Treating Schizophrenia With Electroencephalography Tests

Researchers have validated an electroencephalography (EEG) test to study and treat schizophrenia. The findings, published in two separate studies, offer a clinical test that could be used to help diagnose individuals at risk for developing mental illness later in life.

One of the studies, published in Schizophrenia Research, shows that patients with schizophrenia do not register subtle changes in reoccurring sounds as well as others and that this deficit can be measured by recording patterns of electrical brain activity obtained through EEG.

The second study, published in NeuroImage: Clinical, establishes a link between certain EEG tests and patients’ cognitive and psychosocial impairments, suggesting that the EEG test could be used to objectively measure the severity of a patient’s condition.

Scientists monitored volunteers’ electrical brain activity patterns as they listened to a sequence of beeps that occasionally included a discordant prolonged beep. A total of 1,790 people (966 patients with schizophrenia and 824 healthy controls) were tested at five sites nationwide.

The EEG data were analyzed for two auditory processing metrics: mismatch negativity (MMN) and P3a (i.e., a measure of electrical energy emitted by the brain as it automatically shifts attention to the longer beep).

Researchers showed that measures of MMN and P3a were associated with the severity of a patient’s symptoms. In a comparison of MMN and P3a measurements from 42 patients with schizophrenia and 47 non-psychiatric comparison individuals, scientists showed that differences in these auditory processing metrics accounted for approximately one half of the variance in the severity of patients’ symptoms and their ability to perform tasks necessary for real-world functioning.

The two studies further validate that the EEG testing can be conducted outside of academic research laboratories.

Using Cognitive-Behavioral Therapy for Insomnia During Recovery

Insomnia is a problem for patients in the early phases of recovery from the disease of addiction, and may lead to an increased risk of relapse, according to a report in the Journal of Addiction Medicine.

Insomnia may be linked with a higher risk of alcohol-related problems and relapse. Population studies report individuals with sleep disturbance are more likely to be at risk of developing addiction.

If insomnia contributes to relapse, can treatment for insomnia reduce that risk? The evidence is mixed, with some studies reporting that using medications for insomnia during recovery (mainly from addiction with alcohol) can lower the relapse rate.

Evidence supports the use of cognitive-behavioral therapy to treat patients with insomnia during recovery. This multicomponent approach includes daily sleep diaries and questionnaires to gather information on the patient’s insomnia and progress during treatment, and education on sleep and the effects of substances, including “sleep hygiene” practices to promote good sleep. This belief has made behavioral approaches more widely used.

Restricting Mental Health Treatment

A new study published in Psychiatric Services found many common insurance and state Medicaid policies negatively impact patient health and impose a major workload on psychiatrists that takes time away from patient care.

More than 50% of psychiatrists surveyed practicing in community mental health centers pointed to formulary restrictions, prior authorization, and step therapy protocols as the most frequent roadblocks to prescribing an optimal treatment regimen.

Three quarters of psychiatrists spend more than 10% of their time on utilization management-related administrative tasks, with one in 10 reporting they spend 40% or more of their time on such tasks.

The study found medication restriction policies directly impact patient wellness. Three quarters of psychiatrists stated that patients had trouble complying with medication plans, and 62% said patients experienced increased emergency department visits, hospitalizations, and increased health care costs.

Increasing medication options will provide better care and improve patient results.

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Mental Illness Not the Only Factor in Youth Violence

A study recently published in *PLoS One* identified more than 40 different behavioral factors other than mental illness that are strongly associated with gun possession. These include heroin use, substance use on school property, having been injured in a fight, and having been a victim of sexual violence.

This new information was uncovered by applying the latest computational methodologies to nationally representative data from the Centers for Disease Control and Prevention.

Previous research confirms that stricter gun control efforts are effective in curbing gun violence and substantially reducing the number of firearm-related injuries and deaths. Thus, this study focused not on the means by which guns were obtained but rather the prevalence of and behavioral factors associated with gun possession among American youth.

Researchers who want to study gun violence have been hindered in part by the moratorium on gun violence prevention research, which was first imposed by Congress in 1996. This study adds significant knowledge to the field in regard to better identifying and understanding the behavioral components associated with gun possession, in particular those factors that may increase the likelihood of gun possession among children and adolescents.


Comparing Mental Disorders and Suicide Rates Between Soldiers and Civilians

New results from the largest-ever study of mental health risk and resilience in Army personnel show that despite higher rates of current mental disorders and suicidality among U.S. Army soldiers than similarly matched civilians, the rates of most pre-enlistment mental disorders among new soldiers are comparable to those of civilians.

Some pre-enlistment mental disorders and an increased presence of one or more additional disorders are more common among new soldiers than civilians, showing that a history of these disorders is associated with increased probability of volunteering for Army service. In addition, the rates of pre-enlistment suicidality reported by new soldiers are comparable to those reported by non-deployed, active-duty soldiers throughout their Army careers and to those of matched civilians.

Two reports published in *Depression & Anxiety* are based on a survey of 38,507 new soldiers. In the first report, the lifetime rates of pre-enlistment mental disorders were compared to those of a matched civilian sample. Results showed that new soldiers and civilians do not differ in their probability of having at least one lifetime mental disorder (38.7% of new soldiers; 36.5% of civilians). However, a significantly higher proportion of new soldiers than civilians were shown to have a history of three or more mental disorders (11.3% versus 6.5%). The second report noted that 14.1% of new soldiers had considered suicide at some point in their life before enlisting, 2.3% had made a suicide plan, and 1.9% previously attempted suicide.


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Depression and Anxiety in Hispanic/Latino Populations

Rates of depression and anxiety vary widely among different segments of the U.S. Hispanic and Latino population, with the highest prevalence of depressive symptoms in Puerto Rican individuals, according to a new report in *Annals of Epidemiology*.

From 2008 to 2011, the study sampled more than 16,000 Hispanic/Latino individuals ages 18 to 74 in four diverse communities. All participants filled out two 10-item questionnaires on depression and anxiety asking how often they had experienced symptoms of depression in the past week and how often they suffered from anxiety symptoms such as nervousness and restlessness.

Overall, 27% of Hispanic/Latino individuals reported high levels of depressive symptoms, with a low of 22.3% among those of Mexican background and a high of 38% among those of Puerto Rican background.

One of the study’s most compelling findings was the relatively low use of antidepressant and anti-anxiety medications among Hispanic and Latino individuals. Overall, only 5% of the study sample used antidepressant agents even though depression affected 27% of this population. Antidepressant agent use varied widely according to insurance status: 8.2% of insured individuals used antidepressant agents versus 1.8% of those uninsured.

Anti-anxiety medications were used by 2.5% of Hispanic/Latino individuals, with use significantly higher among individuals with cardiovascular disease. Anxiety prevalence followed a pattern similar to depression.