

## Adolescent Psychopathology and Cognitive/Academic Functioning: Impact of Comorbidity Using a Genetically Sensitive Design

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**Aims.** To determine: i. the nature of the associations between three domains of psychopathology (depressive, hyperactivity and conduct symptoms) and cognitive/academic performance among adolescents i.e., whether these reflect causal processes and/or common genetic effects; ii. The extent to which these associations vary by comorbidity.

**Methods.** The sample comprised participants in the UK Twins Early Development Study (TEDS;  $n \approx 12,000$  individuals) assessed for depressive, hyperactivity and conduct symptoms using standardised questionnaires. Cognitive and academic performance were assessed using Standard Progressive Matrices and GCSE scores respectively. Comorbidity was derived as a count of borderline/high psychopathology scores present per individual. Twin modelling was used to investigate preliminary correlations and moderation effects. Genetic models were further used to determine the most likely direction of causal effects with/without genetic correlations.

**Results.** There were small to moderate negative correlations between adolescent psychopathology domains and cognitive performance ( $-0.01 \leq r \leq -0.15$ ) and academic performance ( $-0.06 \leq r \leq -0.23$ ). Correlations were smallest for depressive symptoms and largest for hyperactivity/conduct symptoms. The correlation between hyperactivity symptoms and cognitive performance was significantly more negative as comorbidities increased (moderation coefficient  $-\beta_{\text{mod}} = 0.07$ , 95% CI: 0.02, 0.12). Similarly, the association between depressive symptoms and academic performance also became more negative as comorbidities increased ( $\beta_{\text{mod}} = -0.08$ , 95% CI:  $-0.11$ ,  $-0.05$ ). Twin modelling indicated that hyperactivity symptoms were causally associated with poorer cognitive and academic performance. In contrast, poorer cognitive performance was causally associated with conduct symptoms.

**Conclusion.** These preliminary findings indicate the impact of comorbidity on the functioning of adolescents with hyperactivity and depressive symptoms. They further suggest the need to specifically recognise these comorbidities during assessment and treatment planning to promote optimal functioning. Our findings also suggest differential mechanisms for the links between different psychopathology domains and impaired functioning. Further analyses will investigate moderation of the causal links and/or genetic correlations and whether these associations vary by indicators of marginalisation (sex and ethnicity).

Abstracts were reviewed by the RCPsych Academic Faculty rather than by the standard *BJPsych Open* peer review process and should not be quoted as peer-reviewed by *BJPsych Open* in any subsequent publication.

### Modelling Co-Occurring Mental Health Conditions Among Autistic Individuals Using Polygenic Scores

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**Aims.** This study investigated the relationship between common genetic variation and co-occurring mental health conditions among autistic individuals.

**Methods.** The study was conducted with the Simons Foundation Powering Autism Research (SPARK) dataset, V9 release, and included probands [ $n = 17,582$ ] with confirmed diagnosis of autism, who were also in the SPARK iWES1 array genotyping dataset. Six co-occurring mental health conditions (attention deficit hyperactivity disorder or ADHD, bipolar disorder, depression, schizophrenia, anxiety disorder and disruptive behaviour disorders) were analysed. Polygenic scores (PRS) were generated with PRS software, using summary statistics from the most recent genome wide association studies (GWAS) for autism, ADHD, schizophrenia, bipolar disorder, depression, anxiety, neuroticism, p-factor, intelligence, educational attainment and hair colour (negative control). General linear models (GLM) and Cox proportional hazards models were computed, with age at registration, sex, cognitive impairment and genetic principal components included in both sets of models. Multiple testing correction was done using the Benjamini-Yekutieli method. Results were calculated using odds ratios (OR), 95% Confidence Intervals (CI) and corrected p values (p).

**Results.** There were similar patterns of association and interaction for both GLMs and Cox models. Polygenic scores for educational attainment were significantly lower for those with co-occurring ADHD (GLM: OR=8.85E-01, 95% CI=8.48e-01–9.23e-01,  $p = 2.91E-07$ ; Cox: OR=8.94E-01, 95% CI=8.66e-01–9.22e-01,  $p = 4.76E-11$ ), bipolar disorder (GLM: OR=7.45E-01, 95% CI=6.54e-01–8.49e-01,  $p = 2.40E-04$ ; Cox: OR=7.25E-01, 95% CI=6.39e-01–8.23e-01,  $p = 3.96E-05$ ), depression (GLM: OR=8.63E-01, 95% CI=8.04e-01–9.26e-01,  $p = 5.13E-04$ ; Cox: OR=8.56E-01, 95% CI=8.03e-01–9.12e-01,  $p = 2.80E-05$ ), schizophrenia (GLM: OR=6.94E-01, 95% CI=5.71e-01–8.42e-01,  $p = 3.99E-03$ ; Cox: OR=6.67E-01, 95% CI=5.52e-01–8.05e-01,  $p = 1.41E-03$ ), anxiety disorder (GLM: OR=8.77E-01, 95% CI=8.37e-01–9.20e-01,  $p = 9.88E-07$ ; Cox: OR=8.81E-01, 95% CI=8.49e-01–9.15e-01,  $p = 1.46E-09$ ) and disruptive behaviour disorders (GLM: OR=7.10E-01, 95% CI=6.63e-01–7.60e-01,  $p = 3.22E-21$ ; Cox: OR=7.10E-01, 95% CI=6.67e-01–7.57e-01,  $p = 1.35E-24$ ).

**Conclusion.** Polygenic scores for educational attainment were associated with the co-occurrence of several mental health conditions among autistic individuals.

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### How Are Inpatient Psychiatric Ward Rounds Understood in Research Literature? A Scoping Review

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**Aims.** Ward rounds are complex clinical interactions crucial in delivering high-quality, safe, and timely patient care. They serve as a platform for the multidisciplinary team to collaboratively assess a patient's condition and actively involve the patient and their caregivers in shared decision-making to formulate a care plan. Ward rounds involve an intersection of factors worthy of consideration separate from the wider literature on inpatient experience and multidisciplinary team meetings. With this review our primary aim is to systematically identify what methods and perspectives researchers are using to understand ward rounds.

**Methods.** The databases searched were Medline, CINAHL, British Nursing Index, PsychInfo, and ASSIA as well as reference and citation checking. The search terms used were *psychiatr\** AND (*ward round* OR "*multi disciplinary team meeting*" OR "*clinical team meeting*"). Studies were included if they were peer reviewed, included primary research on psychiatric inpatient ward rounds in which patients are participants with no restriction on the type of ward or hospital, patient group, country or methodology.

**Results.** 224 records were retrieved and screened from the database search and 10 from other sources. 35 full texts were reviewed for eligibility and 26 included in the review. 16 studies had no particular theoretical perspective, 2 were constructivist, 2 critical realist, 2 lean methodology, 1 systems research, 1 phenomenological, 1 trauma informed and 1 critical theory. 9 focussed on patient experience, 5 ward round structure, 3 on power relationships, 3 on efficiency, 2 on shared decision making and 4 had a unique focus. Though often not explicit, critical theory influenced discussion of power is common in papers focused on patient experience and ward round structure. Cross-sectional surveys, interviews, focus groups and audit cycles were the most common methods. Key themes which emerge are anxiety provoked by ward rounds, preparation and communication, and the negotiation of power structures. Key tensions identified include being multidisciplinary versus overcrowding, efficiency versus personalisation and reliability versus responsiveness.

**Conclusion.** For a central part of inpatient psychiatric practice there is a limited range of research on psychiatric ward rounds. The influence of critical theories' focus on power was widespread with limited representation of other theoretical perspectives and concerns. There was no research using experimental methods, but there was some implementation research. Key tensions are highlighted which services may wish to consider when revisiting ways of working on inpatient psychiatric wards.

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## Systematic Review of Cultural Expressions of Depression in African Communities; Implications for Service Provision

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**Aims.** This review delves into the understanding of depression within African communities, extending its scope to nations with

significant African populations, aiming to enhance service provision for these patients. While focusing on cultural experiences of depression that transcend geographical boundaries, it builds upon existing literature predominantly centred on sub-Saharan African countries.

**Methods.** A comprehensive literature search was conducted across multiple databases, yielding 13 relevant articles after applying stringent criteria. Following Cochrane guidelines, search terms encompassed population (Africa, Africans, African communities), exposure (Depression, Depressive disorder, Dysphoria, Dysthymia, Low mood), and outcomes (Cultural expressions, Cultural variations, Somatization, Cultural framework, Cross-cultural research, Service provision).

**Results.** Analysing selected articles through the CASP checklist, a narrative synthesis of qualitative studies over the past twelve years elucidated diverse perceptions and expressions of depression in African communities compared with Western contexts. Three major themes emerged: Expressions of depression (with sub-themes: Attitudes towards depression), Perceptions of depression (including Stigmatization), and culturally acceptable forms of treatment (including Barriers towards treatment).

**Conclusion.** The review underscores the significance of integrating culturally acceptable treatment methods into psychological therapy for improved healthcare delivery. Collaboration between clinicians and patients is pivotal, with religious assistance emerging as a culturally acceptable treatment avenue. Establishing therapeutic alliances with religious communities could enhance treatment effectiveness. Further research is warranted to explore the impact of religious activity on depression symptoms and progression, as well as the influence of mental health providers' religious backgrounds on treatment dynamics. This holistic approach is crucial for addressing the unique cultural nuances surrounding depression in African communities and optimizing patient care.

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## Do AI Chatbots Incite Harmful Behaviours in Mental Health Patients?

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**Aims.** The contribution of mental illness towards total Disability Adjusted Life Years is increasing according to the Global Burden of Disease study. As the need for mental health services increases, technological advances are being deployed to improve the delivery of care and lower costs.

The emergence of Artificial Intelligence (AI) technology in mental health and companionship is an evolving topic of discussion. There have been increasing debates about the use of AI in managing mental health problems. As the AI technology and its use grows, it is vital to consider potential harms and ramifications.

There are very limited discussions about the use of chatbots and relevant AI by humans to commit crime especially in those suffering from mental illness. AI can potentially serve as an effective tool to misguide a vulnerable person going through a mental health problem e.g. encourage someone to commit a serious offence. There is evidence that some of the most used AI chatbots tend to accentuate any negative feelings their users already had