



Volume 2 | Issue 8 | 2023

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Best Regards,

Medical Team, Micro Labs Limited.

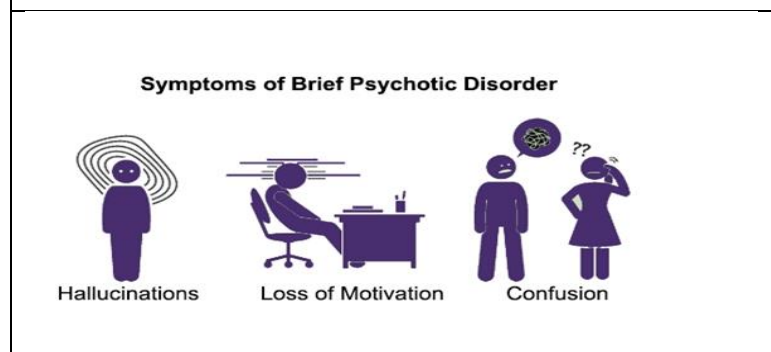


1. A study on the prevalence of severe hyponatremia in individuals with and without psychotic disorders.

Introduction:

Hyponatremia is described as a low serum sodium concentration. This condition is diagnosed when the sodium concentration falls below the lower reference limit of 135 mmol/L. One of the most well-known water-electrolyte abnormalities in the human body is hyponatremia. Its frequency ranges from 15 to 30% among hospitalised patients, and it can reach 40% in critical care units (ICU) ⁽¹⁾. Hyponatremia is common in psychiatric patients because it may develop as a result of polydipsia or as a side effect of antipsychotics and antidepressants. The purpose of this study is to look at the characteristics, aetiology, and clinical course of individuals with and without psychiatric disorders who have acquired severe hyponatremia ⁽²⁾.

Fig1:psychotic disorder symptoms



Methods:

This study examined retrospectively at cases that had a serum sodium content of ≤ 125 mmol/l on admission. This study evaluated inpatient medical records and collected clinical data such as age, gender, primary reason for admission, laboratory data, hyponatremia aetiology, comorbidities, underlying mental illnesses, medication, and clinical outcomes. The χ^2 test, Fisher's

Table 1:Hyponatremia etiology.

Psychiatric <i>n</i> = 69		Nonpsychiatric <i>n</i> = 54	
Polydipsia	30.4%	Unknown	37.0%
Gastrointestinal loss of sodium	21.7%	Low intake	22.2%
SIADH	18.8%	Heart or renal failure	18.5%
Unknown	15.9%	SIADH	13.0%
Low intake	14.5%	Polydipsia	5.6%
Heart failure, renal failure	4.3%	Gastrointestinal loss of sodium	5.6%

Abbreviation: SIADH, syndrome of inappropriate secretion of antidiuretic hormone.

exact test, and t-test were used to compare psychiatric and nonpsychiatric patients, and IBM SPSS Statistics 22 was employed for the statistical analyses.

Results:



A total of 123 cases (62 female) were studied. In 69 patients (56%), psychiatric conditions were present, including schizophrenia ($n = 19$), anorexia ($n = 16$), mood disorders ($n = 14$), and organic mental diseases ($n = 9$). The average age of the patients was 63 years. On admission, the mean blood sodium concentration was 119 mmol/l, and the most common causes of hyponatremia were polydipsia (20%), inadequate sodium intake (18%), and syndrome of inappropriate antidiuretic hormone production (16%) (table 1). The psychiatric group was substantially younger (55 vs. 74 years), more likely to have polydipsia (30% vs. 6%), and had lower in-hospital mortality (0% vs. 17%) than the nonpsychiatric group.

Discussion:

The researchers discovered differences in patient features, aetiology, and mortality from hyponatremia in individuals with and without psychiatric conditions. Patients suffering from psychiatric illnesses were younger and had fewer underlying diseases.

In a research, Kondo S et al find that life expectancy is lower in people with psychotic disorders than in the general population, and this is linked to natural causes such as cardiovascular disease and infections rather than suicide. In contrast, in this study mortality in psychiatric cases was lower than in nonpsychiatric cases⁽³⁾.

Conclusion:

This study discovered clinical differences in psychiatric and nonpsychiatric patients with severe hyponatremia. According to study results, hyponatremia patients were frequently admitted to hospitals for conditions unrelated to their condition. Regular serum sodium monitoring is essential since hyponatremia in mental patients is common. When patients with psychiatric disorders complain of fatigue or loss of appetite, doctors should take hyponatremia into account because these symptoms might also be caused by psychiatric problems other than hyponatremia.

In this study, the clinical profiles of psychiatric and nonpsychiatric patients with severe hyponatremia differed. Clinicians must monitor blood sodium levels since hyponatremia symptoms might mimic those of mental illnesses.

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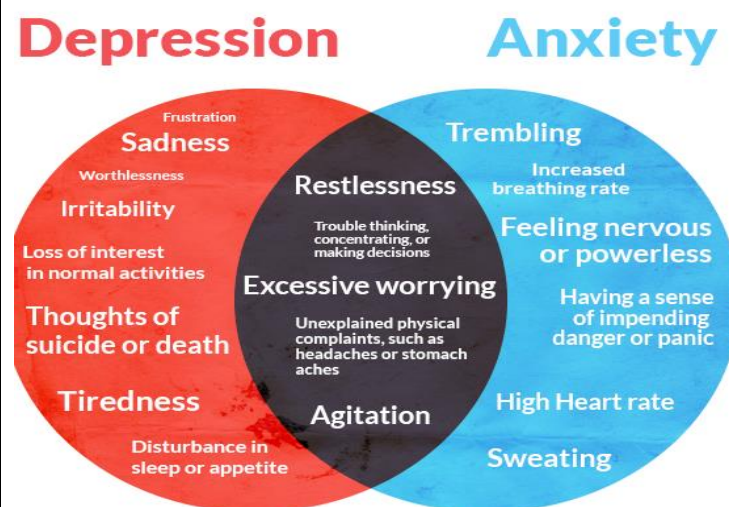


2. Psychometric characteristics and normative data for 8- to 17-year-olds in the Revised Children's Anxiety and Depression Scale

Introduction:

Anxiety and depression are two internalising psychiatric disorders that commonly begin in infancy and manifest themselves in adolescence. They are among the diseases that young people have the most often diagnosed. Depression and anxiety disorders are more likely to proceed into adulthood if they are not identified and treated in a timely manner ⁽¹⁾. The Revised Children's Anxiety and Depression Scale (RCADS) is suggested for use in paediatric patients with chronic pain by the

Fig1: Distinguishing Depression From Anxiety



Paediatric Initiative on Methods, Measurement, and Pain Assessment in Clinical Trials. The RCADS is a reliable and valid tool for evaluating the depression and anxiety symptoms in children and adolescents between the ages of 8 and 18 ⁽²⁾. RCADS is one of the most often utilised assessment tools for depression and anxiety in children and adolescents. This study's objectives were to examine RCADS validity (factorial, convergent, known groups) and reliability (internal consistency) in a representative sample and to give norm data ⁽¹⁾.

Methods:

There were a total of N = 446 elementary school students and N = 2209 secondary school students who might have taken part in the study. The number of full data sets needed for statistical analysis was N = 1562, which is equivalent to a participation percentage of 98.5% among all initially enrolled students. The sample's gender distribution (n = 818 girls, 52. 4%) was balanced. Participants responded to questions on their demographics, functional disability, anxiety, depression, and HRQoL.



The IBM Statistical Package for Social Sciences version 28 for Windows was used to analyse statistical data.

Results:

With a Cronbach's alpha of 0.96, the internal consistency for the Total Internalising Score of the RCADS was quite high. Cronbach's alpha for the subscales varied from 0.73 (OCD) to 0.89 (SP). Confirmatory factor analysis demonstrated that the 6 factor model had a better model fit than the 1 and 2 factor models, with CFI = 0.93, TLI = 0.93, RMSEA = 0.05, and SRMR = 0.05. The (sub)scales showed moderate to strong negative correlations ($0.31 \leq \tau \leq 0.48$; $p < 0.001$) with functional impairment and moderate to strong negative correlations ($-0.31 \leq \tau \leq -0.51$; $p < 0.001$) with health-related quality of life (table 1). Girls and certain adolescents had considerably higher mean scores on the anxiety and depression measures.

Table 1: τ -Correlations of the RCADS with functional impairment and HRQoL								
	MDD	GAD	OCD	PD	SAD	SP	Total anxiety scale	Total internalising scale
HRQoL	-0.51*	-0.32*	-0.34*	-0.38*	-0.31*	-0.39*	-0.41*	-0.47*
Functional Impairment ^a	0.48*	0.32*	0.36*	0.42*	0.31*	0.36*	0.41*	0.45*
- Abbreviations: GAD, generalized anxiety disorder; HRQoL, Health-Related Quality of Life, measured with KIDSCREEN-10; MDD, Major depressive disorder; OCD, Obsessive-compulsive disorder; PD, Panic disorder; SAD, Separation anxiety disorder; SP, Social phobia. ^a Measured with FDI, Functional Disability Inventory. * Significant at $p \leq 0.006$ after Bonferroni correction.								

Discussion:

The RCADS is a measuring instrument that has been extensively validated to evaluate anxiety and depression in children and adolescents from both clinical and community populations.

The RCADS (sub)scales' strong internal consistency of this study is in line with Piqueras et al.'s assessment, which noted strong RCADS dependability across a variety of contexts and nations ⁽³⁾.



The correlations between symptoms of MDD and both HRQoL and functional impairment were stronger than those between symptoms of anxiety and those same two impairment criteria, suggesting that depression may be more difficult in everyday life for children and adolescents than are anxiety disorders. A study by Klaufus et al., which demonstrated that depression causes a larger individual burden of disease than anxiety, supports these conclusions⁽⁴⁾.

Conclusion:

The RCADS is a valid and dependable assessment instrument to evaluate anxiety and depressive symptoms according to the Diagnostic and Statistical Manual of Mental Disorders(DSM). The diagnostic usefulness of the RCADS should be increased by setting cutoff points through additional validation studies in significant clinical samples.

According to the Diagnostic and Statistical Manual of Mental Disorders(DSM), the Revised Children's Anxiety and Depression Scale (RCADS) is a reliable and accurate assessment tool for assessing anxiety and depressive symptoms.

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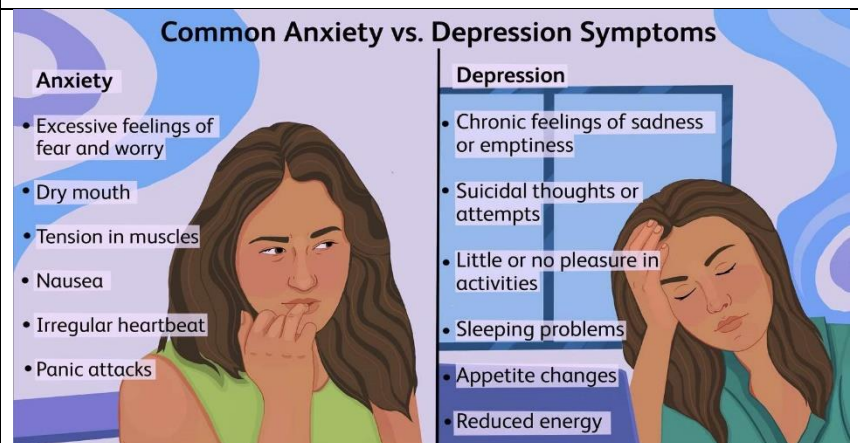


3.The development of suicidal thoughts and suicide attempts and their correlation with specific anxiety and depressive symptoms.

Introduction:

Suicide is a significant global public health issue. The lifetime prevalence rates for suicidal thoughts and suicide attempt are respectively 9.2% and 2.7% worldwide. Younger people are more likely than older people to attempt suicide, while older people are more likely to complete suicide. Major depressive disorder (MDD) is a mental illness that affects approximately 90% of suicide victims ⁽¹⁾. The association between affective disorders and suicide in young people is widely known, but there is

Fig1:Anxiety and depression symptoms



now rising evidence that anxiety disorders play a part in young people's suicidal thoughts and behaviour. This study aimed to evaluate the predictive role of the Symptoms of anxiety, depression and distress in onset of ideation, planning for suicide and suicide attempts ⁽²⁾.

Methods:

This cluster randomised controlled study examined the effects of an 18-month school-based intervention on young people who need support. A measure of current suicidal thoughts from the previous month and the existence of suicidal activity (plan and attempt) over the previous 12 months were included in the outcome variables. The Suicidal Ideation Attributes Scale (SIDAS), a five-item screener that measures the frequency, controllability, distress, and impairment associated with suicidal thoughts, and proximity to suicide attempt, was used to determine the severity of active suicidal ideation.

Results:



An 18-month follow-up was completed by 786 individuals out of a total of 1428 who had completed baseline data. At baseline, anxiety, insomnia, and worry that interfered with daily activities predicted a recurrence of suicide thoughts 18 months later. Later suicide intentions and attempts were more likely to occur when there was anxiety about the present and the past, decreased appetite, and the conviction that life was not worth living. Generally speaking, total scale scores on the scales were a poor indicator of the initiation of suicidal behaviour. At the 18-month follow-up, the predictors for the beginning of making a suicide attempt (Table 1) are similar to those for making a suicide plan, including worrying about the future (51.0%) and believing life wasn't worth living (Population Attributable Fraction(PAF): 40.1%), with sleeping too little and worrying about the past no longer being significant but still having substantial PAFs. Scores above the threshold for depression or anxiety were linked to high PAF but did not significantly predict the beginning of suicide attempts at 18 months.

Table 1. Adjusted odds ratios, prevalence, population attributable risk fraction of anxiety, depression and distress symptoms at baseline predicting onset of a suicide attempt at 18 months ($n = 498$).

	Adj OR	Prevalence	PAF
Anxiety Symptoms (GAD SCARED)			
I worry about other people liking me	2.95	24.8 %	32.6 %
I worry about what is going to happen in the future	4.81*	27.3 %	51.0 %
I worry about things that have already happened	3.11	27.7 %	36.8 %
Life wasn't worth living	6.87*	11.4 %	40.1 %
Sleeping too little	2.84	32.2 %	37.2 %
Reduced appetite	4.93*	14.2 %	35.8 %

Notes. Odds ratios adjusted for gender and intervention group. GAD SCARED = Generalised Anxiety Disorder subscale of the Screen for Child Anxiety Related Disorders. MDI = Major Depression Inventory. DQ5 = Distress Questionnaire 9.

Discussion:

According to this study's findings, suicidal ideation at the 18-month follow-up differed significantly from suicide intentions and attempts in a number of factors. Suicidal ideation was substantially



correlated with two worry-related variables, satisfying the general criteria for anxiety, and a functional impairment due to anxiety item ⁽²⁾.

Worrying about other people's perceptions was another frequent predictor across all suicidality outcome factors. This is consistent with the study results of Campisi et al that suicide thoughts and attempt are highly related with social problems in this age range ⁽³⁾.

The impact of insufficient sleep in subsequent suicidal ideation and behaviours was identified as a shared risk factor across all investigations. This result is in consistent with the Harris et al study that sleep disruption as a risk factor for suicidal thoughts and behavior ⁽⁴⁾.

Conclusion:

The relevance and possible role of certain symptoms in predicting future suicidality are highlighted by the current investigation. Insufficient sleep, worry about the future, and social anxiety are major contributors to adolescent's suicidality, and they provide possible targets for therapy. Future studies should focus on the possible significance of anxiety symptoms in the future development of suicidal thoughts and behavior and analyse suicide studies at the symptom level rather than the whole scale level.

These results highlight specific symptom patterns linked to the later start of suicidal behaviours. It's crucial for public health and therapeutic settings to expand the focus beyond feeling hopeless and depressed to include stress, anxiety, and insomnia as risk factors for suicidality.

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4. A case report of Alice in Wonderland Syndrome (AIWS).

Introduction:

The syndrome known as Alice in Wonderland Syndrome (AIWS) is characterised by visual distortions (metamorphopsia), such as the perception of objects or body images as larger or smaller than normal, longer or shorter, thinner or thicker than normal, or as being farther away than normal (teleopsia) or closer than normal (pelopsia), as well as visual hallucinations ⁽¹⁾. This is a syndrome that impairs all of your senses and perception. Vision, touch, and hearing are all impacted in the same way. These sensations are not caused by problems with the eyes, hearing, or hallucinations. It is instead changes in how the brain interprets the surroundings. Because of the uncommon and unexpected observations made by patients, this disease was dubbed "Alice in Wonderland Syndrome" (AIWS) in the 1950s. This is an instance of a patient who has migraines with prior auras, which is typical with AIWS ⁽²⁾.

Case Report:

A patient with normal neurodevelopment came to the hospital complaining of vibrating headaches on the left side of his head. The pain lasted more than 24 hours and returned every 2 months. He had nausea, photophobia, and phonophobia prior to the migraines. He described the objects around him as varied in size and shape. The visual abnormalities had been happening for over a year and had been increasingly common in the previous several months. His physical evaluation was routine, and his psychological test revealed no abnormalities. He was aware and well-oriented to time, location, person, and circumstance, according to the psychiatric assessment. Neurological examinations were



(A) Alice experiences partial macrosomatognosia, and (B) Alice experiences total-body microsomatognosia

normal, and brain MRI and EEG revealed no abnormalities. A full blood test was carried out and all findings were within normal ranges. The DSM-IV Axis 1 Disorder Structured Clinical Interview was used. The Hamilton Depression Rating Scale (HDRS) score was 17 and the Beck Anxiety Inventory score was 13. His symptoms improved when he was given 500 mg of valproic acid daily. During his



follow-up, his daily valproic acid dose was increased to 1000 mg/day, and his problems were entirely resolved. Migraines with aura are primary headaches in which focal neurological symptoms develop during a 10-minute period. Visual abnormalities, sensory problems, muscular difficulties, and/or speech impairments are all possible. In this case study, our client displayed symptoms compatible with AIWS.

Discussion:

Since 1955, around 170 cases of AIWS have been described in the literature, with the majority of individuals being under the age of 18. In a study of 3224 participants aged 13 to 18, Palacios-Sanchez et al discovered that the prevalence of micropsia and macropsia was 6.5% and 7.3%, respectively, in males and females. This shows that visual illusions in AIWS are more common than previously thought ⁽³⁾.

Despite the fact that the pathophysiology of migraines is not completely known, it is clear that both the peripheral and central nervous systems are involved. The AIWS could potentially cause by irregular blood flow in the regions of the brain that control vision and texture. According to studies, aura and headaches are both caused by vasoconstriction. Trigeminal afferents are activated by neuronal pannexin-1 mega channel opening, which is followed by the activation of caspase-1, the release of proinflammatory mediators, and the activation of NF-kB (nuclear factor Kappa-B) around the trigeminal nerve fibres around the vessels of the pia mater ^(4,5).

Conclusion:

Many practitioners and researchers throughout the world remain confused by AIWS' ambiguity. AIWS does not have standard treatment plan. Doctors may provide migraine preventative medicine, antibiotics, or antivirals depending on the Patient specific circumstances. AIWS has inspired considerable scientific attention in the last five years. This is mostly due to increased interest in researching the brain network and breakthroughs in neuroimaging diagnostics in neuroscience, psychiatry, and neurology.

The Alice in Wonderland Syndrome (AIWS) is defined by visual distortions (metamorphopsia), such as the perception of objects or body images as larger(macropsia), or smaller(micropsia), than normal, longer or shorter, thinner or thicker than normal, farther away (teleopsia) or closer than normal (pelopsia), as well as visual hallucinations.



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