BPD and Resilience

Peter Fonagy, Programme Director, UCLPartners

7th September 2015
Transdiagnostic structure of mental disorder
Life-course structure to psychopathology
Need for longitudinal research designs

• Extant research on structure of psychopathology focuses on individuals who report symptoms within a specified period
  • Biggest puzzle is why people change clinical presentations over time (adolescent conduct problem adult depression)

• Mixing single-episode, one-off cases with recurrent and chronic cases which differ in:
  • extent of their comorbid conditions
  • the severity of their conditions
  • etiology of their conditions.

• Some individuals more prone to persistent psychopathology.
Problems with psychopathology research from developmental standpoint (Caspi et al., 2013)

- Possibility of one General Psychopathology factor
  - disorders are positively correlated not just at the disorder level but substantially so at the spectrum level
    - Externalizing and Internalizing spectra: ~.5
    - Internalizing and Thought Disorder: ~.6

- Propensities to specific forms of psychopathology (e.g., Internalizing vs. Externalizing) and propensity to develop any and all forms of common psychopathologies
The $p$ factor in adolescent psychopathology

N= 2,230 Dutch adolescents

Wave 1
Age: 10.5 years (0.58)
Self-Report:
- YSR
- RCADS
Parent-report
- CBCL

Wave 2
Age: 13.6 (0.59)
Self-Report:
- YSR
- RCADS
Parent-report
- CBCL

Wave 3
Age: 16.1 (0.59)
Self-Report:
- YSR
- RCADS
- CAPE
Parent-report
- CBCL

Wave 4
Age: 19.1 (0.60)
Self-Report:
- ASR

Laceulle et al., 2015
The $p$ factor in adolescent psychopathology

Model A: Three-correlated factor

N= 2,230 Dutch adolescents

Inadequate model fit

$\chi^2_{(723)} = 5148.82$

CFI = .890

TLI = .875

RMSEA = .052

90% CI = .051-.054
The *p* factor in adolescent psychopathology

Model B': Revised bi-factor model

Laceulle et al., 2015

- N = 2,230 Dutch adolescents

Best model fit

\[ \chi^2(716) = 4665.65 \]

- CFI = .902
- TLI = .887
- RMSEA = .050
- 90% CI = .048-.051

Laceulle et al., 2015
The $p$ factor in adolescent psychopathology

N= 2,230 Dutch adolescents

<table>
<thead>
<tr>
<th>Statistics, Loadings, and Correlations</th>
<th>Model A</th>
<th>Model B'</th>
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<tbody>
<tr>
<td></td>
<td>INT</td>
<td>EXT</td>
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<tr>
<td>Standardized factor loadings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxious-depressed</td>
<td>0.932</td>
<td></td>
</tr>
<tr>
<td>Withdrawn-depressed</td>
<td>0.711</td>
<td></td>
</tr>
<tr>
<td>GAD</td>
<td>0.900</td>
<td></td>
</tr>
<tr>
<td>Social anxiety</td>
<td>0.880</td>
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<td>Separation anxiety</td>
<td>0.844</td>
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<td>Panic disorder</td>
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<tr>
<td>Delinquency</td>
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<tr>
<td>Aggression</td>
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<tr>
<td>Attention problems</td>
<td>0.783</td>
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<tr>
<td>Factor correlations</td>
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<tr>
<td>Internalizing</td>
<td>0.440</td>
<td></td>
</tr>
<tr>
<td>Externalizing</td>
<td></td>
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</tbody>
</table>

Laceulle et al., 2015
A general psychopathology factor in early adolescence

Praveetha Patalay, Peter Fonagy, Jessica Deighton, Jay Belsky, Panos Vostanis and Miranda Wolpert

Background
Recently, a general psychopathology dimension reflecting common aspects among disorders has been identified in adults. This has not yet been considered in children and adolescents, where the focus has been on externalising and internalising dimensions.

Aims
Examine the existence, correlates and predictive value of a general psychopathology dimension in young people.

Method
Alternative factor models were estimated using self-reports of symptoms in a large community-based sample aged 11–13.5 years (N=23,477), and resulting dimensions were assessed in terms of associations with external correlates and future functioning.

Results
Both a traditional two-factor model and a bi-factor model with a general psychopathology bi-factor fitted the data well. The general psychopathology bi-factor best predicted future psychopathology and academic attainment. Associations with correlates and factor loadings are discussed.

Conclusions
A general psychopathology factor, which is equal across genders, can be identified in young people. Its associations with correlates and future functioning indicate that investigating this factor can increase our understanding of the aetiology, risk and correlates of psychopathology.

Declaration of interest
None.
Bi-factor model with the item-loadings

Community-based sample aged 11-14 years (N= 23, 477)

Patalay, Fonagy, Deighton, Belsky, Vostanis and Wolpert (submitted)
## Correlation between factor scores and predictors

<table>
<thead>
<tr>
<th>Predictor</th>
<th>2-factor model (Model 1)</th>
<th>Bi-factor model (Model 2)</th>
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<tbody>
<tr>
<td></td>
<td>Internalising</td>
<td>Externalising</td>
</tr>
<tr>
<td>Gender (Female)</td>
<td>.13**</td>
<td>-.21**</td>
</tr>
<tr>
<td>Free School Meals</td>
<td>.04**</td>
<td>.14**</td>
</tr>
<tr>
<td>Income Deprivation</td>
<td>.02*</td>
<td>.14**</td>
</tr>
<tr>
<td>Special Education Needs</td>
<td>.10**</td>
<td>.14**</td>
</tr>
<tr>
<td>School Attainment</td>
<td>-.1**</td>
<td>-.2**</td>
</tr>
</tbody>
</table>
## Logistic regression predicting future caseness

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>Wald Chi-square</th>
<th>Odds-ratio</th>
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<tbody>
<tr>
<td><strong>2-factor model</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Internalising</td>
<td>.49***</td>
<td>76.4</td>
<td>1.80</td>
</tr>
<tr>
<td>Externalising</td>
<td>1.41***</td>
<td>689.64</td>
<td>4.11</td>
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<tr>
<td><strong>Bi-factor model</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internalising</td>
<td>.22</td>
<td>4.43</td>
<td>1.25</td>
</tr>
<tr>
<td>Externalising</td>
<td>1.43***</td>
<td>413.74</td>
<td>4.16</td>
</tr>
<tr>
<td>P-Factor</td>
<td>2.33***</td>
<td>479.01</td>
<td>10.30</td>
</tr>
</tbody>
</table>
The ‘P’ Factor (Caspi et al., 2013)

- Ungendered chronic Psychotic conditions
- Partially gendered Personality disorder
- Gendered ‘Neurotic’ conditions

Gendered Style: Male to Female

Impairment

Externalizing

Internalizing
The scalar model did not result in a significantly worse fit than the configural model: robust $\chi^2_{\text{diff}}(6, N = 434) = 12.51, p > .05, \text{CFI} = .95, \text{TLI} = .93, \text{RMSEA} = .05$ (90% CI: .03-.07).
The p factor in personality pathology

Sharp et al., 2015 *Journal of Abnormal Psychology*

Current diagnostic classifications treat disorders as discrete entities, only to find that comorbidity is the rule
- Personality disorders have a typical comorbidity of 50% or more

It suggests the presence of a common latent dimension

General Criteria for Personality Disorders: DSM-IV

**Criterion A:** Moderate or greater impairment in personality (self/other) pathology
P factor in PDs: the DSM factor structure

Sharp et al., 2015 *Journal of abnormal psychology*

UNACCEPTABLE MODEL FIT

Comparative Fit Index (CFI) < 95
Tucker-Lewis Index (TLI) < 95
P factor in PDs: the DSM factor structure

N=966 inpatients

<table>
<thead>
<tr>
<th></th>
<th>BPD</th>
<th>AVPD</th>
<th>OCPD</th>
<th>SZTPD</th>
<th>NPD</th>
<th>ASPD</th>
</tr>
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<tbody>
<tr>
<td>BPD</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
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<tr>
<td>NPD</td>
<td>.47</td>
<td>.18</td>
<td>.55</td>
<td>.01</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>ASPD</td>
<td>.55</td>
<td>.31</td>
<td>.04</td>
<td>.16</td>
<td>.56</td>
<td>-</td>
</tr>
</tbody>
</table>

In spite of internal coherence at a criterion level, DSM personality disorders, within individuals, are not neatly separable. They are not discrete phenomena.

Sharp et al., 2015 *Journal of abnormal psychology*
P factor in PDS: does EFA replicate the DSM factor structure?

Excellent model fit:

\( \chi^2 \) (897) = 1110.58, \( p < .001 \)
RMSEA = .02 [ .01, .02 ], \( p = 1 \)
CFI = .97
TLI = .97

N=966 inpatients

1. Avoids abandonment
   - Interpersonal Instability
   - Identity disturbance
   - Self-harming impulsivity
   - Suicidality
   - Affective instability
   - Emptiness
   - Intense anger
   - Transient dissociation

2. Avoids social work
   - Must be liked
   - Restraint in intimacy
   - Preoccupied with rejection
   - Socially inhibited
   - Views of self as inept
   - No risks or new activities

3. Orderly
   - Perfectionistic
   - Workaholic
   - Moral inflexibility
   - Hoarding
   - Reluctance to delegate
   - Miserly
   - Rigidity

4. Ideas of reference
   - Odd beliefs
   - Odd perceptions
   - Odd thinking/speech
   - Suspicious
   - Constricted affect
   - Odd behaviour/appearance
   - Lacks close friends
   - Social anxiety

5. Grandiose
   - Preoccupied with fantasies
   - Believes s/he is special
   - Needs admiration
   - Entitlement
   - Exploitative
   - Lacks empathy
   - Envious
   - Arrogant

6. Failure to conform
   - Deceitfulness
   - Impulsivity
   - Irritable, aggressive
   - Disregard for safety
   - Irresponsible
   - Lacks remorse

Sharp et al., 2015 Journal of abnormal psychology
Excellent model fit: 

\[ \chi^2_{(897)} = 1030.09, \; p < .001 \]

RMSEA = .02 [.01, .02], \; p = 1

CFI = .98

TLI = .97

Average load = .81

78% of criteria

Marking the specific factor

Average load = .68

Average load = .47

Average load = .28

Average load = .31

Average load = .27

Average load = .53

Only factor loadings >|30| are shown

Sharp et al., 2015 *Journal of abnormal psychology*
Identification of a Common Neurobiological Substrate for Mental Illness (Goodkind et al. 2015, JAMA Psychiatry)
Shared Patterns of Decreased Gray Matter From the Voxel-Based Morphometry Meta-analysis (Goodkind et al. 2015, JAMA Psychiatry)
Extracted per-Voxel Probabilities of Decreased Gray Matter in the Voxel-Based Morphometry Meta-analysis, Separated by Individual Diagnosis and Common Gray Matter Loss Region (Left and Right Anterior Insula)
Common Gray Matter Loss Regions From the Voxel-Based Morphometry Meta-analysis Are Part of An Interconnected Brain Network
Relationship Between Gray Matter Volume in the Common Gray Matter Loss Regions and Performance on a Computerized Battery of Behavioral Cognitive Tests
The Paradigm Shift to Resilience
From disease- to health-oriented research: A paradigm shift
Formerly: Investigating the mechanisms that lead to stress-related illness
Now: Investigating the mechanisms that protect against illness
Basic assumption of resilience research:
Resilience is not simply due to an absence of disease processes but reflects the work of active adaptation mechanisms with a biological basis
(Kalisch et al)
Active refers to any resource demanding process and may apply to cognitive as well as behavioral processes (Kalisch et al)
The 8- Item Grit Scale

1. New ideas and projects sometimes distract me from previous ones.*
2. Setbacks (delays and obstacles) don’t discourage me. I bounce back from disappointments faster than most people.
3. I have been obsessed with a certain idea or project for a short time but later lost interest.*
4. I am a hard worker.
5. I often set a goal but later choose to pursue (follow) a different one. *
6. I have difficulty maintaining (keeping) my focus on projects that take more than a few months to complete. *
7. I finish whatever I begin.
8. I am diligent (hard working and careful)


Duckw
What does GRIT Predict?

- **Lifetime educational attainment** (Duckworth et al., 2007).
- **Teacher effectiveness** (Duckworth, Quinn, Seligman, 2009; Robertson-Kraft & Duckworth, 2012)
- **Academic performance** at elite universities (Duckworth et al., 2007)
- Final rank in the **National Spelling Bee** (Duckworth, Kirby, Tsukayama, Berstein & Ericsson, 2011; Duckworth et al., 2007)
- West Point cadets one standard deviation higher in grit have 62% higher odds of **remaining at West Point** long-term (more strongly than SAT score, high school rank, or self-control (Duckworth et al., 2007)
- **Retention in Army Special Operations Forces** (ARSOF) selection course, sales employees keeping their jobs, graduate from high school, and to stay married. (Eskreis-Winkler et al., 2014).
The confusion that is the current literature on resilience

“Differential sensitivity”

**Gender socialization**
- Protects against negative consequences of sexual abuse and parental violence

**5-HTTLPR**
- Short allele + high adversity: Increased risk for depression and PTSD
- Short allele + low adversity: Decreased risk for PTSD

**Parenting style**
- Protects from negative effects of bullying

**Racial socialisation**
- Positive outcomes in school, overall wellbeing, less depression, higher self-concept

**Emotion regulation**
- Predicts resilience to maltreatment and other adversities

**FKBP5**
- Interacts with childhood abuse in risk for depression and PTSD

**Neighbourhood advantage**
- Community cohesion: Lower risk for PTSD

**Family resources**
- Protective against ACEs

**Attachment security**
- Positive mood in face of threat and social exclusion, lower risk of PTSD

**CRHR1**
- Interacts with childhood abuse: risk of depression

**Psychological flexibility**
- Better mental health, QoL, interpersonal functioning

**Peer influence**
- Protective against risk-promoting environments

**Involvement in community and extracurricular activities**
- Impact on biological stress response system, better overall adjustment

**Self-regulation**
- Predicts resilience
US spending on science, space, and technology correlates with Suicides by hanging, strangulation and suffocation

Correlation: 0.992082
Resilience has been conceptualised variously as a…
Resilience has been conceptualised variously as a...
A Simplified Conceptual Framework for Resilience
The ability of a system to resist dynamically a perturbation or adverse condition that challenges the integrity of its normal operation and to preserve function as a result in reference to some initial design or normative functional standards.
Bringing order to the conceptual chaos

Factors
eg social support
social status
personality
life history
coping style
genetic background
brain function
May overlap conceptually and/or interact statistically

Mediating mechanisms
psychological or biological

Outcome
RESILIENCE
The role of systemic factors

Factors

Systemic factors
- Quality of family, school, or community
- Social support
- Social status
- Personality
- Life history
- Coping style
- Genetic background
- Brain function

Individual factors
- Social support
- Social status
- Personality
- Life history
- Coping style
- Genetic background
- Brain function

Mediating mechanisms
- Psychological or biological

Outcome
- Resilience
Five types of capital in the social and physical ecology (Ungar, 2015)

- Social capital: Relationships with caregivers, feelings of trust, cultural embeddedness
- Human capital: Ability to learn, play and work
- Natural capital: Land, water, biological diversity
- Built capital: Safe streets, public transport, recreational facilities, housing, schools
- Financial/institutional capital: Social welfare programs, healthcare, support for SEN, mentoring programs

Individual resilience

Social capital

Human capital

Natural capital

Built capital

Financial/institutional capital

Relationships with caregivers, feelings of trust, cultural embeddedness
Diagnostic criteria for resilience (Ungar 2015)

1. Presence and experience of adversity
2. Individual and contextual dimensions of resilience
3. Temporal and cultural influences
1. Presence and experience of adversity

- Risk factors are cumulative: risk of poor outcomes increases in direct proportion to quantity of risk factors to which a child is exposed.

- Five dimensions:
  - Severity
  - Chronicity
  - Ecological complexity (involving multiple ecological levels)
  - Attributions of causality (internal locus of control/self-efficacy)
  - Cultural and contextual relevance of factors that influence children’s experience of their exposure to risk
Cultural and contextual relevance: Western Aboriginal Child Health Survey (n=5,289)

- 3 factors predicted resilience:
  1. As expected, prosocial peer group increased resilience **BUT**
  2. Higher SES **decreased** resilience
  3. Children with more knowledge of their culture were **less resilient**

- **90%** of Aboriginal peoples live in **lower SES neighbourhoods**: high SES may **separate** a child from **social supports**/expose them to prejudice

- Knowledge of one’s culture in this context may **heighten sensitivity to oppression → depression and delinquency**
Development as an ecological process

Bronfrenbrenner, 1979
ADAPTATION = adaptation to a particular social context

Epistemic hypervigilance

Epistemic trust
2. Individual and contextual dimensions of resilience

- Individual factors
- Contextual factors

Less severe/chronic risk exposure
2. Individual and contextual dimensions of resilience

- More severe/chronic risk exposure
- Individual factors
- Contextual factors

Contextual factors:
- More severe/chronic risk exposure

Individual factors:
- Contextual factors
Resilience and depression in middle school students from European countries

- Kassis, Artz, Scambor et al 2013
- 30% of sample (n=5,149) reported exposure to family violence
- **Emotional self-control**, talking with parents about violence and attitudes towards violence that suppress aggression only *correlated* with better outcomes at medium and low levels of exposure to violence
- At higher levels of exposure aspects of the environment *predicted outcomes* (eg amount of violence that had been experienced)
Ego-overcontrol may serve a protective function for maltreated children (Cicchetti, Rogosch, et al 1993, 1997)

- Investigated evidence for competence in 205 school-aged maltreated & nonmaltreated children summer camp
- In maltreated: Ego-resiliency, ego-overcontrol and positive self-esteem predicts adaptive functioning
- For nonmaltreated children: Only ego-resiliency and positive self-esteem but also mother’s emotional availability and positive relationships with camp counselors predict adaptive functioning ➔ relationship factors in non-maltreated

- Self-system processes and personality for successful adaptation in maltreating home environments ➔ better able to avoid being targets of maltreatment
- Relationship factors more critical to resilient outcomes in nonmaltreated children
3. Temporal and cultural dimensions

- Child’s stage of physical and cognitive development: a temper tantrum in a four-year-old may win adult attention but a violent outburst from a 14-year-old puts the child at risk for incarceration.

- Sociohistorical context: period during which a child lives influences their opportunities to access resources and the social construction of their behaviors as either problems or solutions.

- Context and culture influence resilience by shaping the child’s access to different types of capital.
The Measurement of Resilience
Kalish et al., 2014

\[ R_{T2} = 1 / (\Delta \Sigma P / \Sigma S) = \Sigma S / \Delta \Sigma P \]
The Mechanisms of Resilience
Basic assumptions for understanding the mechanism for resilience

- **The mind** is a functional **unit** supported by the **brain**

- Over its lifetime, the **mind** struggles with and **resists insults** arising from its neural, psychological, and social environments.

- **The resilient outcomes to brain destruction embedded at the core of cognition**
  - higher-order cognition itself, for example, self-awareness, in enabling and driving cognitive resilience and functional renormalization
  - the very **function of consciousness** is a form of **fundamental algorithm for resilience** selected by evolution.

- **The mind** is designed to be ‘**resilient’ to assaults** on its structure

- **Mental disorder** entails genetically or environmentally caused **disturbance of brain structure** ➔ **resilient outcome** is the extent to which **normal brain function** is possible despite **suboptimal available structure**
Basic assumptions about the mechanism of resilience: analogy to brain damage

- Resilience mechanism is a neurobiological process – human resilience mirrors the principles of the functioning of the human brain.

- While factors predicting resilience are both contextual/systemic and individual, their impact is mediated by the of the individual human brain (relationship of structure and function).

- The effect of stress is therefore by definition biologic with potential to disable the adequate functioning of human cognition (to cover human information processing) through impact on the functioning of the brain.

- There is a close analogy between how the human brain ‘copes’ with loss of brain structure and how we can best approximate the brain mechanisms underpinning the generation of resilient outcomes.

- But we can no more read this off brain activity than we could infer the nature of the ‘operating system’ by measuring the temperature of the CPU at key locations.
The type, quality and extent of emotional reactions (including stress reactions) are **not** determined by simple fixed stimulus-response relationships…

The process underlying **resilience** is driven by **top-down cognition**.
Appraisal (higher order cognition) theory

Stimulus

Mental representation

Higher order cognition

Emotional response

…but by context-dependent evaluation of motivational relevance
• Brains can **preserve** core aspects of the functional architecture of **information processing** that sustains higher order cognition **in spite** of substantial **structural damage** (Rudrauf, 2014, *Advances in Neuroscience*).

• Full **AD** diagnosed postmortem in **25%-67%** of elderly with **no** prior cognitive **impairment** (Dubois et al., 2012).

• “Higher-order cognition” **unites** in a functionally integrated **subjective frame**
  • **executive** functions
  • **attention,**
  • **self-awareness**
The HOC (positive appraisal) theory of resilience

Factors

\( F_1 \)
\( F_2 \)
\( F_3 \)
\( F_4 \)
\( F_5 \)
\( F_6 \)
\( F_7 \)
\( F_8 \)

Mechanism

\( M_1 \)

1. Positive appraisal style
2. Positive reappraisal
3. Interference inhibition

Outcome

Resilience

Kalish et al, 2014
The HOC (positive appraisal) theory of resilience

Process Class 1 (PC₁)

stress responses are prevented by a process of classifying the situation positively based on its similarity with positively valued prior experiences or cultural stereotypes

- Mildly aversive situations
  - Do not necessarily or automatically generate stress response
- Dominant role of memory content
- Undemanding neuro-cognitive processes

M₁

Resilience

Prefrontal cortex
Dorsomedial deactivation
Ventromedial activation

Amygdala: deactivation

Kalish et al, 2014
The nature of higher cognitive processes in the human brain (Rudrauf, 2014)

- Overall **cognitive framework**, as a condition for **autonomy** and **adaptation** to demands (Paradiso & Rudrauf, 2012)

- Two **components** (Memoudi et al., 2013, *PLoS ONE*)
  - The real-time **multisensory computation** and rendering in posterior cortices of a specific type of projective spaces (Wilford et al., 2012), which frames our **three-dimensional experience** of the **world** and **self**, in perception and **imagination**, and more generally in spatial cognition.
  - Ongoing **computation of inferences** in front temporal cortices on the **physical** and **social causes** of sense data, based on internal **models of the world** and self, and heavily **relying** on **language** and symbolic logic

- Components of HOC are **functionally coupled**, just like thought and **perception** or emotion and action in philosophy.
The nature of higher order cognitive processes in resilience

- **Becoming self-aware** of deficit, is **basic principle for reorganization**.
  - **aware of malfunctioning** to be able to willfully **correct** malfunction
  - **self-awareness**, plays a key role in **enabling** and driving **cognitive resilience** itself
  - **metacognition** of internal states is **central to mechanism**

- Brings forth neuropsychological variables such as general **intelligence**, degree of **literacy**, **educational attainment**, **occupational complexity**, **interpersonal skills**, integration in **social networks**, **personality** variables, and **leisure** activity
  - **Enabling conditions** and **motivating factors for** engaging in a **process**
The central role of social cognition in the mechanism of resilience

- Role of **social cognition** and **support** in higher order cognitive processes
  - social environment of clinicians, friends, and family, providing social feedback signals which are sources of normative models of cognition and behaviour to define cognitive and behavioral references or standards

- A hierarchy of top-down processes contributes to controlling resilience and renormalization of effective connectivity in a robust manner,
  - from higher-order self awareness and perceptual gestalt synthesis
  - to basic operant learning.
Lack of resilience in PD: Interpretative and regulatory role of explicit mentalizing

- Mentalizing has **interpretive role** and allows us to **explain** and **predict behavior** → **a social regulative** role (McGeer, 2007).

- **Behavior** can be **produced by rational interactions** among **beliefs** and **desires**
  - Therefore to make our behavior **socially meaningful** (predictable) our **behavior** can and **should obey** these **same conventions**

- E.G. when adults believe that **deterministic neurological** processes, rather than mental states, **control behavior** (discouraged from believing in free will)
  - there is a **weakening of neural signals associated** with action **planning** (Rigoni et al., 2011),
  - and they exhibit **more antisocial cheating** and **aggression** (Baumeister et al., 2009)
Lack of resilience in BPD: Interpretative and regulatory role of explicit mentalizing

- Individuals with BPD have **limited capacity** to exercise this regulative role of mentalizing and the **appraisal processes** needed to **reduce stress** of any experience are **not there**

- Ample **evidence** of **limitations of appraisal** in BPD

- These are **shared with ‘neurotic’** conditions (e.g. depression, anxiety)

- **In BPD** poor appraisal may be **more severe** than in MDD or GAD but no evidence for this.

- It is likely that **lack of appropriate appraisal** is the distinction between typical (‘normal’) and **syndromal** (‘neurotic’) condition and is associated with relatively low ‘P’ score although possibly very high scores at the spectral level of a bi-factor model.
Positive appraisal style theory of resilience (PASTOR)

1. Positive appraisal
2. Positive reappraisal
3. Interference inhibition

Resilience

Process Class 2 (PC2)

Reappraisal attenuate ongoing stress responses by appropriately adjusting negative and/or generating complementary positive appraisals.

- Strongly aversive situations
  - The stress response is essentially unavoidable
  - Situation automatically classified as negative
- Implies changes in the meaning of the stimuli
- Cognitive reappraisal in terms of intentional mental states
- Crucially depends on social information
- New perspective learnt in social context

Kalish et al., 2014
Lack of resilience in BPD: Failure of reappraisal of negative experience

- BPD partially **closed to acquiring social information to support** process of **reappraisal** (epistemic mistrust)

- Mentalizing model for trauma has **reappraisal of physical and psychological experience** at its core (Allen, 2013)

- Trauma focused CBT and other **exposure based therapies** (e.g. EMDR) enhance **mentalizing of trauma**

- Patients with **BPD** have **specific deficit in reappraisal proper**
  - Cannot generate positive reappraisals
  - Cannot **mitigate** (adjust) negative appraisals

- Links to Gunderson and Lyons-Ruth’s **interpersonal hypersensitivity** model except that hypersensitivity is **consequence** of failure of reappraisal following **stressful interaction**
The HOC (positive appraisal) theory of resilience

Process Class 3(\(PC_3\))

Implies the inhibition of conflictive negative appraisals and interfering *emotional reactions* to information processing

- **Strongly aversive** situations
  - Situation automatically classified as negative
  - **Inhibition allows** for reappraisal to consolidate
- Not sufficient for reappraisal. Protects the acquisition of new appraisals
- Might be a **trait-like capacity** that remains malleable

- Ventromedial prefrontal cortex: activation of efferents towards...
- Amygdalar interneurons: deactivation

Kalish et al, 2014
Lack of resilience in BPD: Failure of inhibition of negative appraisals and emotional reactions

- BPD limited in capacity for the inhibition of conflictive negative appraisals and interfering emotional reactions to information processing.

- Cannot inhibit re-traumatizing triggers leaving them vulnerable to the threat-associated sensations that might be experienced when remembering a traumatic event and which serve to reinforce the sense of threat.

- Consistent with Marsha Linehan’s emphasis on emotion dysregulation as the basic problem in BPD.

- Links to impairment of habituation notion that Antonia New, Koenigsber and others (2014) identified and which may have genetic basis (Goodman et al., 2014).

- This description of the subjective outcome: concept of the alien self—the looming of unmanageable anxiety incapable of reappraisal.
Lack of resilience in BPD: Failure of inhibition of negative appraisals and emotional reactions

- This shift in perspective involves a recognition of the **significance of the capacity for inhibition** in the treatment of BPD.
- Individuals who are really poor at mentalizing require **more than cognitive interventions (talking)**, but interventions that relate to the **body** more directly.
- We have always had a view that **mentalizing was embodied** but we haven’t treated this fact with enough **seriousness**.
- The role of **physical activity** in strengthening the capacity for **inhibition** at the same time as helping to **restore mentalizing** (e.g. if you have an adolescent you can’t communicate with, go running with them, and discuss what the running was like).
‘P’ Factor

Resilience
‘P’ Factor

Resilience

Normal/neurotic
‘P’ Factor

Resilience

BPD
Can we draw these constructs into a unifying conceptualisation?
‘P’ Factor  Resilience

Can we draw these constructs into a unifying conceptualisation?
The current bio-psycho-social MZ model of BPD

- The ‘P’ factor of general vulnerability to psychopathology is actually an indication of the *absence of resilience* (the psychological equivalent of an immune system response, Higgitt & Fonagy, 1992)

- While patients with ‘neurotic’ problems (regardless of severity) have high resilience (unlikely to be effected by subsequent stressors) those with BPD have low resilience and likely to succumb to psychosocial stress

- ‘P’ and ‘R’ are inversely related because they are identical at the level of mechanisms
  - Low ‘R’ reflects an adaptation consequent on serial communication problems in development combined with genetic vulnerability characterized by epistemic hypervigilance which prevents or undermines a reappraisal process and results in apparent rigidity (imperviousness to social influence)
  - The failure to engage in meaningful reappraisal creates a general vulnerability to psychosocial stress (low ‘R’) which yields to the high prediction of future psychopathology from ‘P’
  - Increasing mentalizing increases epistemic trust which in turn generates resilience through improved capacity for appraising and re-appraising stressful events
Epistemic hypervigilance

Epistemic trust

High ‘P’ factor/absence of expected resilience

Resilience/low ‘P’ factor
Thank you for bearing with my indecisions!

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