

University of Groningen

Trapped

Servaas, Michelle N; Schoevers, Robert A; Bringmann, Laura F; van Tol, Marie-José; Riese, Harriëtte

Published in:
The Lancet. Psychiatry

DOI:
[10.1016/S2215-0366\(21\)00353-9](https://doi.org/10.1016/S2215-0366(21)00353-9)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2021

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Servaas, M. N., Schoevers, R. A., Bringmann, L. F., van Tol, M-J., & Riese, H. (2021). Trapped: rigidity in psychiatric disorders. *The Lancet. Psychiatry*, 8(12), 1022-1024. [https://doi.org/10.1016/S2215-0366\(21\)00353-9](https://doi.org/10.1016/S2215-0366(21)00353-9)

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

are characterised by more markers of social adversity such as deprivation and unemployment than are White people. A smaller percentage of South Asians were in the most deprived quintile than were Black African or Black Caribbean patients, which provides one possible explanation for the lower rates of suicide reported in this group.

The study also reports that ethnic group might influence which mental health services are received. More minority ethnic patients were admitted to hospital involuntarily or on community treatment orders, despite lower clinician perceptions of risk, and fewer were under the care of home crisis services, a fact frequently reported in the literature.^{1,5,7,8} The continuation of this trend in Hunt and colleagues' work, despite the recent nature of the data which only spanned the last 15 years, identifies an ongoing requirement to evaluate how the experience of and routes into mental health support can be improved for people from minority ethnic backgrounds.⁶ Mental health services should work towards establishing a means of assessing the need for care that limits potentially implicit biases and ensures that adequate care is readily accessible and provided promptly and in the least restrictive means possible.⁷

The Article has several strengths alongside the examination of sociodemographic factors, including the consideration of temporal changes in rates over time. However, the research is limited by the lack of data on length of time spent in mental health treatment, and more specific treatment details, meaning that understanding the effectiveness of current suicide prevention efforts in different mental health services

is not possible. Similarly, information regarding routes into care, such as whether police were involved, is predictive of negative outcomes such as disengagement from services,⁵ and might have provided additional insights into different experiences of treatment. Finally, as the authors acknowledge, inclusion of people who have had treatment as a denominator in the rate calculations can produce biased estimates. However, this study provides valuable insights into how suicide rates differ across ethnic groups and potential influencing factors.

I declare no competing interests.

Phoebe Barnett
phoebe.barnett@ucl.ac.uk

Centre for Outcomes Research and Effectiveness, Research Department of Clinical, Educational and Health Psychology, University College London, London WC1E 7HB, UK

- 1 Barnett P, Mackay E, Matthews H, et al. Ethnic variations in compulsory detention under the Mental Health Act: a systematic review and meta-analysis of international data. *Lancet Psychiatry* 2019; **6**: 305–17.
- 2 Singh SP, Greenwood N, White S, Churchill R. Ethnicity and the mental health act 1983: systematic review. *British J Psychiatry* 2007; **191**: 99–105.
- 3 Hunt IM, Richards N, Bhui K, et al. Suicide rates by ethnic group among patients in contact with mental health services: an observational cohort study in England and Wales. *Lancet Psychiatry* 2021; **8**: 1083–1093.
- 4 Bhui KS, McKenzie K. Rates and risk factors by ethnic group for suicides within a year of contact with mental health services in England and Wales. *Psychiatric Services* 2008; **59**: 414–20.
- 5 Halvorsrud K, Nazroo J, Otis M, Hajdukova EB, Bhui K. Ethnic inequalities and pathways to care in psychosis in England: a systematic review and meta-analysis. *BMC Medicine* 2018; **16**: 1–17.
- 6 Arundell L-L, Barnett P, Buckman JE, Saunders R, Pilling S. The effectiveness of adapted psychological interventions for people from ethnic minority groups: a systematic review and conceptual typology. *Clinical Psychology Review* 2021; **88**: 102063.
- 7 Nazroo JY, Bhui KS, Rhodes J. Where next for understanding race/ethnic inequalities in severe mental illness? Structural, interpersonal and institutional racism. *Social Health Illn* 2020; **42**: 262–76.
- 8 Kisely S, Moss K, Boyd M, Siskind D. Efficacy of compulsory community treatment and use in minority ethnic populations: a statewide cohort study. *Aust N Z J Psychiatry* 2020; **54**: 76–88.



Trapped: rigidity in psychiatric disorders

In the past decades, it has been shown to be difficult to predict the course of psychiatric disorders, because the mechanisms underlying their development and recovery process remain poorly understood.¹ These difficulties have been attributed to the fact that previous research was mostly performed from a categorical, diagnostic label point of view and on a single level (ie, psychological or biological), typically on the basis of static measures with low ecological validity.¹ To improve the prediction of course of illness, we propose

to adopt a transdiagnostic, cross-level, mechanistic approach informed by clinical observations on rigidity in psychiatric patients.

Clinicians frequently observe that patients, regardless of their diagnostic label, develop more rigid cognitions, emotions, and behaviour during the progression of their psychiatric disorder.² Although context is clearly important for patients, these observations suggest that the degree of perseveration of cognitions, emotions, and behaviour could be more relevant when searching

for mechanisms underlying the course of psychiatric disorders. Prolonged rigidity in these domains might ultimately result in the development of maladaptive schemas and traits, which in themselves increase the risk for psychiatric chronicity.^{2,3} Hence, rigidity may be an informative concept on the position of a patient on a transdiagnostic continuum of severity of psychiatric symptoms.

On the basis of these clinical observations and in line with growing research interest in such overarching aspects of psychiatric disorders,¹ we propose to devote research efforts to investigating the concept of rigidity, defined as an inability to flexibly adapt cognitions, emotions, and behaviour in response to changes in the environment.³ Specifically, we suggest studying (1) the aforementioned domains dynamically, using repeated measurements over time during daily life (psychological level); (2) how this form of psychological rigidity is related to rigidity in dynamic functioning of the brain (biological level); and (3) how associations between these two rigidity measures dynamically change during illness progression and recovery to uncover markers regarding the course of illness.

To our knowledge, there are currently no longitudinal studies investigating whether rigidity indeed increases during the progression of different psychiatric disorders and whether this concept has predictive value for the course of these disorders. Studying rigidity in this way might foster progress in psychiatric research for two reasons. First, the dynamic and contextual nature of this concept connects well with clinical complexity and reality. Second, the transdiagnostic and mechanistic character of this concept makes it an ideal vehicle to investigate markers of course of illness across psychiatric disorders and research levels.

To capture dynamic patterns of cognitions, emotions, and behaviour, the experience sampling methodology (ESM) is receiving growing interest. Previous ESM research demonstrated that individuals with psychiatric disorders, compared with individuals without, show increased emotional responses to daily events, slower emotional recovery, and in general less socially and physically active behavior.⁴ Notably to date, there is little research on the association between fluctuations in momentary cognitions and psychiatric symptoms. Yet negative cognitions are strongly associated with the

Panel: Strengths of rigidity markers at psychological and biological levels

Markers at the psychological level (ESM)

- Close to the (subjective) experience of the patient
- Ecologically valid (measured in daily life)
- Feasible for implementation in clinical practice (ie, eHealth tools)
- Provide personalised information on cognitions, emotions, and behaviour useful to inform treatment, specifically when combined with qualitative data

Markers at the biological level (fMRI)

- More objective
- Provide fundamental knowledge on brain functioning useful for psychoeducation
- Provide information for neurostimulative and pharmacological interventions

ESM=experience sampling methodology. fMRI=functional MRI.

experience of negative emotions and the presentation of maladaptive behaviours.

Intuitively, the ability to flexibly adapt to changes in the environment depends on the ability of the brain to flexibly form connections between brain regions, which can be measured with dynamic functional connectivity (DFC) using functional MRI (fMRI).⁵ Indeed, in individuals without psychiatric disorders, neuroimaging studies have shown that DFC is positively associated with cognitive flexibility⁶ and that lower DFC predicted worse behavioural performance in various domains relevant for psychiatry.⁷ Specifically, the combination of flexible reconfiguration of frontal brain networks and a conserved network structure of stable visual and somatosensory-motor brain networks seems key to neural flexibility.⁶

By combining ESM and DFC, we are able to investigate rigidity in an interdisciplinary, dynamic, and ecologically valid way and benefit from the joint strengths of these methods and research levels (panel). Using phase synchronisation calculated on task-based or resting-state fMRI data, it is now possible to obtain information on how brain regions and networks communicate with each other per timepoint.⁸ This approach creates the unique opportunity to integrate findings across methods and research levels by calculating similar statistical measures on ESM and DFC time-series data capturing rigidity (eg, mean in combination with the standard deviation⁹). Ultimately,

these rigidity measures might serve as transdiagnostic markers for severity of psychiatric symptoms in a specific patient.

If these measures are also sensitive to changes in the recovery process, they could function as a course marker as well. In this regard, changes during and after psychological therapy could be of specific interest, because they represent structural changes in cognition with long-term protective benefits for mental health.¹⁰ Importantly, psychological and biological markers each have their own merits and can be used for different purposes (panel). Finally, these markers could help to detect vulnerability for and onset of psychiatric disorders, monitor treatment progress and subsequent potential relapse, and improve the efficacy of transdiagnostic interventions targeted at this core aspect.

We declare no competing interests. This work was supported by the foundation Researchfonds Stichting Postacademische Psy-opleidingen (awarded to MNS, grant PPO-MS-MH) and the charitable foundation Stichting tot Steun VCVGZ (awarded to HR, grant 239). The authors' funding sources were not involved in writing the manuscript or the decision to submit it for publication.

*Michelle N Servaas, Robert A Schoevers, Laura F Bringmann, Marie-José van Tol, Harriëtte Riese
m.n.servaaas@umcg.nl

Department of Psychiatry, Interdisciplinary Center for Psychopathology and Emotion regulation (MNS, RAS, HR), Department of Biomedical Sciences of Cells and Systems, Cognitive Neuroscience Center (M-JvT), University Medical Center Groningen, and Department of Psychometrics and Statistics (LFB), University of Groningen, Groningen 9700 RB, The Netherlands

- 1 Dalgleish T, Black M, Johnston D, Bevan A. Transdiagnostic approaches to mental health problems: current status and future directions. *J Consult Clin Psychol* 2020; **88**: 179–95.
- 2 Young JE, Klosko JS, Weishaar ME. Schema therapy: a practitioner's guide, 1st edn. New York: The Guilford Press, 2006.
- 3 Kashdan TB, Rottenberg J. Psychological flexibility as a fundamental aspect of health. *Clin Psychol Rev* 2010; **30**: 865–78.
- 4 Myin-Germeyns I, Kavanova Z, Vaessen T, Vachon H, Kirtley O, Viechtbauer W, Reininghaus U. Experience sampling methodology in mental health research: new insights and technical developments. *World Psychiatry* 2018; **17**: 123–32.
- 5 Cohen JR. The behavioral and cognitive relevance of time-varying, dynamic changes in functional connectivity. *Neuroimage* 2018; **180**: 515–25.
- 6 Braun U, Schafer A, Walter H, et al. Dynamic reconfiguration of frontal brain networks during executive cognition in humans. *Proc Natl Acad Sci USA* 2015; **112**: 11678–83.
- 7 Jia H, Hu X, Deshpande G. Behavioral relevance of the dynamics of the functional brain connectome. *Brain Connect* 2014; **4**: 741–59.
- 8 Ponce-Alvarez A, Deco G, Hagmann P, Romani GL, Mantini D, Corbetta M. Resting-state temporal synchronization networks emerge from connectivity topology and heterogeneity. *PLoS Comput Biol* 2015; **11**: e1004100.
- 9 Dejonckheere E, Mestdagh M, Houben M, et al. Complex affect dynamics add limited information to the prediction of psychological well-being. *Nat Hum Behav* 2019; **3**: 478–91.
- 10 Hollon SD, Stewart MO, Strunk D. Enduring effects for cognitive behavior therapy in the treatment of depression and anxiety. *Annu Rev Psychol* 2006; **57**: 285–315.



PTSD: equity in diagnostic practice

Post-traumatic stress disorder (PTSD) provides a vocabulary to describe the psychological toll all manner of traumatic events can take. However, although most cases of PTSD are not related to combat, more than 90% of PTSD-related US federal legislation introduced between 1989 and 2009 targeted military populations.¹ The US Department of Defense and the US Department of Veterans Affairs are leading funders of PTSD research.² PTSD has been constructed as a predominantly military-related disorder.

Psychiatric researchers rarely publicly forswear military patronage in defence of scientific integrity, as some social scientists did during the Cold War. Following decades of increased attention to national security after the September 11 attacks, people in the USA have assimilated militarisation into daily life.³ Indeed, critical engagement with the politics of PTSD might seem to dishonour veterans and can thus be politically taboo. Nevertheless, the consequences of military influence on

both the clinical and cultural understandings of PTSD require further scrutiny.

Close reading of the DSM-5 text explicating Criterion A, which specifies types of events that can constitute PTSD-causing trauma, illustrates how the military context of PTSD's origin continue to shape its classification. The discussion of PTSD risk factors in the DSM-5 frames combat as inherently traumatic to both the victims and perpetrators of war-related violence (panel). This value-laden claim, although not directly incorporated into Criterion A, expands the range of war-related events that can constitute trauma by including acts perpetrated by soldiers. Further, by specifying military personnel, this language implicitly excludes non-military situations (panel). To be clear, we are not making a moral equation between the actions of service personnel and civilian perpetrators of violence. However, if it is indeed the case that to act violently—whatever the circumstances—might