ V3

- Brief self report measure (20 mins)
- Multi-domain
  - Individual (6 scales)
  - Family (2 scales)
  - Peers (2 scales)
  - School (2 scales)
  - Community (1 scale)

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## Self ARQ scales

	Cronbach Alpha
Negative cognition	0.83
Confidence (self and future)	0.81
Emotional insight	0.71
Social skills	0.68
Empathy / Tolerance	0.66

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## Family ARQ scales

### Connectedness ( $\alpha = 0.87$ )

- I enjoy spending time with my family
- People in my family expect too much of me

### Availability ( $\alpha = 0.89$ )

- There is someone in my family I can talk to about anything
- There is someone in my family that I feel particularly close to

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## Peer ARQ scales

### Connectedness ( $\alpha = 0.81$ )

- I have a friend I can trust with my private thoughts and feelings
- I enjoy being around people my age

### Availability ( $\alpha = 0.64$ )

- I wish I had more friends I felt close to
  - I find it hard making friends
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## School ARQ scales

### Supportive environment ( $\alpha = 0.81$ )

- My teachers are caring and supportive of me
- I feel that what I say counts at school

### School engagement ( $\alpha = 0.65$ )

- I hate going to school
- I try hard at school

# Community ARQ scales

## Connectedness ( $\alpha = 0.88$ )

- I like my neighbourhood
- There is an adult in my neighbourhood I could talk to if I had a problem

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## Next steps ...

- Further psychometric testing
  - improve reliability
  - test-retest
  - discriminate between populations
  - construct validity
  
  - qualitative interview data
    - picture of resilient vs vulnerable ARQ scores

# Research applications

- Standardisation of measurement
  - comparisons across risk groups/method
- Tracking resilience over time
- Examining complex interactions such as depression/anxiety and resilience ...
- Clinical applications ...

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**Thank you**

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