

## Developing a culturally relevant measure of resilience.

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## Resilience scale for Adults (RSA) Resilience scale for Adolescents (READ)

- Measuring resilience 1998
  - Existing scales
    - Wagnild and Youngs (1993) the Resilience Scale
  - Theory,
    - Overarching generally agree upon theory?
  - Definition
    - Firstly, a sense of **self-esteem** and **self-confidence**; secondly, a belief in one's own **self-efficacy** and ability to deal with change and adaptation; thirdly, a repertoire of **social problem-solving** approaches (Rutter, 1985); ability to bounce back (Wolin & Wolin, 1993); good outcomes despite significant stress (Rutter, 2000)
  - Focus groups - No money
  - Empirical findings
    - 1) Personal dispositions, 2) Family coherence, 3) Social support from outside the family (Garmezy, 1985; Werner, 1993, Rutter, 1985)

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## Review of resilience literature

- A large literature review
- Identification of protective factors in resilience literature until we found no new factors
- 15 categories
  - Personal competence, self-efficacy, internal locus of control, temperament, hope, ego-strength, self actualization, social competence, education/professional life, religion, structured life,
  - Social support, family cohesion,
  - *Problem solving abilities, exposure to stress*

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## The development of the Resilience Scale for Adults (RSA)

- 295 positively phrased items was reduced to **45 items**  
**5 factors**, total Cronbach's alpha = **.93**
  - 1) Personal competence, 2) Social competence, 3) Structured style, 4) Family cohesion and 5) Social resources
    - (Hjemdal, Friborg, Martinussen & Rosenvinge, 2001)
- **Differentiated** between a **normal sample** (N = 276) with **psychiatric out-patients** (N = 60)
  - All factors differentiated and RSA total  $t = 7.78^{***}$ 
    - (Friborg, Hjemdal, Rosenvinge, & Martinussen, 2003)

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## Criterion validity (N = 648)

Correlations

Instruments	PC	SC	SS	FC	SR
Sense of Coherence	.70	.36	.52	.55	.55
Optimism	.68	.48	.40	.42	.53
Active coping	.42	.28	.28	.23	.30
Satisfaction w/life	.62	.31	.43	.51	.48
Avoidance coping	-.16	-.21	-.18	-.21	-.28
Wishful Thinking	-.35	n.s	-.29	-.20	-.15
Symptoms, SCL	-.67	-.31	-.43	-.50	-.46

(Friborg &amp; Hjemdal, 2004)

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## Acquiescence bias: Which response format is more appropriate?

O. Friborg et al. / *Personality and Individual Differences* 40 (2006) 873–884

Table 1  
Examples of item transformations from a Likert to a semantic differential format

		Not true at all							Very true						
<i>Likert format</i>															
I feel that my future looks promising		1	2	3	4	5	6	7							
It is easy for me to think of good conversational topics		1	2	3	4	5	6	7							
<i>Semantic differential format</i>															
I feel that my future looks	<i>uncertain</i>	1	2	3	4	5	6	7							<i>promising</i>
To think of good conversational topics is	<i>easy for me</i>	1	2	3	4	5	6	7							<i>difficult for me</i>

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## RSA and number of factors

- Confirmatory factor analyses ( $N_1 = 482$  and  $N_2 = 201$ )
  - Remaining **33** items
  - **Six factors**

	$\alpha_1$	$\alpha_2$	items
<b>1. Perception of self</b>	.70	.81	6
<b>2. Planned future</b>	.66	.78	4
3. Social competence	.76	.75	6
4. Structured style	.69	.67	4
5. Family cohesion	.78	.79	6
6. Social resources	.69	.77	7

- Absolute fit: Chi Square = 46.92,  $p = .07$
- Relative fit: **RMSEA** ranging from **.013 to .042**

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## Personality and Experiments with pain

- **Big 5 personality** and **RSA** in cross sectional studies ( $N = 482$ )
  - Correlations varying between .64 and .12
  - Principal component analyses indicate **shared and unique variance**
  - (Friborg, Barlaug, Martinussen, Rosenvinge & Hjemdal, 2005)
- **Pain and RSA** in an experimental study ( $N = 80$ )
  - **Higher scores on RSA** predicted **lower** levels of subjective report of **stress** and **pain** (only in the high stress condition)
  - (Friborg, Hjemdal, Rosenvinge, Martinussen, Aslaksen & Flaten, 2006)

## Predicting health

- **Prospective** study of students ( $N = 159$ )
  - Tracked the occurrence of **stressful life events** over a **3 month** period in a **healthy** sample with scores below cut-off scores on psychiatric symptoms
  - Results: Students that reported **higher RSA scores** on 2) **Planned future** and 3) **Social competence** and **encountered stressful life events** developed **fewer depressive** and **anxious symptoms**, than lower scores.
    - (Hjemdal, Friborg, Stiles, Rosenvinge & Martinussen, 2006)
- **Predicting hopelessness** ( $N = 666$ )
  - (Hjemdal, Friborg, Stiles, submitted)

## Resilience, vulnerability and symptoms all the same?

- Resilience **just counterpart** of vulnerability and psychopathology? ( $N = 1581$ )
  - Joint principal components analyses of items from **RSA**, **HADS** (Hopkins Anxiety and Depression Scale), **HINT** (Habitual Index of Negative Thinking)
  - Results shared **common** variance but also **unique contribution**, thus more than counterpart to vulnerability and psychopathology
    - (Friborg, Hjemdal, Martinussen, & Rosenvinge, 2009)

## The RSA cross-culturally

- Confirmatory factor analyses:
- Belgium – ( $N = 385$ )
  - Absolute fit Chi-square = 900.18,  $p < .001$  relative fit **RMSEA = .047**, **HSCL-25  $r = -.43$** , **SOC-13  $r = .61$** 
    - (Hjemdal, Friborg, Braun, Kempnaers, Linkowski & Fossion, conditionally accepted)
- Brazil ( $N = 221$ )
  - Absolute fit Chi-square = 929.27,  $p < .001$  Relative fit **RMSEA = .065**, **HSCL-25  $r = -.38$** , **SOC-29  $r = .71$** 
    - (Hjemdal, Roazzi, Dias, & Vikan, 2009)
- Persian ( $N = 373$ )
  - Absolute fit Chi-square = 735,  $p < 0.01$ , Relative fit **RMSEA = 0.037**; **Differentiates** between **runaway girls** and a **control sample**
    - (Jowkar, Friborg, & Hjemdal, 2010)

## Resilience scale for Adolescents (READ) the development

- Confirmatory factor analysis supported a 5 factors, 28 items
- N = 425 adolescents (13-16 year of age)

1. Personal competence	(8 items) ( $\alpha = .85$ )
2. Social competence	(5 items) ( $\alpha = .82$ )
3. Structured style	(4 items) ( $\alpha = .69$ )
4. Family cohesion	(6 items) ( $\alpha = .85$ )
5. Social resources	(5 items) ( $\alpha = .78$ )

( $\alpha = .94$ , total READ)

(Hjemdal, Friborg, Stiles, Martinussen, & Rosenvinge, 2006)

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## READ related to mental health

- Correlational designs
  - Higher scores on READ total score and all factor scores **predict** lower levels of **depressive** symptoms (N = 387)
    - Even when controlling for age, gender, negative life events, bullying and social anxiety symptoms
      - (Hjemdal, Aune, Reinfjell, Stiles, Friborg, 2007)
  - Significant **positive associations** with other **social indicators** (parental care, close relationships, general health) **negative association** with indicators of **mental health problems** (anxiety, depression, self-harm, suicide ideation, parasuicid, violent behavior, alcohol/drug use) (N = 6724)
    - (von Soest, Mossing, Stefansen, Hjemdal, 2010)

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## Resilience for adolescents and adults

- **Adolescents**
  - 28 items
    1. Personal competence
    2. **Social competence**
    3. **Structured style**
    4. **Family cohesion**
    5. **Social resources**
- **Adults**
  - 33 items
    1. Perception of self
    2. Planned future
    3. **Social competence**
    4. **Structured style**
    5. **Family cohesion**
    6. **Social resources**

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## Ongoing research projects

- **Adults (RSA)**
  - Exploration of the RSA in several clinical treatment projects, e.g. Randomized Controlled Trials
  - Prospective exploration of stress, resilience and cognitive vulnerability (N = 1724)
  - Diverse cross-cultural validations
- **Adolescents (Resilience Scale for Adolescents: READ)**
  - Prospective study of psychiatric disorders and READ (N = 1500)
  - Diverse cross-cultural validations

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## Thank you for your time



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