The relevance of epidemiology to the field of personality Disorder

Paul Moran
Reader in Psychiatry
University of Bristol
Plan for talk

- My journey into psychiatry... and the field of personality disorders
- The importance of epidemiology
- 3 recent themes on the impact of personality disorders
  - on general health and life expectancy
  - on future mental health
  - on psychological treatment
- What this all means for service users, clinicians and policymakers
My journey into psychiatry
Three London hospitals:
So why personality disorders?

‘I feel that they are the least understood of all psychiatric patients... unlike other patients there is no specific provision made by society for handling them adequately or dealing logically with the problems they create.’

Hervey Cleckley, 1941
Peoples’ stories

• Poor quality of life
  “My life’s been shit”
  man, 40s

• Isolation
  “I’ve always been a very lonely person... no family, no friends.”
  man, 30s

• Emotional distress
  “I feel things very, very much. I’ve continuous experience of ghastly emotional pain...”
  woman, 40s

• Relationship problems
  “I can see my effect on people I know... I annoy people, frustrate people, upset people.”
  woman, 40s
Public Health

“The science and art of preventing disease, prolonging life and promoting health through the organised efforts of society”.

Sir Donald Acheson
Chief Medical Officer, 1988
The study of populations (as opposed to individuals)

*The distribution of diseases in a population and the factors influencing that distribution*

Abraham Lilienfeld, 1957
The importance of epidemiology

- Determination of prevalence
- Determination of needs
- Determination of co-morbidity
- Determination of aetiology
- Determination of effective treatments
Guides clinical decision making
Provides reassurance that someone's problems are not inexplicable and that they are not alone
Helps communicate information
Can help to mobilise resources...!
Our **major** challenge:

The need to settle on a term which
- is scientifically robust
- is least stigmatising
- does not obfuscate (‘complex’, ‘challenging’ etc)
- helps us to develop and test new treatments
- helps mobilise resources to help people
Defining ‘personality’ in a busy clinical setting...
Standardised Assessment of Personality – Abbreviated Scale (SAPAS): preliminary validation of a brief screen for personality disorder

PAUL MORAN, MORVEN LEESE, TENNYSON LEE, PAUL WALTERS, GRAHAM THORNicroft and ANTHONY MANN

Background There is a need for a brief and simple screen for personality disorders that can be used in routine psychiatric assessments.

Aims To test the concurrent validity and test–retest reliability of a brief screen for personality disorder.

Method Sixty psychiatric patients were administered a brief screening interview for personality disorder. On the same day, they were interviewed with an established assessment for DSM–IV personality disorder. Three weeks later, the brief screening interview was repeated in order to examine test–retest reliability.

Results A score of 3 on the screening interview correctly identified the presence of DSM–IV personality disorder in 90% of participants. The sensitivity and specificity were 0.94 and 0.85 respectively.

Conclusions The study provides preliminary evidence of the usefulness of

Method

Personality disorder can significantly affect the management and outcome of associated mental illness (Patience et al, 1995; Yonkers et al, 2000). An assessment of personality status should therefore ideally form part of the routine assessments conducted by psychiatric teams (Moran et al, 2003; Tyrer & Simmons, 2003). However, too often the assessment of personality disorder remains one of clinical judgement. Unfortunately, clinical diagnoses are unreliable (Mellsop et al, 1982), and although reliability can be improved by the use of standardised assessments, these assessments are lengthy and require training. Self-report questionnaires are useful research tools, but they can be tiring for patients because they require the ability to concentrate on written questions. A brief structured interview with the patient would overcome some of these problems provided it could be easily incorporated into a standard psychiatric interview. This paper reports on the preliminary validation of a brief structured interview for personality disorders that is feasible for use in routine clinical assessment.

Measures

Screening questionnaire

The screening questionnaire consisted of eight dichotomously rated items taken from the opening section of an informant-based interview, the Standardised Assessment of Personality (SAP) (Mann et al, 1981; Pilgrim & Mann, 1990; Pilgrim et al, 1993). The SAP allows an ICD–10 or DSM–IV diagnosis of personality disorder to be made (World Health Organization, 1992; American Psychiatric Association, 1994). Each of the eight questions from the opening section of the SAP corresponds to a descriptive statement about the person and can be scored 0 or 1 (see Appendix). The scores on the eight items can be added together to produce a total score between 0 and 8.

An exploratory analysis of the SAP ratings of a sample of 303 primary care attenders (Moran et al, 2001; Rendu et al, 2002) showed that the total score on these eight official probe items satisfactorily predicted the final SAP diagnosis of personality disorder obtained after more detailed questioning of the informant: area under the curve (AUC)=0.79, 95% CI 0.74–0.84. The performance of these eight items suggested that they might also act as a patient-based screen for a diagnosis of...
Sensitivity, specificity and power to predict PD at different cut-off scores of the SAPAS.

<table>
<thead>
<tr>
<th>Cut off score</th>
<th>Sensitivity</th>
<th>Specificity</th>
<th>PPV</th>
<th>NPV</th>
<th>% correctly classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>2+</td>
<td>0.97</td>
<td>0.44</td>
<td>0.68</td>
<td>0.92</td>
<td>73</td>
</tr>
<tr>
<td>3+</td>
<td>0.94</td>
<td>0.85</td>
<td>0.89</td>
<td>0.92</td>
<td>90</td>
</tr>
<tr>
<td>4+</td>
<td>0.82</td>
<td>0.89</td>
<td>0.90</td>
<td>0.80</td>
<td>85</td>
</tr>
<tr>
<td>5+</td>
<td>0.58</td>
<td>1.0</td>
<td>1.0</td>
<td>0.66</td>
<td>77</td>
</tr>
</tbody>
</table>
Sensitivity, specificity and power to predict PD at different cut-off scores of the SAPAS.

<table>
<thead>
<tr>
<th>Cut off score</th>
<th>Sensitivity</th>
<th>Specificity</th>
<th>PPV</th>
<th>NPV</th>
<th>% correctly classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>2+</td>
<td>0.97</td>
<td>0.44</td>
<td>0.68</td>
<td>0.92</td>
<td>73</td>
</tr>
<tr>
<td>3+</td>
<td>0.94</td>
<td>0.85</td>
<td>0.89</td>
<td>0.92</td>
<td>90</td>
</tr>
<tr>
<td>4+</td>
<td>0.82</td>
<td>0.89</td>
<td>0.90</td>
<td>0.80</td>
<td>85</td>
</tr>
<tr>
<td>5+</td>
<td>0.58</td>
<td>1.0</td>
<td>1.0</td>
<td>0.66</td>
<td>77</td>
</tr>
</tbody>
</table>
SAPAS significantly correlates with global functioning (Hesse et al, 2008)
UTILITY OF SAPAS

- SAPAS score predicts drop-out from specialist treatment (Crawford et al, 2009)

- SAPAS score independently associated with non-response to antidepressant treatment (Gorwood et al, 2010)

- International review of 8 screens – SAPAS performs best (Germans et al, 2012)

- Adopted by large scale surveys of psychiatric morbidity in England and Denmark
A PROSPECTIVE STUDY OF THE RELATIONSHIP BETWEEN PERSONALITY AND CORONARY HEART DISEASE*

A. M. OSTFELD, M.D.†, B. Z. LEBOVITS, Ph.D.‡, R. B. SHEKELLE, Ph.D.§
and O. PAUL, M.D.¶

University of Illinois College of Medicine; Roosevelt University, Chicago;
Northwestern University School of Medicine

(Received 5 April 1963)
The link between PD and general health

- Cross sectional survey of randomly selected households within Southwark and Lambeth

- Personality dysfunction as measured by SAPAS

- Outcome of interest – self-rated health

  “How is your health in general?” 😊 😞
A note on odds ratios

• An odds ratio (OR) shows the likelihood of an outcome in one group compared to another.

• **OR > 1.0**: outcome is *more likely to occur* in the group of interest relative to the comparison group.

• **OR < 1.0**: outcome is *less likely to occur* in the group of interest relative to the comparison group.

• **OR = 1.0** means that there is *no difference* in the likelihood of the outcome occurring in the two groups.
People screening positively for personality disorder are more likely to report poor general health

Sub-threshold symptoms of personality disorder are independently associated with poor self-rated health

People screening positively for personality disorder are more likely to report having multiple longstanding illnesses - backpain, migraine, arthritis, asthma

Original article

Physical health comorbidities in women with personality disorder: Data from the Geelong Osteoporosis Study

S.E. Quirk a,*, A.L. Stuart a, S.L. Brennan-Olsen a,b, J.A. Pasco a,c, M. Berk d,e,f,g, A.M. Chanen e, H. Koivumaa-Honkanen h,i,j, M.A. Kotowicz c,k, P.S. Lukkala l,m, L.J. Williams a

a Deakin University, IMPACT Strategic Research Centre, School of Medicine, Geelong, Australia
b Institute of Health and Ageing, Australian Catholic University, Melbourne, Australia
c Melbourne Medical School-Western Campus, Faculty of Medicine, Dentistry & Health Sciences, University of Melbourne, Melbourne, Australia
d Department of Psychiatry, University of Melbourne, Melbourne, Australia
e Orygen, the National Centre of Excellence in Youth Mental Health, Melbourne, Australia & Centre for Youth Mental Health, The University of Melbourne, Melbourne, Australia
f Barwon Health and the Geelong Clinic, Geelong, Australia
g Florey Institute for Neuroscience and Mental Health, Melbourne, Melbourne, Australia
h Institute of Clinical Medicine, Psychiatry, University of Eastern Finland (UEF), Kuopio, Finland
i Departments of Psychiatry, Kuopio University Hospital, Kuopio; South-Savonia Hospital District, Mikkeli; North Karelia Central Hospital, Joensuu; SOSTERI, Savonlinna; SOTE, Isalmi; Lapland Hospital District, Rovaniemi, Finland
j Clinic of Child Psychiatry, University Hospital of Oulu, Oulu, Finland
k School of Medicine, Deakin University, Geelong, Australia
l School of Medicine, Faculty of Health Sciences, UEF, Kuopio, Finland
m Research and Clinical Research Unit, Savonlinna Institute of Clinical Medicine, UEF, Kuopio, Finland
WHY?

◆ Methodological:
  reporting bias – unlikely
  reverse causality - possible

◆ Common risk factors/causal pathwaya –
  entirely possible (g x e)
Personality disorder & life expectancy
SLaM BRC Case Register

- Across all SLaM services: inpatient, outpatient, CMHTs, liaison services, forensic, old age, CAMHS, LD

- Anonymised database derived from electronic clinical record system

- Over 200,000 patient records
Estimated life expectancy at birth of patients with personality disorder

Female
- General population: 81.6 years
- All personality disorders: 62.9 years

Male
- General population: 77.4 years
- All personality disorders: 59.7 years
SMRs for personality disorder by age groups

- 15 - 44: 10.3 (95% CI)
- 45 - 64: 3.56
- > 64: 2.54

Age in years
Conclusion

People with PD have significantly increased mortality and reduced life expectancy

Quality of physical health care among patients with personality disorder

DR. RAHIL SANATINIA\textsuperscript{1}, SOPHIE M. MIDDLETON\textsuperscript{1}, DR. TINT LIN\textsuperscript{2}, DR. OLIVER DALE\textsuperscript{3} AND PROF. MIKE J. CRAWFORD\textsuperscript{1}, \textsuperscript{1}Centre for Mental Health, Imperial College London, London, UK; \textsuperscript{2}Central and North West London NHS Foundation Trust, London, UK; \textsuperscript{3}West London Mental Health Trust, London, UK

ABSTRACT

Objective – To investigate the assessment and treatment of physical health in patients with personality disorder and compare this to the care received in schizophrenia.

Method – We collected data from a random sample of 246 patients with personality disorder on monitoring and intervention for seven key aspects of physical health. We compared the results with those from a random sample with schizophrenia.

Results – In our sample, 160 (65\%) people had the diagnosis of emotionally unstable personality disorder. In total, 104 (42.3\%) people with personality disorder were being prescribed antipsychotic medication; 23 (9.3\%) participants had all seven aspects of physical health recorded. Alcohol was most frequently recorded (76\%); BMI (38.6\%), blood glucose (25.2\%) and blood cholesterol (20.7\%) were less likely to be recorded. Interventions were not given to all those requiring them. Compared to people with schizophrenia, a lower proportion had evidence of assessment of smoking, illicit drug use, blood glucose and blood lipid levels. Smoking cessation advice was more likely to be offered to people with schizophrenia (difference = 29.4\%, 95\% CI = 12.5 to 44.7).

Conclusion – Physical health is under-assessed and under-treated in patients with personality disorder. Medical staff must do more to help tackle increased morbidity among this group. Copyright © 2015 John Wiley & Sons, Ltd.
Impact on future mental health

From: https://margiewarrell.com/facing-uncertainty/
WHAT DO WE KNOW FROM EXISTING STUDIES?

Collaborative Longitudinal Personality Disorders Study (CLPS study; Gunderson et al, 2000)

- Longitudinal study of patient sample with selection of PD diagnoses + a comparator group (major depression)
- 19 clinical centres
- PD: n= 487; Major depression: n=95
- 66% followed-up for 10 yrs
Social functioning at 10 years
(from: Gunderson et al Arch Gen Psychiatry. 2011;68(8):827-837)
McLean Study of Adult Development (Zanarini et al, 2003)

- Study of 290 former McLean Hospital inpatients with BPD
- Followed-up every 2 years for 16 years
- ‘Remission’ = no longer meeting criteria for BPD
- ‘Recovery’ = GAF score>=61: able to work, at least one sustaining relationship
Time to Remissions and Recoveries Lasting at Least 2 Years Among Patients With Borderline Personality Disorder and Comparison Subjects With Other Axis II Disorders
Methodological problems

- Studies of clinical populations with high levels of functional impairment and co-morbidity
- Studies have not looked at all forms of PD
- Have not looked at severity of PD

Is personality disorder really associated with an increased risk of future problems?
Our aim

To determine whether there is an independent association between personality disorder and:

- future mental problems
- substance use
- social difficulties
Area: 228,000 km²
Population: 4.5 million
Capital: Melbourne
Victoria Adolescent Health Cohort Study

10-wave cohort study of health in young people living in Victoria, Australia

Representative sample of adolescents derived from 2-stage (cluster) sampling procedure:

- Stage 1: 45 schools randomly selected
- Stage 2: a single intact class was selected at random from each participating school
Adolescent phase

- Wave 1: 1992, 14.9 yr, n=898
- Wave 2: 1993, 15.5 yr, n=1727
- Wave 3: 1993, 15.9 yr, n=1697
- Wave 4: 1994, 16.4 yr, n=1628
- Wave 5: 1994, 16.8 yr, n=1575
- Wave 6: 1995, 17.4 yr, n=1530

Total intended sample = 1037 (w1) + 995 (w2) = 2032

96% (1943) of sample participated at least once in waves 1-6

2 entry points

Adult phase

- Wave 7: 1998, 20.7 yr, n=1601
- Wave 8: 2001/03, 24.1 yr, n=1520
- Wave 9: 2006/08, 29.1 yr, n=1501
- Wave 10: 2012/13, 35.1 yr, n=1443

SAP (friend informant), n=1145

Outcomes

PD

96% (1943) of sample participated at least once in waves 1-6
Baseline (age 24 yrs) measures

- Parental divorce/separation
- School qualifications
- Common mental disorder: GHQ-12
- Alcohol diary
- Cigarette smoking
- Use of illicit substances
- Personality disorder: Standardised Assessment of Personality
5 levels of severity:

(0) **No personality disturbance**

(1) **Personality difficulty** (one criterion less than the threshold for PD)

(2) **Simple PD** (in one DSM cluster only)

(3) **Complex PD** (2+ PDs in >1 cluster)

(4) **Severe PD** (2+ personality disorders in >1 DSM cluster with one being ASPD).
Outcomes (age 35 yrs)

- **Axis I disorder**: Composite International Diagnostic Interview
  Depression
  Anxiety (GAD, social phobia, agoraphobia, panic)

- **Licit substances**
  Cigarette smoking, nicotine dependence
  High risk alcohol, alcohol dependence

- **Illicit substances**
  Cannabis, amphetamines, cocaine, designer drugs
Outcomes (age 35 yrs)

• Social difficulties
  - ever separated/divorced from long-term partner (> 2 yrs)
  - not currently in relationship
  - in receipt of welfare benefits

‘Multiple social difficulties’ = 2 + difficulties
Analysis of the imputed datasets

- N = 1635
- 3 models for each outcome
  - model 1 = unadjusted
  - model 2 = adjusted for sex + baseline social measures
  - model 3 = model 2 + prior mental health + substance use
Not in a relationship at 35 yrs, by PD severity at 24 yrs

- No disturbance
- Personality difficulty
- Simple PD
- Complex & Severe PD
Multiple social problems at 35 yrs, by PD severity at 24 yrs

- No disturbance
- Personality difficulty
- Simple PD
- Complex & Severe PD
Depressive disorder at 35 yrs, by PD severity at 24 yrs

- No disturbance
- Personality difficulty
- Simple PD
- Complex & Severe PD

%
Alcohol dependence at 35 yrs, by PD severity at 24 yrs

- No disturbance
- Personality difficulty
- Simple PD
- Complex & Severe PD

%
<table>
<thead>
<tr>
<th></th>
<th>No long-term relationship</th>
<th>Separated/divorced</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OR</td>
<td>95% CI</td>
</tr>
<tr>
<td><strong>Model 1 (unadjusted)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No pathology</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Personality difficulty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>1.16</td>
<td>0.62 – 2.16</td>
</tr>
<tr>
<td>Complex/severe</td>
<td>2.07</td>
<td>1.36 – 3.16</td>
</tr>
<tr>
<td>Joint p-value</td>
<td>2.50</td>
<td>1.52 – 4.13</td>
</tr>
<tr>
<td></td>
<td>0.0001</td>
<td></td>
</tr>
<tr>
<td><strong>Model 2</strong> *</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No pathology</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Personality difficulty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>1.15</td>
<td>0.61 – 2.15</td>
</tr>
<tr>
<td>Complex/severe</td>
<td>2.06</td>
<td>1.35 – 3.14</td>
</tr>
<tr>
<td>Joint p-value</td>
<td>2.36</td>
<td>1.43 – 3.88</td>
</tr>
<tr>
<td></td>
<td>0.0002</td>
<td></td>
</tr>
<tr>
<td><strong>Model 3</strong> **</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No pathology</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Personality difficulty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>1.09</td>
<td>0.57 – 2.08</td>
</tr>
<tr>
<td>Complex/severe</td>
<td>1.83</td>
<td>1.18 – 2.83</td>
</tr>
<tr>
<td>Joint p-value</td>
<td>2.05</td>
<td>1.21 – 3.45</td>
</tr>
<tr>
<td></td>
<td>0.006</td>
<td></td>
</tr>
</tbody>
</table>

* Model 2 = sex, parental divorce, education, welfare receipt  
** Model 3 = model 2 + w8 mental health and substance use
<table>
<thead>
<tr>
<th></th>
<th>ANXIETY DISORDER</th>
<th></th>
<th>DEPRESSIVE DISORDER</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OR</td>
<td>95% CI</td>
<td>OR</td>
<td>95% CI</td>
</tr>
<tr>
<td>Model 1 (unadjusted)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No pathology</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Personality difficulty Simple</td>
<td>2.73</td>
<td>1.52 – 4.93</td>
<td>2.34</td>
<td>1.28 – 4.28</td>
</tr>
<tr>
<td>Complex/severe</td>
<td>1.94</td>
<td>1.15 – 3.27</td>
<td>1.64</td>
<td>1.01 – 2.65</td>
</tr>
<tr>
<td>Joint p-value</td>
<td>&lt;0.0001</td>
<td></td>
<td>2.83</td>
<td>1.60 – 5.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.0002</td>
<td></td>
</tr>
<tr>
<td>Model 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No pathology</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Personality difficulty Simple</td>
<td>2.59</td>
<td>1.41 – 4.76</td>
<td>2.28</td>
<td>1.24 – 4.19</td>
</tr>
<tr>
<td>Complex/severe</td>
<td>1.83</td>
<td>1.08 – 3.10</td>
<td>1.59</td>
<td>0.98 – 2.58</td>
</tr>
<tr>
<td>Joint p-value</td>
<td>2.75</td>
<td>1.50 – 5.04</td>
<td>2.69</td>
<td>1.52 – 4.79</td>
</tr>
<tr>
<td></td>
<td>0.0003</td>
<td></td>
<td>0.0005</td>
<td></td>
</tr>
<tr>
<td>Model 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No pathology</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Personality difficulty Simple</td>
<td>2.43</td>
<td>1.30 – 4.53</td>
<td>2.14</td>
<td>1.15 – 3.99</td>
</tr>
<tr>
<td>Complex/severe</td>
<td>1.52</td>
<td>0.88 – 2.64</td>
<td>1.33</td>
<td>0.81 – 2.20</td>
</tr>
<tr>
<td>Joint p-value</td>
<td>2.27</td>
<td>1.20 – 4.28</td>
<td>2.23</td>
<td>1.24 – 4.01</td>
</tr>
<tr>
<td></td>
<td>0.007</td>
<td></td>
<td>0.009</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DAILY SMOKING</td>
<td>ALCOHOL DEPENDENCE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------</td>
<td>--------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OR</td>
<td>95% CI</td>
<td>OR</td>
<td>95% CI</td>
</tr>
<tr>
<td><strong>Model 1 (unadjusted)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No pathology</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Personality difficulty</td>
<td>1.60</td>
<td>0.88 – 2.90</td>
<td>0.99</td>
<td>0.38 – 2.53</td>
</tr>
<tr>
<td>Simple</td>
<td>2.01</td>
<td>1.28 – 3.16</td>
<td>1.33</td>
<td>0.72 – 2.48</td>
</tr>
<tr>
<td>Complex/severe</td>
<td>2.81</td>
<td>1.69 – 4.68</td>
<td>2.89</td>
<td>1.52 – 5.50</td>
</tr>
<tr>
<td>Joint p-value</td>
<td>&lt;0.0001</td>
<td></td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td><strong>Model 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No pathology</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Personality difficulty</td>
<td>1.54</td>
<td>0.82 – 2.89</td>
<td>0.97</td>
<td>0.37 – 2.53</td>
</tr>
<tr>
<td>Simple</td>
<td>1.83</td>
<td>1.15 – 2.90</td>
<td>1.27</td>
<td>0.68 – 2.35</td>
</tr>
<tr>
<td>Complex/severe</td>
<td>2.30</td>
<td>1.35 – 3.94</td>
<td>2.44</td>
<td>1.25 – 4.73</td>
</tr>
<tr>
<td>Joint p-value</td>
<td>0.003</td>
<td></td>
<td>0.05</td>
<td></td>
</tr>
<tr>
<td><strong>Model 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No pathology</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Personality difficulty</td>
<td>1.32</td>
<td>0.64 – 2.74</td>
<td>0.89</td>
<td>0.33 – 2.43</td>
</tr>
<tr>
<td>Simple</td>
<td>1.60</td>
<td>0.91 – 2.81</td>
<td>1.11</td>
<td>0.59 – 2.10</td>
</tr>
<tr>
<td>Complex/severe</td>
<td>1.81</td>
<td>0.97 – 3.40</td>
<td>2.29</td>
<td>1.14 – 4.61</td>
</tr>
<tr>
<td>Joint p-value</td>
<td>0.14</td>
<td></td>
<td>0.11</td>
<td></td>
</tr>
</tbody>
</table>
CONCLUSIONS

- PD severity is robustly associated with odds of major depression and anxiety + lack of long-term relationship
- Both effects are independent of previous patterns of substance use and prior depression/anxiety
- Future trajectories for substance misuse are more nuanced and best predicted by prior substance use
IMPLICATIONS

PD severity is important prognostic marker in medicine.

PD is important source of ‘disease burden’ in general population – and of no lesser importance than other common mental disorders.
Impact on psychological treatment
Established in England in 2008 to improve access to psychological interventions for depression and anxiety

Single point of access for evidence-based psychological treatments for mild-moderate anxiety or depression (CBT)

1 million referrals/year ~ 50% enter treatment

Stepped care: high (up to 20 sessions) or low intensity (6-10 sessions)

‘Recovery’ = moving from case ➔ non-case

Only 45% achieve recovery
- IAPT services will have a substantial role in the management of people with personality disorder.

- Assuming prevalence of 4% ≈ 40,000 people with personality disorder/yr.

- Do personality difficulties affect response to treatment?
The impact of comorbid personality difficulties on response to IAPT treatment for depression and anxiety

Elizabeth Goddard a, Janet Wingrove b, Paul Moran c, *

a King’s College London, Institute of Psychiatry, Psychology and Neuroscience, Department of Clinical Psychology, Addiction Sciences Building, 4 Windsor Walk, London, SE5 8AF, UK 

b Southwark Psychological Therapies Service, South London and Maudsley NHS Foundation Trust, Eileen Skellern House, Denmark Hill, SE5 8AZ, London, UK

c King’s College London, Institute of Psychiatry, Psychology and Neuroscience, Health Services and Population Research Department, De Crespigny Park, London, SE5 8AF, UK

ARTICLE INFO

Article history:
Received 10 February 2015
Received in revised form
26 June 2015
Accepted 14 July 2015
Available online 16 July 2015

Keywords:
Personality disorder
Depression
Anxiety
Treatment outcome
Cognitive behaviour therapy
IAPT

ABSTRACT

The UK’s Improving Access to Psychological Therapies (IAPT) initiative provides evidence-based psychological interventions for mild to moderate common mental health problems in a primary care setting. Predictors of treatment response are unclear. This study examined the impact of personality disorder status on outcome in a large IAPT service. We hypothesised that the presence of probable personality disorder would adversely affect treatment response.

Method: We used a prospective cohort design to study a consecutive sample of individuals (n = 1249).

Results: Higher scores on a screening measure for personality disorder were associated with poorer outcome on measures of depression, anxiety and social functioning, and reduced recovery rates at the end of treatment. These associations were not confounded by demographic status, initial symptom severity nor number of treatment sessions. The presence of personality difficulties independently predicted reduced absolute change on all outcome measures.

Conclusions: The presence of co-morbid personality difficulties adversely affects treatment outcome among individuals attending for treatment in an IAPT service. There is a need to routinely assess for the presence of personality difficulties on all individuals referred to IAPT services. This information will provide important prognostic data and could lead to the provision of more effective, personalised treatment in IAPT.

© 2015 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).
Methods

● **Aim**
To examine whether the likely presence of PD independently predicts treatment outcomes in a large IAPT service

● **Primary hypothesis**
PD will be independently associated with higher levels of CMD symptoms, greater functional impairment and persistent case-ness at end of treatment

● **Design**
Prospective cohort study
Population and setting
Data

- IAPTus – online, secure database of routine data

- Data extracted for all individuals who initially attended between Jan 2012 – Jan 2013 and who had a PD rating (n=1249)

- 1005/1249 (81%) had end of treatment ratings

- Those with missing paired data – younger, lower symptom severity scores
Measures

- **Depression:** Patient Health Questionnaire-9 (PHQ-9)
- **Anxiety:** Generalised Anxiety Disorder Assessment (GAD-7)
- **Impairment:** Work & Social Adjustment Scale (W&SAS)
- **Personality difficulties:** SAPAS
RESULTS

SAMPLE (N=1002)

64% female
74% White British
54% employed
15% long-term sick or disabled
Relationship between SAPAS score and depression at last session

\[ r = 0.4; \quad p < 0.001 \]
Regression model examining predictors of depression at end of treatment

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Beta</th>
<th>p-value</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>-0.01</td>
<td>0.71</td>
<td>-1.1, 0.75</td>
</tr>
<tr>
<td>Age</td>
<td>0.07</td>
<td>0.03</td>
<td>-0.00, 0.08</td>
</tr>
<tr>
<td>N of sessions</td>
<td>-0.22</td>
<td>&lt;0.001</td>
<td>-0.3, -0.17</td>
</tr>
<tr>
<td>Baseline PHQ-9 score</td>
<td>0.49</td>
<td>&lt;0.001</td>
<td>0.43, 0.63</td>
</tr>
<tr>
<td>Baseline GAD-7 score</td>
<td>0.00</td>
<td>0.95</td>
<td>-0.11, 0.12</td>
</tr>
<tr>
<td>Baseline W&amp;SAS score</td>
<td>0.07</td>
<td>0.06</td>
<td>-0.00, 0.11</td>
</tr>
<tr>
<td>SAPAS</td>
<td>0.08</td>
<td>0.02</td>
<td>0.04, 0.56</td>
</tr>
</tbody>
</table>

Adj. $R^2 = 0.35$; $R^2$ change estimate ($\Delta R^2$) = 0.005; $p = 0.02$
Relationship between SAPAS score and anxiety at last session

$r = 0.4; \ p < 0.001$
Regression model examining predictors of anxiety at end of treatment

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Beta</th>
<th>p-value</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>-0.00</td>
<td>0.91</td>
<td>-0.85, 0.75</td>
</tr>
<tr>
<td>Age</td>
<td>0.06</td>
<td>0.07</td>
<td>-0.00, 0.1</td>
</tr>
<tr>
<td>N of sessions</td>
<td>-0.22</td>
<td>&lt;0.001</td>
<td>-0.26, -0.15</td>
</tr>
<tr>
<td>Baseline PHQ-9 score</td>
<td>0.25</td>
<td>&lt;0.001</td>
<td>0.14, 0.32</td>
</tr>
<tr>
<td>Baseline GAD-7 score</td>
<td>0.26</td>
<td>&lt;0.001</td>
<td>0.19, 0.39</td>
</tr>
<tr>
<td>Baseline W&amp;SAS score</td>
<td>0.05</td>
<td>0.22</td>
<td>-0.02, 0.08</td>
</tr>
<tr>
<td>SAPAS</td>
<td>0.11</td>
<td>0.003</td>
<td>0.12, 0.57</td>
</tr>
</tbody>
</table>

Adj. $R^2 = 0.32; \quad \Delta R^2 = 0.009; \quad p = 0.003$
Relationship between SAPAS score and functioning at last session

\[ r = 0.3; \ p < 0.001 \]
Regression model examining predictors of functioning at end of treatment

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Beta</th>
<th>p-value</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>0.01</td>
<td>0.85</td>
<td>-1.1, 1.4</td>
</tr>
<tr>
<td>Age</td>
<td>0.03</td>
<td>0.36</td>
<td>-0.03, 0.07</td>
</tr>
<tr>
<td>N of sessions</td>
<td>-0.14</td>
<td>&lt; 0.001</td>
<td>-0.3, -0.11</td>
</tr>
<tr>
<td>Baseline PHQ-9 score</td>
<td>0.30</td>
<td>&lt; 0.001</td>
<td>0.31, 0.59</td>
</tr>
<tr>
<td>Baseline GAD-7 score</td>
<td>-0.07</td>
<td>0.1</td>
<td>-0.29, 0.03</td>
</tr>
<tr>
<td>Baseline W&amp;SAS score</td>
<td>0.39</td>
<td>&lt; 0.001</td>
<td>0.33, 0.48</td>
</tr>
<tr>
<td>SAPAS</td>
<td>0.07</td>
<td>0.03</td>
<td>0.03, 0.73</td>
</tr>
</tbody>
</table>

Adj. $R^2 = 0.35$; $\Delta R^2 = 0.004$; $p = 0.03$
Main findings

Baseline SAPAS independently predicted

- Higher final scores for anxiety, depression and functional impairment
- Less clinical change
- Less recovery at end of treatment

But was not independently associated with drop out
Conclusions

- The presence of personality difficulties is an important prognostic indicator in the IAPT population (1 million referrals/yr!)

- Mechanism unclear:
  - increased drop-out? X
  - sicker at baseline? X
  - dynamic issues?
  - more complex alliance?
Implications

Personality screening provides valuable prognostic data for IAPT services. Personality screening could also help shape more personalized, effective, brief psychological treatment:

- More focus on core beliefs vs. automatic thoughts
- More consideration of issues around endings
- More consideration of alliance/relational issues
Major epidemiological findings

- Health and social disadvantages that people with personality disorder experience
- The reduced life expectancy of people with personality disorder
- The need for personalised care in the treatment of depression and anxiety

Personality disorder is key to understanding population mental health
Thanks

My family

Service users and staff at the Bethlem and Maudsley Hospitals
Jane Bunclark and the former Crisis Recovery Unit team.
Jann Oliver, Duncan McLean and team at the Cawley Centre

Colleagues at the Institute of Psychiatry
Barbara Barrett, Sarah Byford, Colin Campbell, Tony Cleare, Tom Craig, Crispin Day,
Marcella Fok, Sir David Goldberg, Claire Henderson, Matthew Hotopf, Louise Howard,
Manuela Jarrett, Hind Khalifeh, Anthony Mann, Sir Robin Murray, Carmine Pariante,
Rob Stewart, Graham Thornicroft, Allan Young

Collaborators
George Patton, Carolyn Coffey, Andrew Chanen, Louisa Degenhardt, Rohan Borschmann,
(University of Melbourne), Kim Dean (UNSW), Mike Crawford (Imperial), Rebecca French
(LSHTM), Mary McMurran, Birgit Vollm (Nottingham), Anthony Bateman, Peter Fonagy
(UCL), Tim Weaver (Middx), Mickey Kongerslev, Sune Bo and Erik Simonsen (Roskilde).
Thank you for listening

paul.moran@bristol.ac.uk