

The Impact of Psychopathy on Treatment for Patients With Serious Mental Illness: Attitudes, Behavior, and Risk

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Background: Psychopathy is related to poor treatment retention. Understanding which features of psychopathy impact treatment is important to help develop strategies for disruptive patients, especially for patients with serious mental illness (SMI). The present study aimed to assess the relations between psychopathy and treatment-related attitudes, behaviors, and risk factors that may be important for developing treatment retention strategies for patients with SMI.

Methods: Forensic inpatients (N=92; Mage=35 years; 72% male) were assessed using the Psychopathy Checklist-Revised (PCL-R; Hare, 2003), Personality Assessment Inventory (PAI; Morey, 2007), Minnesota Multiphasic Personality Inventory (MMPI-2; Butcher et al., 2001), Analysis of Aggressive Behavior, and the HCR-20 (Webster et al., 1997).

Results: Logistic regressions showed the lifestyle facet was related to treatment noncompliance (OR=1.21, p=.048) and prior hospitalizations (OR=1.49, p=.043). The interpersonal facet (OR=1.35, p=.028) increased the odds of having previously escaped from hospitalization. The affective facet (OR=1.40, p=.009) was related to dangerousness towards others and having used a weapon in a crime (OR=1.47, p=.003). Multiple regressions found the lifestyle facet (p=.001) was associated with treatment rejection on the PAI and negative treatment indicators on the MMPI-2 (p=.040). On the HCR-20, the affective, lifestyle, and antisocial facets (p<.05) were each associated with higher historical domain scores, while the affective and lifestyle facets (p<.05) were positively related to the clinical and risk domains.

Conclusions: Psychopathy is an important clinical construct that should be considered when developing treatment plans for patients with SMI. This study shows that specific psychopathy facets present different challenges to treatment and do not reflect treatment responsiveness.

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Transsaccadic-Associated Deficits in Individuals With Schizophrenia and Bipolar Disorder

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Background: Patients with schizophrenia and bipolar disorder with psychotic features (PSY) experience a reduced ability to distinguish between origins of internally and externally generated sensations, which has been associated with hallucinations. It has been suggested that corollary discharge (CD), an internal copy of a motor command, may be compromised in PSY compared to healthy controls (HC).

Methods: In an ongoing study examining deficits in CD, we have recruited 16 PSY and 15 HC to date. Participants performed a transsaccadic detection paradigm in a behavioral and functional MRI scan session. Psychometric functions were derived based upon visual error (VE) alone and behavioral responses using VE+CD. Symptoms were measured using the PANSS and Sense of Agency Scale (SOAS).

Results: PSYs displayed significantly more negative perceptual bias than HCs (p=.025), while perceptual thresholds were not significantly different between groups (p=.214) suggesting that PSYs mostly underestimated while HCs overestimated the presaccadic target location. While HC tended to show a greater difference in VE versus VE+CD bias scores, the group by condition interaction was not significant (p=.27). PSYs displayed a significant inverse relationship between the perceptual threshold and the SOAS (r =-.68, p=.007) with a significant positive relationship between threshold and PANSS Positive symptoms (rs=.591, p=.016).

Conclusions: These findings partially replicate previous work evaluating transsaccadic perception in individuals with psychosis and additionally link both psychotic symptoms and mental agency with these perceptual deficits. Further analysis of associated fMRI data will allow us to investigate the change in brain activity and connectivity associated with the observed CD deficits.

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Using Machine Learning to Predict Non-Remitting PTSD Symptoms in Two Independent Traumatically Injured Samples

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Background: Due to its heterogeneity, prediction of post-traumatic stress disorder (PTSD) development after trauma is difficult.

Methods: Using biological and psychological data collected within 2 weeks of a traumatic injury, we applied support vector machines (SVM) to classify patients from two independent trauma samples (Ns=278 and 214), recruited from a Level-1 Trauma Center, according to PTSD symptom trajectories.

Results: PTSD symptom trajectories were identified using latent class mixture models on PTSD Checklist (PCL) scores collected at 3 time points (baseline, 1 or 3 months, and 6-months post trauma). SVM classifiers were developed and tested on one sample and externally validated on the second sample. 32 variables were considered as potential predictors in