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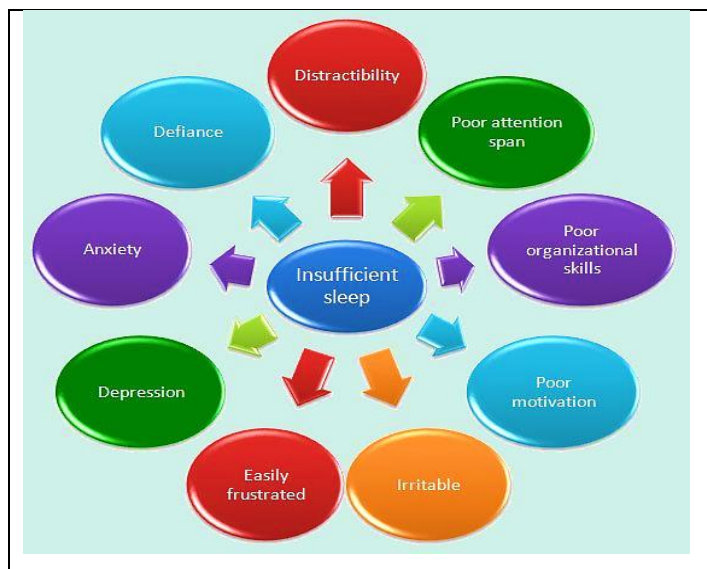
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1. Prevalence of insomnia and its associated factors among postpartum mothers

Introduction

Sleep is a physiological process that is essential for humans' physical, emotional, and mental wellness. Sleep disorders are characterized by issues with sleep quality, timing, duration, and quantity. Seven main categories of sleeping disorders were identified in the third edition of the International Classification of Sleeping Disorders. These include parasomnias, central disorders of hypersomnolence, insomnia disorders, breathing disorders related to sleep, sleep-wake disorders, and sleep-related movement disorders.¹ Insomnia is a sign of frequent mental health conditions in mothers, such as anxiety, depression, alcoholism, and self-harm. It is



frequently linked to drug or substance exposure as well as coexisting physical and mental health issues. Mothers who suffer from insomnia may experience mental health issues that negatively impact their quality of life, particularly in the postpartum phase. Insomnia is highly correlated with maternal age and parity, family size, known medical conditions, occupation, and educational attainment. Additionally, there was a strong correlation between insomnia during the postpartum period and depression, social support, and marital status. Both the mother's and her child's health are impacted, both immediately and over time, by insomnia during the postpartum phase.² The purpose of this study was to determine how common insomnia and related conditions are among new mothers.

Methods

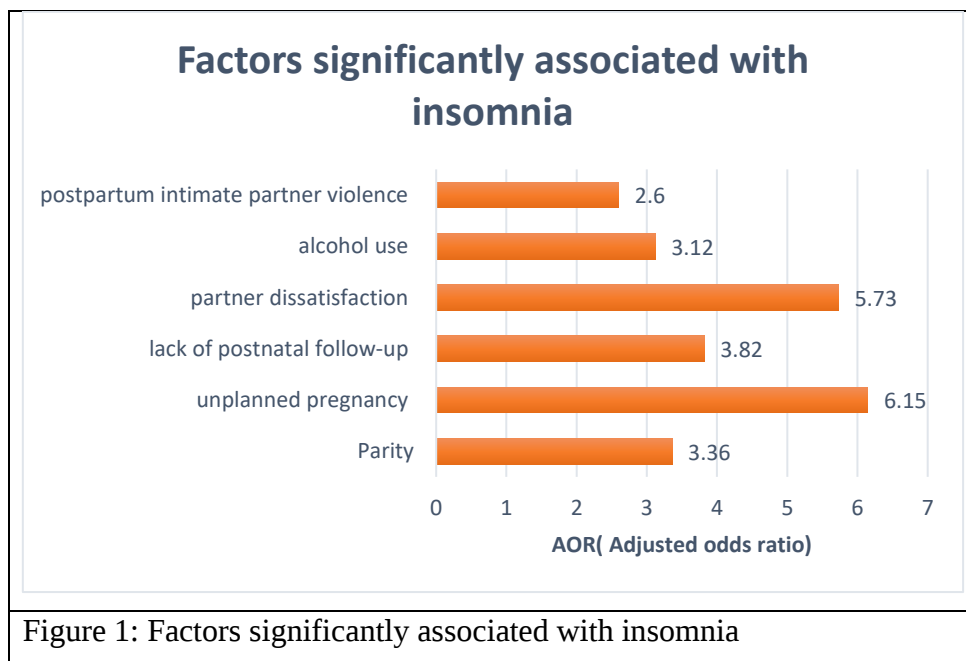
In this community-based cross-sectional study, 441 postpartum mothers were selected randomly. A standardized questionnaire was utilized to conduct the face-to-face interviews. Insomnia was measured using the standardized Athens Insomnia Scale (AIS). The household wealth index was



evaluated using a technique that included 38 items categorized as poor, medium, and high. Data was entered using EpiData version 4.4.2.1 and analyzed using the Statistical Package for Social Sciences version 26. A binary logistic regression analysis was used to identify factors that substantially affected insomnia at a $p < 0.05$.

Results

During the prior pregnancy, most patients (92.1%) received antenatal care (ANC) follow-up. Similarly, most of them (95.6%) gave birth to their first kid at a hospital. Of them, 82.3% gave birth naturally. Approximately 62.1% of interviewees reported having less social support. Approximately 41.3% of the participants experienced intimate partner abuse after giving birth. Furthermore, postpartum depression affected 28.3% of the patients. It was noted that 29.3% of people had insomnia (95% CI: 25, 33.5). Insomnia was found to be significantly correlated with parity (AOR=3.36; 95% CI: 1.88, 5.60), lack of after-birth follow-up (AOR=3.82; 95% CI: 1.85, 7.90), partner dissatisfaction with the gender of the newborn baby (AOR=5.73; 95% CI: 3.23, 10.2), unplanned pregnancy (AOR=6.15; 95% CI: 5.23, 11.55), partner daily alcohol use (AOR=3.12; 95% CI: 1.66), and intimate partner violence after giving birth (AOR=2.60; 95% CI: 4.67) (Figure 1).





Discussion

According to this survey, the prevalence of insomnia is 29.3%. Insomnia was found to be substantially correlated with parity, unexpected pregnancy, lack of after-birth follow-up, partner dissatisfaction with the gender of the newly born, partner daily alcohol usage, and intimate partner violence after giving birth.² According to Gessesse DN et al., 24% of women experienced poor sleep quality throughout the postpartum phase. The following characteristics were strongly linked to poor sleep quality: family size, unexpected pregnancy, a family history of mental illness, known medical conditions, intimate partner abuse, and women who are literate and have completed secondary school.¹ The study by Belete H. and Misgan E. revealed a high percentage of maternal insomnia. Maternal sleeplessness has been related to numerous avoidable risk factors; therefore, postnatal maternal treatments should focus on the mother's sleep health.³

Conclusion

In this study, three out of every ten mothers suffered from insomnia. Therefore, combined support and enhancement of postpartum mother and partner counseling is required from health professionals and health extension workers. In addition, the media and other concerned parties should focus on the highlighted reasons to overcome them.

Postpartum mothers' factitious insomnia was substantially correlated with parity, postnatal full follow-up, partner contentment with the gender of the current infant, status of the current pregnancy, partner daily alcohol usage, and postpartum intimate partner violence.

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2. Prognostic relationship of anxiety and depression in patients with chronic obstructive pulmonary disease

Introduction

Chronic Obstructive Pulmonary Disease (COPD) is the third most prevalent cause of death worldwide. Previous studies have revealed that people with COPD are more likely to experience depression and anxiety than the general population. These patients are at higher risk for death, illness progression, acute exacerbation of COPD (AECOPD), and poor health-related quality of life. Preventing, diagnosing, and treating anxiety and depression in patients with COPD is crucial from a personal and societal standpoint.¹ Furthermore, psychological conditions have also been found to affect COPD prognosis. The prevalence rates of anxiety and depression in people with COPD range from 10% to 65%. Depression and anxiety can worsen symptoms, interfere with treatment compliance, raise medical expenses, and eventually lead to a worse prognosis. It's still unclear how anxiety, depression, and the prognosis of COPD are related.² The purpose of this study was to investigate the relationships between acute exacerbations of COPD and 30-day readmission rates and anxiety and depression.

Methods

In accordance with the PRISMA statement, a systematic review and meta-analysis were carried out to evaluate the influence of depression and anxiety on the prognosis of COPD. The authors searched four databases (PubMed, Cochrane Library, Web of Science, and Embase) with the following keywords: "depression," "anxiety," "readmission," "exacerbations," and "chronic obstructive pulmonary disease." The main findings of this systematic review and meta-analysis were about the effect of anxiety and depression on the prognosis of AECOPD. The major outcomes assessed were the 30-day readmission for COPD and AECOPD throughout the follow-up year. The Newcastle-Ottawa Quality Assessment Scale (NOS), which rates studies according to selection, comparability, and exposure/outcome criteria, was used to independently evaluate the quality of the included research.



Results

According to the pooled analysis, individuals with depression were more likely than those without depression to be readmitted within 30 days (HR: 1.22, 95% CI: 1.12–1.33, $p < 0.001$), with moderate heterogeneity ($p < 0.001$). Patients with anxiety had a greater chance of developing AECOPD within the first year of discharge than those without anxiety (HR: 2.10, 95% CI: 1.28–3.45, $p = 0.003$). Patients with depression had a greater risk of developing AECOPD within the first year of discharge (HR: 1.36, 95% CI: 1.10–1.69, $p = 0.004$) (Figure 1). The relationships between 30-day readmission and anxiety and depression showed similar findings.

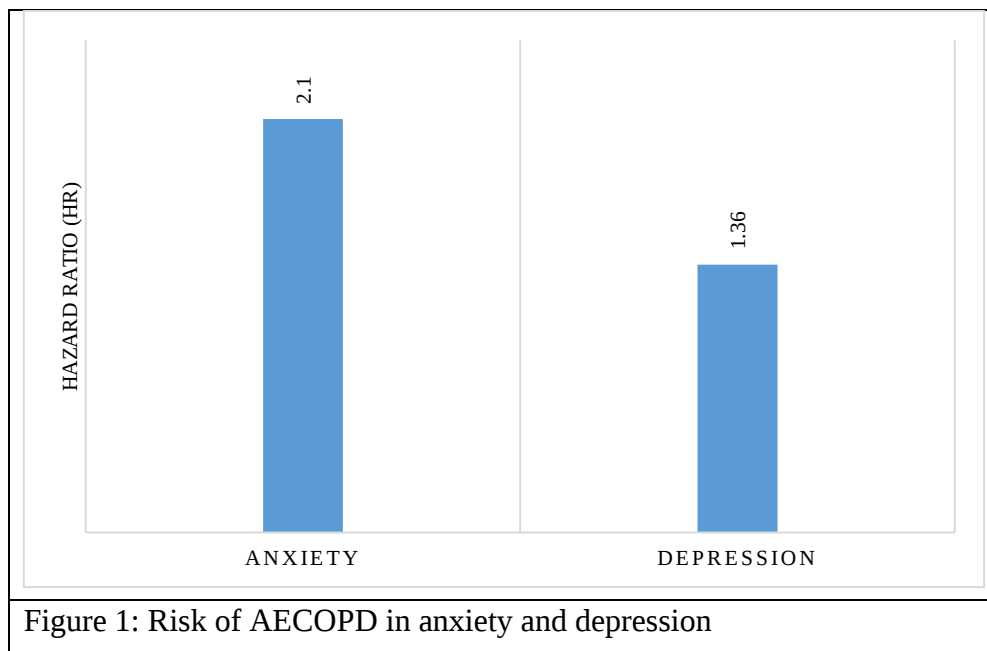


Figure 1: Risk of AECOPD in anxiety and depression

Discussion

In this study, patients with anxiety were more likely than those without anxiety to get AECOPD during the first year following discharge (HR: 2.10). Additionally, within the first year following discharge, patients with depression were more likely to develop AECOPD (HR: 1.36).² A study by Huang J et al. found that after controlling for the impact of family history, disease duration, BMI index, and other variables, anxiety and/or depression will raise the risk of acute exacerbation in patients with chronic obstructive pulmonary disease (AECOPD) (adjusted OR = 1.60, 95% CI: 1.10–2.31).³



Conclusion

Anxiety and depression were related to an increased risk of 30-day readmission and AECOPD in individuals with COPD.

Anxiety and depression have an adverse impact on the prognosis of COPD, increasing the likelihood of readmission and exacerbations.

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3. Prevalence and determinants of first episode psychosis admitted at the time of presentation

Introduction

The first episode of psychosis (FEP) is usually preceded by a period of varying but identifiable early symptoms. These initial symptoms may include attenuated psychotic symptoms, subthreshold symptoms, and non-psychotic symptoms. Early therapies often focus on the time between the development of FEP and the first observable symptom to prevent, delay, or mitigate the transition to psychosis. It may develop gradually over several years or suddenly over a few weeks or months during this initial symptom phase.¹ A clinical population with a high hospitalization rate is those who present with an FEP. Most people with an FEP are admitted to the hospital within two years of diagnosis (35%) and within seven years (55%) of being diagnosed. Since psychotic diseases peak in onset during a critical developmental period late adolescence or early adulthood, admission may be more restrictive for the individual. According to young individuals who have been admitted to hospitals, it can be a terrible experience and interfere with their plans for their education and careers.



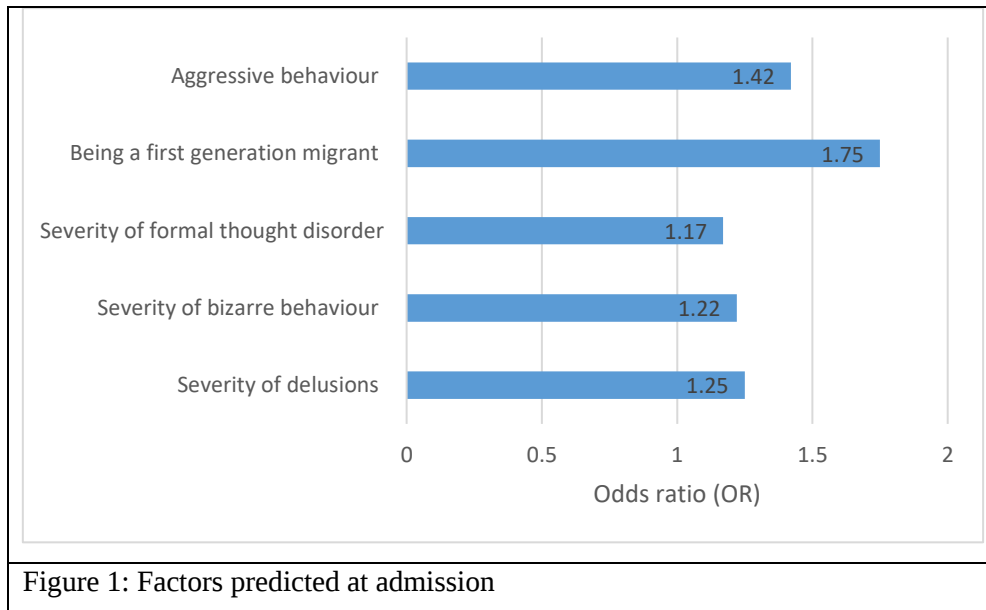
Identifying people who are at high risk of hospitalization and possibly creating treatments that offer alternate ways to provide care in place of admission would be made possible by advancing knowledge of the factors that influence admission.² This study was conducted to assess the proportion of people with FEP who were admitted at the time of presentation (voluntarily or unwillingly) and to identify relevant demographic and clinical characteristics.

Methods

This cohort study included 1220 adolescents who were treated at the Early Psychosis Prevention and Intervention Center (EPPIC) after presenting with FEP. The EPPIC is one of Orygen's specialist streams, offering comprehensive care to young individuals having their first episode of psychosis. The Scale for the Assessment of Positive Symptoms (SAPS) is used for assessing the severity of psychotic symptoms. This tool assesses positive psychotic symptoms in four areas: formal thought disorder, delusions, hallucinations, and unusual behavior. Each item was given a score between 0 and 5, which was determined using patient records data. The Health of the Nation Outcome Scales (HoNOS) were used to measure self-harming and violent behavior at the start of the service, and it was completed by the mental health professional who worked most closely with the young person. The odds ratios were calculated using binary logistic regression, both unadjusted and adjusted.

Results

The median age of 1208 participants was 20 years (I.Q.R. 17–22) and 58.6% of them were male. About 50.2% were admitted at the time of presentation. The severity of delusions (OR = 1.25, 95% CI [1.12, 1.40]), bizarre behavior (OR = 1.22, 95% CI [1.10, 1.36]), formal thought disorder (OR = 1.17, 95% CI [1.04, 1.32]), being a first-generation immigrant (OR = 1.75, 95% CI [1.17, 2.62]), and aggressive behavior (OR = 1.42, 95% CI [1.02, 1.99]) were the factors that remained significant on multivariate analysis after controlling for potential confounding variables (Figure 1). Lower admission rates were linked to longer periods of untreated psychosis. The involuntary hospitalization rate was 70.1% (33.7% of the cohort). Risk variables for involuntary admission were consistent with any admission, except aggressiveness, and included older age and male sex.



Discussion

Primary as well as secondary prevention is a fundamental part of early intervention for psychosis treatments. Ultra-high-risk psychosis clinics were created to identify youth who are more likely to acquire a psychotic disorder, treat any co-occurring disorders with evidence-based care, and stop the development of a full-threshold psychotic condition.³ The ultra-high-risk clinics also have a secondary prevention component, and young persons with FEP who first came through an ultra-high-risk clinic had a nearly halved probability of admission compared to those who presented directly to the FEP service.⁴

Conclusion

Even in a well-established early intervention program, the severity of psychopathology is the best predictor of FEP admission, which is still high. Also, there was an independent correlation exists between admission and migrancy. Potential explanations for these findings are studied, as well as measures to lower admission rates, such as (i) preventative treatments and (ii) alternate care routes.

Early intervention and the identification of ultra-high-risk patients allow to tailor the first episode of psychosis (FEP) service delivery to stop the condition from becoming worse and reaching the severe stage.



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4. Case Report on personality changes and psychosis following traumatic brain injury

Introduction

Traumatic brain injury (TBI) is a primary cause of physical and mental impairment and can result from physical assault, falls, car crashes, or injuries sustained in sports. Approximately 64–74 million people worldwide suffer moderate to severe TBIs each year. According to estimates, there are 100–749 newly diagnosed TBI cases worldwide for every 100,000 individuals.¹ Psychotic symptoms and illnesses are widespread after TBI. TBI can cause acute symptoms like delirium, agitation, and confusion. Chronic sequelae are frequently overlooked and might manifest as alterations in cognition, memory, perception, language, IQ, personality, mood disorders, or psychoses. It is believed that neuroplasticity plays a role in the pathophysiology of these latter effects. According to a theory, TBIs promote neural remodeling, which may harm people who are already at risk of schizophrenia. After TBI, it has been demonstrated that the emergence of positive psychotic symptoms is associated with alterations in the hippocampus, namely volume reduction, which results in dopamine circuit dysregulation, a process linked to schizophrenia. Most reported cases of post-TBI psychotic disorder have been males, with symptoms appearing within two years of moderate to severe head injury, imaging revealing localization to the frontal and temporal areas, and predominantly positive symptomatology including delusions and hallucinations. The Brain Injury Personality Scale was created to categorize and assess the degree of personality changes that occur after traumatic brain



injury.² This case provides a method for determining how specific, frequent, and fundamental clinical characteristics of the disease are linked to pathophysiology in specific cerebral cortical circuits.

Case presentation

A 63-year-old male patient was admitted to the hospital with a medical history of hypertension, chronic kidney disease, and TBI. The patient was receiving dialysis three times a week. At the age of 18, he was notable for having been shot in the head, with the bullet passing through his right frontal bone. According to his sister, he was intelligent, gregarious, and had many

friends before his disability. After the experience, he was diagnosed with schizophrenia over a period of years. He developed paranoid delusions and auditory hallucinations over time. He also had personality changes, such as impulsivity, "excessive spending of money in gambling and in buying unnecessary things," and a short fuse. The patient has previously been admitted as an inpatient with decompensated mental disease to a psychiatric hospital. The patient is taking 50 mg of sertraline for mood and 3 mg of risperidone for psychosis. He currently lives alone and can carry out all his everyday tasks, including eating, dressing,

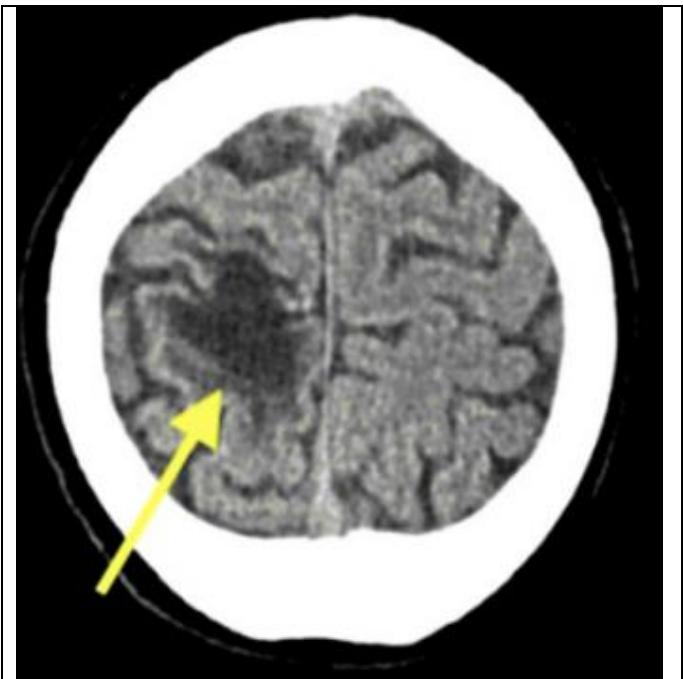


Figure 1. A non-contrast axial CT scan of the head shows a calvarial malformation slightly above the right frontal convexity region, indicated by yellow arrows.

and taking a shower. He arrived at the hospital with a history of depressive mood, aggressive conduct, and suicidal ideas, as well as an internal preoccupation with chaotic thoughts. The patient's impulsivity and violence can be explained by a variety of differential diagnoses, such as substance-induced psychosis, frontotemporal dementia, chronic traumatic encephalopathy, and psychosis after TBI. The CT head without contrast showed a deformity in the calvarium immediately above the right frontal convexity region (Figure 1) and an area of encephalomalacia in the same region (Figure 2).



Discussion

Significant brain damage can disturb the body's normal chemical balance, resulting in psychosis. The medical literature strongly supports the theory that TBI causes depression, sleeplessness, PTSD, and drug abuse. Additionally, there is a significant chance that TBI can result in the development of other mental disorders, and newly developed secondary psychosis must be taken into consideration as a significant differential in TBI patients.¹ So, identifying prior TBIs is critical in the clinical examination of a mental condition to make an accurate differential diagnosis with psychosis.³

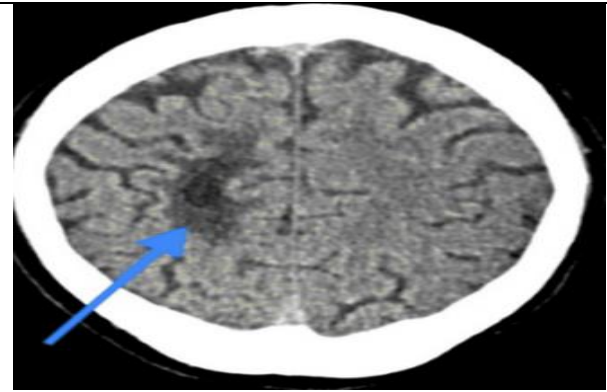


Figure 2. CT head without contrast: Blue arrows indicate encephalomalacia in the right frontal convexity region.

Conclusion

According to this theory, brain trauma may interfere with vital neuronal circuits that are necessary for preserving emotional and cognitive control, especially those related to dopamine regulation and frontal-limbic brain networks. As a result, people who have TBI may be at a higher risk of acquiring psychotic disorders. Although there is sufficient evidence of a robust correlation between TBI and the beginning of psychosis, causality has not been shown. Numerous factors, including genetic susceptibility, pre-existing mental health disorders, and environmental triggers, are probably involved in this connection.

Traumatic brain injury (TBI) can cause long-term problems in cognitive function, emotional regulation, and behavioral control. It can range in severity from minor concussions to serious brain injuries.



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