Personality and Mental Health, 2022, 16, 130-137

Matching ICD-11 personality status to clinical management in a community team: The Boston Personality Project

Mithilesh Jha[1], Barbara Barrett[2], Chris Brewin[3] , Geoff Bowker[1] , Nick Harwood[1] , Iram Jalil[1] , Mike Crawford[4],Jaspreet Phull[1], Katherine Allen[5], Conor Duggan[6] , Min Yang[7,8], Peter Tyrer[1,2]

[1] Lincolnshire Partnership NHS Foundation Trust, St George's, Long Leys Road, LINCOLN, Lincolnshire, LN1 1FS, UK

[2] Kings Health Economics, King's College London, De Crespigny Park, London SE5 8AF

[3] Department of Psychology, University College Hospital, London

[4] Division of Psychiatry, Commonwealth Building, Imperial College, London, W12 0NN, UK

[5] Birmingham and Solihull Mental Health Foundation Trust, Uffculme Centre, Queensbridge Road, Moseley, Birmingham B13 8QY

[6] University of Nottingham, Triumph Road, Nottingham, NG7 2TU

[7] West China School of Public Health, Sichuan University, Chengdu, China

[8] Faculty of Health, Art and Design, Swinburne, University of Technology, Melbourne, Australia

Abstract

Epidemiological studies have established that between 30 and 50% of all patients in community mental health teams have personality disorders. These are normally comorbid with other psychiatric disorders, often as Galenic syndromes, and are seldom identified. In the Boston Personality Project all patients under a community health service in one area of Lincolnshire (n=719) will have their personality status assessed using a set of measures to record the new ICD-11 classification of personality disorders. This will include both personality strengths and personality problems and will also encompass those with personality difficulty, a sub-syndromal diagnosis identified in ICD-11 that is not a personality disorder. Following these assessments matched interventions using a stepped care approach will be given for both the severity of disorder and its domain structure. These interventions will include shorter versions of existing psychological treatments, environmental therapies including nidotherapy, adaptive and acceptance models, and social prescribing. It will also include reduction programmes for polypharmacy and unnecessary long-term prescribing. The main outcomes will be linked to the costs of psychiatric care at all levels for each of the 719 patients. Because it is expected that changes in service use will be slow the costs will be measured over 10 years.

Introduction

The papers in this special issue have illustrated the changing impact of personality disorder over time. But these changes have mostly occurred with the passage of time rather than following any specific interventions. The Boston Personality Project is attempting to examine whether interventions that promote better awareness of personality disorder in patients and staff, and which are matched to the severity and type of personality disorder, lead to improved clinical and cost outcomes and greater satisfaction in patients and staff. There is already good evidence that greater patient satisfaction is associated with better services (eg, Shipley et al, 2000), better outcomes with greater patient involvement in treatment decisions (Coulter et al, 2015) and, in the case of personality disorders, great saving in costs (Ranger et al, 2009). A previous study linked to a randomised controlled trial (Grenyer et al, 2018) has showed that a whole of service stepped care model of treatment for personality disorder significantly reduced demand on hospital services over an 18 month period. The Boston Personality Project has not been set up as a randomised trial at this stage although such trials are likely when it comes to testing interventions. As personality disorder changes greatly over time (Yang et al, 2021) it is also necessary to have a long-time scale for the project. The first stage in the project is an assessment of the new ICD-11 classification of personality disorder in a clinical population, followed by selected interventions appropriate for each level of disorder.

Method

[Table 1 near here]

The study is a staged one involving several components linked to an overall model. Boston, an area of Lincolnshire, a rural county in England, has been chosen for the study as it is demographically representative of the county (Table 1) and may also be representative of England as a whole. It has a mixture of urban and rural situations, with both prosperous and socially deprived areas, and its deprivation score of 16.26 is similar to that for England as a whole. It is also representative of Lincolnshire as a county, as it is intermediate to areas having high deprivation scores in the north and north-east but low ones in the south.

The attributes of the model are:

(a) Comprehensive assessment of personality dysfunction and personality strengths in all patients attending the Boston Community Mental Health Team (CMHT)
(b) Assessment to be made by a combination of rating scales with clinical reports to identify both severity and domains of personality dysfunction in the ICD-11 classification
(c) Detailed assessment of trauma histories of all patients using recently improved scales
(d) Training of all staff in the CMHT in the nature and significance of personality dysfunction and its implications for mental health
(e) Mutually agreed interventions when considered appropriate to reduce personality dysfunction and promote personality strengths
(f) Serial assessments of both patient and CMHT provider satisfaction over time
(g) Reduction of inappropriate or unduly prolonged treatments when these are recognized to be unnecessary
(h) Liaison with primary care services to ensure continuity of planned interventions when patients discharged from CMHT
(i) Recording of all costs of treatments and services provided by the CMHT every 6 months over 10 years.

The functioning of the model will be overseen by a development team composed of staff from Lincolnshire Partnership NHS Foundation Trust together with external experts in stress disorders, forensic psychiatry, general practice, psychiatric nursing and economics.

Research investigations linked to the model

Phase 1: Diagnostic assessment and procedures

A. Comparison of ICD-10 and ICD-11 diagnoses

[Table 2 near here]

46 (6.4%) of the patients currently in the Boston CMHT have received an ICD-10 diagnosis of personality disorder, 42 with emotionally unstable personality disorder, borderline type, and

one each with avoidant, dissocial, paranoid and schizoid personality disorder. The ICD-11 personality status of each of these will be assessed using a standard methodology involving rating scales and clinical assessments (Table 2).

Personality assessment using ICD-11 will first be made in all those patients currently diagnosed patients with personality disorder (n=46) with the help of six instruments, five of them self-rating scales and the fourth, Structured Personality Assessment from Notes and Documents (SPAN-DOC), that allows personality status to be assessed from patient records or from contemporaneous feedback. Assessments of agreement (weighted kappa) will be used to compare the combined personality assessments of three independent raters.

The main hypothesis tested here will be that ICD-10 only identifies the more severe personality disorders classified in ICD-11.

B. Comparison of prescription patterns

It is well established that polypharmacy is common in many personality disorders, despite the recommendation that drug treatment is not recommended apart from one exception, 'short-term use of sedative medication may be considered cautiously as part of the overall treatment plan for people with borderline personality disorder in a crisis. The duration of treatment should be agreed with them, but should be no longer than 1 week ' (National Institute of Health and Clinical Excellence, 2009). With the help of colleagues in the pharmacy department at Lincolnshire Partnership NHS Trust the prescribing history of all those identified as having an ICD-11 personality disorder will be available. The extent of inappropriate polypharmacy (Aronson, 2006) will be determined.

C. Histories of trauma

Two new trauma scales have been introduced and are being piloted in studies using the new ICD-11 classification studies. These are ITQ (Hyland et al, 2021) and ITQ)(International Trauma Questionnaire) (Cloitre et al, 2018). We aim to administer these to all patients in the Boston CMHT and will also add the Davidson Trauma Questionnaire (Davidson et al, 1997) for

comparative purposes. The expectation is that those with more severe personality disorders will have higher scores on these instruments.

D. Mental state comorbidities

It has been shown in many studies using DSM, ICD and other classifications of personality disorder that there is greater psychiatric comorbidity in these conditions compared with others (eg Lyons et al, 1997; Tyrer et al, 1997). The ICD-10 mental state diagnoses of all patients in the Boston CMHT will be determined through the electronic data base (Rio) and compared with the ICD-11 levels of severity of personality dysfunction. More formal assessments of mental state disorders will also be made. It is expected that greater levels of severity will be associated with greater comorbidity.

E. Acceptability of diagnosis

Personality disorder has attracted a great deal of stigma in recent years. When a bold declaration was made by Department of Health in England; *Personality Disorder: No Longer a Diagnosis of Exclusion* (Department of Health, 2003), it was hoped that greater acceptance of the diagnosis might follow. Unfortunately, the opposite has occurred in the last few years. The services being offered for personality disorder are almost entirely linked to emotionally unstable personality disorder (ICD-10) or borderline personality disorder (in DSM-4 and AMPD) and these are grossly inadequate to meet the demand (Duggan & Tyrer, 2021). The diagnosis is a very unsatisfactory one and was considered to be a redundant addition to the ICD-11 classification (Mulder et al, 2021) but has been added as a 'pattern specifier'. As services have become more selective because of work pressures and shortage of staff the diagnosis of emotionally unstable personality disorder has become the new diagnosis of exclusion across the country, leading to great frustration and annoyance as well as an increase in the perception of stigma.

80% of all personality disorders are Type R (treatment resisting) as opposed to Type S (treatment seeking)(Tyrer et al, 2003a) ; borderline is one of the few treatment seeking groups. The ICD-11 classification is expected to identify all personality disorders clearly and offset the focus on emotional instability. To help reduce the stigma the Personality Strengths Interview Schedule has been introduced. Already it has been shown that greater personality strengths reduce suicidal behaviour (Yang et al, 2022) and by addressing both strengths and weaknesses in care we expect to improve outcomes.

F. Training of all staff in the CMHT in the nature and significance of personality dysfunction and its implications

It is not going to be easy for all staff in the CMHT (total 13) to embrace the concept of personality disorder and the environmental changes that may be necessary to create improvement. A programme of training linked to input from 'experts by experience' together with input from The Enabling Environments Initiative at the Royal College of Psychiatrists (Chair: Rex Haigh) is planned to help improve understanding of personality disorder in the Boston team. In this training the patients are also given important responsibilities. Some of the notions behind this training come from the therapeutic community movement and have been tested elsewhere (Pearce et al, 2017).

Phase 2: Stepped care interventions

These will only be introduced once there is general agreement, if not unanimity, in the classification of personality status in the 719 patients. The interventions cover a very wide range and some have not yet been tested fully. The aim is to match the intervention with the individual severity/domain pattern in the ICD-11 classification. The classification offers over 600 different combinations of diagnosis. Many of these will either be so rare, or so close to other combinations that they can be regarded as redundant, but this has yet to be determined. But in every case the intervention will have to be approved and supported by the individuals concerned and will not proceed without it. This is consistent with the collaborative spirit of nidotherapy (Tyrer et al, 2003b; Spears et al, 2017) and that of co-production, where the people being treated have ownership of the interventions given (Ramsden et al, 2020).

In the context of a whole service model, a brief psychological intervention of four sessions has already been shown to be feasible and an effective component of care (Huxley et al, 2019). In the Boston Study a much wider range of interventions is being considered as part of a stepped care approach. Many of these are environmental ones, including social prescribing and nidotherapy. Social prescribing has been embraced as a useful form of management for all chronic illness in the NHS, including mental illness, but the evidence for its value is still very sparse (Tyrer & Boardman, 2020). Those referred for social prescribing see a trained link worker, not a mental health professional but someone with great experience of local facilities, so that suggested changes can be made that might improve life style and satisfaction. In nidotherapy the assessment of the environmental needs is more complex and the proposed solution has to be embraced fully by the patient and the nidotherapist (Tyrer et al, 2003b; Tyrer & Tyrer, 2018). In randomised trials it has been shown to be of benefit and to be cost-effective (Ranger et al, 2009; Tyrer et al, 2011, 2017).

Because in the selection of treatments personal choice has an important role to play it is not possible to prescribe these in advance. Some of the possibilities are shown in Table 2 to illustrate how the severity and domains of personality disturbance may be used as guides to different interventions.

Phase 3: Economic outcomes

The study will last for up to 10 years and currently the main primary outcome is health service secondary care cost. If the interventions, ranging from shortened versions of MBT and DBT, drug withdrawal regimens, nidotherapy and other environmental changes, some carried out in conjunction with social prescribing, including drama and other art therapies, are successful, fewer patients will require more intensive treatment and more will return to primary care. A long-term study is needed as changes are likely to be slow, but if effective, we hypothesise will be long-lasting. Although the study is not a randomised trial, the primary outcome of the project as a whole is the cost comparison between those for secondary patient care in Boston

and those in the rest of Lincolnshire over 10 years. This comparison is justified as Boston is regarded as representative of the rest of the county (population 600,000).

Data will be collected from hospital records, Kings Health Economics will carry out the cost analysis in conjunction with Lincolnshire Partnership Trust.

Discussion

This study is the first to make use of the new ICD-11 classification of personality disorders in managing those with predominantly Type-R personality disorders as well as Type-S ones that now dominate clinical practice. These include many Galenic syndromes (conditions in which mental state and personality are closely intertwined)(Tyrer et al, 2022b) but in most of which the clinician ignores the personality component. One of the most difficult aspects of research into interventions for personality disorders is comorbidity. A significant proportion of mental state disorders is intrinsically bound to personality disturbance, but in evaluating interventions for these it is difficult to be certain which aspect of pathology is being addressed. By taking a whole team approach any interactions become clearer and contribute to the outcomes for both groups of disorder. The project has the ability, with suitably designed experiments, to test several different hypotheses involving all mental illness within a whole team model, including important interactions at staff and patient levels.

Taking a long-term perspective will also help in determining the nature of the relationship between personality disorder and other mental illness over the longer time . In particular, it can help to determine if personality factors are the driver behind continuing disorders such as depression (Tyrer , 2015; Berk et al, 2018), whether the mental state disorders are primary and lead to personality dysfunction when they persist, and whether Galenic syndromes are best considered as single or joint disorders.

By recording a combination of overall costs and satisfaction of both patients and staff the project can determine if the extra attention given to personality function leads to better performance in community mental health teams. One of the factors leading to burn-out in such teams is the failure of some patients to ever improve and the frequent relapse of some who do improve but then get re-referred. If the additional attention and extra intervention given to those with comorbidity pathology leads to more sustainable improvement this would help both morale and performance.

Acknowledgments: We acknowledge the help of Elena Titova-Chaudhry, Ruth Vickers and Mary O'Sullivan in setting the groundwork for the study.

Declaration of Interest: None of the authors has any relevant interests to declare.

References:

Aronson JK (2006). Polypharmacy, appropriate and inappropriate . British Journal of General Practice, 56 , 484-485.

Bach, B., Brown, T.A., Mulder, R.T., Newton-Howes, G., Simonsen, E., & Sellbom, M. (2021). Development and initial evaluation of the ICD-11 personality disorder severity scale: PDS-ICD-11. *Personality and Mental Health, 15*, 223–36.

Berk, M., Boyce, P., Hamilton, A., Morris, G., Outhred, T., Das, P., et al. (2018). Personality: Distraction or driver in the diagnosis of depression. *Personality and Mental Health*, *12*, 126-130.

Coulter,A., Entwistle, V.A., Eccles, A., Ryan, S., Shepperd, S. & Perera, R. (2015). Personalised care planning for adults with chronic or long-term health conditions*. Cochrane Database of Systematic Reviews, CD10523.*

Cloitre, M., Shevlin M., Brewin, C.R., Bisson, J.I., Roberts, N.P., Maercker, A., et al. (2018). The International Trauma Questionnaire: Development of a self-report measure of ICD-11 PTSD and Complex PTSD. *Acta Psychiatrica Scandinavica*, 138, 534-546.

Crawford, M.J., Thana, L., Parker, J. et al (2020). Structured Psychological Support for people with personality disorder: feasibility randomised controlled trial of a low-intensity intervention. *BJPsych Open*, *6*, e25.

Dadds, M.R., Cauchi, A.J., Wimalaweera, S., Hawes, D.J., & Brennan, J. (2012). Outcomes, moderators, and mediators of empathic-emotion recognition training for complex conduct problems in childhood. *Psychiatry Research, 199*, 201–207.

Davidson, J. R. T., Book, S. W., Colket, J. T., Tupler, L. A., Roth, S., David, D., et al.. (1997). Assessment of a new self-rating scale for post-traumatic stress disorder. *Psychological Medicine*, *27*, 153-160.
Duggan, C. (2008). Why are programmes for offenders with personality disorder not informed by the relevant scientific findings? *Philosophical Transactions of the Royal Society of London, B. Biological Sciences,363,* 2599-612.
Duggan, C. & Tyrer, P. (2021). Specialist teams as constituted are unsatisfactory for treating people with personality disorders. *BJPsych Bulletin* (early view). Doi: 10.1192/bjb.2021.69.
Grenyer, B.F., Lewis, K.L., Fanaian, M., & Kotze, B. (2018). Treatment of personality disorder using a whole of service stepped care approach: a cluster randomized controlled trial. *PLoS One, 13,* e0206472.
Huxley,E., Lewis, K.L., Coates,A.D., Borg, W.M., Miller, C.E., Townsend, M.L. et al (2019). Evaluation of a brief intervention within a stepped care whole of service model for personality disorder. *BMC Psychiatry, 19,* 341.
Hyland, P., Karatzias, T., Shevlin, M., McElroy, E., Ben-Ezra, M., Cloitre, M., & Brewin, C. R. (2021). Does requiring trauma exposure affect rates of ICD-11 PTSD and complex PTSD? Implications for DSM-5. *Psychological Trauma: Theory, Research, Practice, and Policy*, 13, 133-142.
Kim, Y-R., Tyrer, P., Hwang, S. (2021). Personality Assessment Questionnaire for ICD-11 personality trait domains: development and testing. *Personality and Mental Health, 15*, 58–71.
Lyons, M.J., Tyrer, P., Gunderson, J., & Tohen, M.J. (1997). Heuristic models of comorbidity of Axis 1 and Axis II disorders. *Journal of Personality Disorders*, 11, 260-269.
Mulder, R.T., Horwood, L.J. & Tyrer, P. (2020). The borderline pattern descriptor in the International Classification of Diseases, 11th Revision: A redundant addition to classification. *Australian and New Zealand Journal of Psychiatry,,* **54**, 1095-1100.
National Institute for Mental Health in England (2003). *Personality Disorder: No Longer a Diagnosis of Exclusion*. Department of Health, London.
National Institute for Health and Care Excellence (2009). Borderline personality disorder: Recognition and management (NICE Clinical Guideline CG78). London, UK: NICE.
Olajide K, Munjiza J, Moran P, O'Connell L, Newton-Howes G, Bassett P, et al. (2018). Development and psychometric properties of the Standardized Assessment of Severity of Personality Disorder (SASPD). *Journal of Personality Disorders, 32***,** 44-56.
Pearce, S., Scott, L., Attwood, G., Saunders, K., Dean, M., De Ridder, R. et al. (2017). Democratic therapeutic community treatment for personality disorder: randomised controlled trial *British Journal of Psychiatry, 210,* 149-156.
Preston, N. (2015). Psychologically Informed Planned Environments (PIPEs): Empowering the institutionalised prisoner. *Forensic Update,* (117)**,** 7-14.
Ramsden, J., Prince, S & Blazdell, J. (eds) (2020). *Working Effectively with 'Personality Disorder' : Contemporary and Critical Approaches to Clinical and Organisational Practice*. Pavilion, West Sussex.
Ranger, M., Tyrer, P., Milošeska, K., Fourie, H., Khaleel, I., North, B. & Barrett, B. (2009). Cost-effectiveness of nidotherapy for comorbid personality disorder and severe mental illness: randomized controlled trial. *Epidemiologia e Psichiatria Sociale, 18,* 128-136.

Spears B, Tyrer H, & Tyrer P (2017). Nidotherapy in the successful management of comorbid depressive and personality disorder. *Personality and Mental Health, **11**,* 344-350.
Davidson K, Tyrer P, Gumley A, Tata P, Norrie J, Palmer S, et al (2006). A randomised controlled trial of cognitive behaviour therapy for borderline personality disorder: rationale for trial, method and description of sample. *Journal of Personality Disorders*, *20***,** 431-449.
Shipley, K., Hilborn, B., Hansell, A., Tyrer, J. & Tyrer, P. (2000). Patient satisfaction: a valid measure of quality of care in a psychiatric service. *Acta Psychiatrica Scandinavica*, *101* **,** 330-333.
Tyrer, P. (2015). Personality dysfunction is the cause of recurrent non-cognitive mental disorder: a testable hypothesis. *Personality and Mental Health, 9,* 1-7.
Tyrer, P., Gunderson, J., Lyons, M. & Tohen, M. (1997) Extent of comorbidity between mental state and personality disorders. *Journal of Personality Disorders*, 11, 242-259.
Tyrer, P., Mitchard, S., Methuen, C. & Ranger, M. (2003a). Treatment-rejecting and treatment-seeking personality disorders: Type R and Type S. *Journal of Personality Disorders, 17*, 265-270.
Tyrer, P., Sensky, T., & Mitchard S (2003b). The principles of nidotherapy in the treatment of persistent mental and personality disorders. *Psychotherapy and Psychosomatics**, 72***, 350-356.
Tyrer, P. & Clark, L-A. (2005). *Structured Personality Assessment from Notes and Documents (SPAN-DOC)*. Imperial College, London and University of Notre Dame, Indiana, USA.
Tyrer, P. & Tyrer H. (2018). *Nidotherapy: harmonising the environment with the patient, 2nd edition.* Cambridge, Cambridge University Press
Tyrer, P., & Boardman, J. (2020). Refining social prescribing in the UK. *Lancet Psychiatry,7***,** 831-832.
Tyrer, P., Miloseska, K., Whittington, C., Ranger, M., Khaleel, I., Crawford, M, et al (2011). Nidotherapy in the treatment of substance misuse, psychosis and personality disorder: secondary analysis of a controlled trial**.** *The Psychiatrist*, *35*, 9 - 14.
Tyrer, P., Tarabi, S.A., Bassett, P., Liedtka, N., Hall, R., Nagar, J., et al. (2017). Nidotherapy compared with enhanced care programme approach training for adults with aggressive challenging behaviour and intellectual disability (NIDABID): cluster-randomised controlled trial. *Journal of Intellectual Disability Research, 61***,** 521-531.
Tyrer, P., Yang, M., Tyrer, H., & Crawford, M. (2021). Is social function a good proxy measure of personality disorder? *Personality and Mental Health* , *15,* 261-272.
Tyrer, P., Mulder, R., Newton-Howes, G. & Duggan, C. (2022). Galenic syndromes: combinations of mental state and personality disorders too closely entwined to be separated. *British Journal of Psychiatry* (in press).
Ward, T. & Brown, M. (2004). The good lives model and conceptual issues in offender rehabilitation. *Psychology, Crime, & Law, 10*, 243-257.
Yang M, Tyrer H, Johnson T & Tyrer P (2021). Personality change in the Nottingham Study of Neurotic Disorder: 30 year cohort study. *Australian and New Zealand Journal of Psychiatry,* Jul 10:48674211025624. doi: 10.1177/00048674211025624.
Yang, M., Tyrer, P. & Tyrer, H. (2022a). The recording of personality strengths: an analysis of the impact of positive personality features on the long-term outcome of common mental disorders. *Personality and Mental Health* (under review)