Cardiovascular disease and mortality in people with psychosis – a health record study [abstract only]

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framework (inner CV: 10×10; outer CV: 10×10). Classification relied on cortical and subcortical correlations of grey matter volume (GMV), from T1-weighted magnetic resonance imaging, and fractional amplitude of low-frequency fluctuations (fALFF) in the slow-3, slow-4, and slow-5 bands, from resting-state functional MRI, with the distribution of 25 normative neurotransmitter maps using JuSpace [1] methodology. Imaging data were corrected for age, sex, and site: GMV was adjusted via dynamic standardization to construct a normative reference sample and fALFF via partial correlations and offset correction.

The factor solution with the highest explained variance (89.3%) included four symptom dimensions: avolition-asociality, expressive deficits, cognitive disorganization, and positive symptoms. Correlations with the fALFF slow-3 frequency band yielded the best performance for avolition-asociality (balanced accuracy [BAC]: 58.1%, AUC: 0.55, sensitivity: 63.8%, specificity: 52.3%) and cognitive disorganization (BAC: 73.7%, AUC: 0.76, sensitivity: 71.4%, specificity: 75.9%). For expressive deficits and positive symptoms, the fALFF slow-4 band provided the highest accuracy (expressive deficits: BAC: 65.0%, AUC: 0.70, sensitivity: 63.0%, specificity: 67.1%; positive symptoms: BAC: 63.3%, AUC: 0.66, sensitivity: 67.8%, specificity: 58.9%).

These findings suggest that symptom dimensions in recent-onset psychosis are differentially associated with specific functional patterns co-localizing with normative neurotransmitter distributions. The integration of dimensional symptom modelling with neurochemical-informed neuroimaging offers a promising path toward more biologically grounded classification approaches.

Factor-Modality	BAC	Sensitivity	Specificity	AUC
F1-GMV	50.92	53.01	48.84	0.51
F1-fALFF_slow3	58.05	63.77	52.34	0.55
F1-fALFF_slow4	57.96	57.97	57.94	0.61
F1-fALFF_slow5	48.89	46.38	51.40	0.49
F2-GMV	62.20	70.18	54.23	0.66
F2-fALFF_slow3	62.15	65.22	59.09	0.63
F2-fALFF_slow4	65.04	63.04	67.05	0.70
F2-fALFF_slow5	59.98	60.87	59.09	0.65
F3-GMV	61.23	65.00	57.46	0.66
F3-fALFF_slow3	73.67	71.43	75.90	0.76
F3-fALFF_slow4	52.85	55.10	50.60	0.55
F3-fALFF_slow5	59.34	63.27	55.42	0.68
F4-GMV	55.43	57.55	53.31	0.58
F4-fALFF_slow3	58.08	58.62	57.53	0.60
F4-fALFF_slow4	63.36	67.82	58.90	0.66
F4-fALFF_slow5	54.30	55.17	53.42	0.57

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IN PSYCHIATRY, NOT ALL THAT TREMBLES IS PARKINSONISM: WILSON'S DISEASE AS DIFFERENTIAL DIAGNOSIS FOR EXTRAPYRAMIDAL SYMPTOMS IN A YOUNG ADULT

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Background: Wilson's Disease is an autosomal recessive disorder of copper metabolism caused by ATP7B dysfunction, resulting in toxic copper accumulation in the liver, brain, and other organs. Psychiatric symptoms—ranging from mood disturbances and psychosis to cognitive and behavioral changes—are common and may precede more typical hepatic and neurological signs. In some cases, psychiatric and neurological symptoms represent the only early manifestations, emerging before overt hepatic involvement. In young males, such features are often misinterpreted as drug-related side effects, leading to delayed diagnosis and treatment. [1,2]

Case description: In October 2022, a 21-year-old man presented to the emergency department with a progressively worsening motor syndrome, including left upper limb dystonia, intentional tremor, postural rigidity, plastic hypertonia, balance and gait disturbances, dysphagia for solids, hypomimia, involuntary vocalizations, dysmetria, and reduced responsiveness. Anamnestic reconstruction was limited by poor caregiver insight. The patient had a history of family dysfunction leading to social service involvement. Over the previous two years, he had been hospitalized twice for psychotic episodes following polysubstance use (cannabis, ketamine, MDMA). During those admissions, he experienced severe extrapyramidal symptoms (diplopia, dystonia) and sedation while on antipsychotic therapy, prompting multiple treatment adjustments. At the time of his current presentation, he was being treated with high-dose haloperidol and biperiden. A urine toxicology screen was performed in the emergency department and returned negative. The initial clinical impression was iatrogenic parkinsonism within a catatonic framework. Pharmacological treatment with clozapine and lorazepam was therefore initiated, resulting in only partial improvement of motor symptoms. Due to the persistence and atypical features of extrapyramidal symptoms (EPS), an organic etiology was suspected. A brain CT scan revealed extensive hypodensities in the mesial white matter and cerebellar hemispheres, involving dentate nuclei and cerebellar peduncles bilaterally. Hospitalization was proposed due to the broad differential diagnosis—including extrapyramidal symptoms, psychotic catatonia, substance use disorder, neurodevelopmental disorder, metabolic disease, and Munchhausen Syndrome by proxy. However, it was refused by the caregiver. Following the CT scan, which was suggestive of a metabolic disorder, a second visit to the emergency department allowed for the prescription of a brain MRI and specific investigations for Wilson's Disease (including oculistic evaluation). However, these exams were postponed due to the patient's inability to perform them. Three months later, the patient finally underwent the MRI, which revealed bilateral hyperintensities in the basal ganglia and cerebellar peduncles. Subsequent tests confirmed the suspicion: ceruloplasmin 0.03 g/L, serum copper 16 μg/dL, and elevated urinary copper. The diagnosis was formally established in a hepatology unit in June 2023, only approximately eight months after the initial clinical suspicion.

Conclusions: As the scope of psychiatry continues to expand and knowledge of autoimmune, metabolic, and genetic conditions advances, psychiatrists are increasingly required to recognize, beyond the psychiatric phenotype, clinical presentations driven by organic etiologies. Early suspicion, appropriate diagnostic work-up, and interdisciplinary collaboration are essential o avoid diagnostic delays and adverse outcomes for the patients.

Though uncommon, Wilson's Disease should be considered in the differential diagnosis of early-onset extrapyramidal and behavioral symptoms, especially when symptoms worsen with antipsychotics.

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CARDIOVASCULAR DISEASE AND MORTALITY IN PEOPLE WITH PSYCHOSIS – A HEALTH RECORD STUDY

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Introduction: People with schizophrenia have a life expectancy reduced by approximately 15 years, with cardiovascular disease (CVD) being a major contributor to this mortality (Tiihonen et al., 2016). Multiple modifiable risk factors for CVD, such as obesity, smoking, diabetes, hypertension, dyslipidemia, and metabolic syndrome, are more prevalent in this population, while delayed diagnosis and treatment of physical illnesses further compound these risks. Determining the relative contribution of these and other factors, including antipsychotic drug treatment, to the development of CVD is an essential step in understanding how to mitigate morbidity and mortality of physical illness in this vulnerable group. We report here a preliminary analysis of the association of psychosis with CVD and mortality in a mainly urban region of the UK.

Methods: This retrospective case-control observational study uses data from NHS Research Scotland Safe Haven to investigate the determinants of cardiovascular disease (CVD) and mortality in people with psychosis in the greater

Glasgow region. The sample included subjects aged 18 or over with a diagnosis of schizophrenia or related psychotic illness, made before the age of 45, on the index date of 1.1.2010. A control group with no history of neurological or psychiatric illness was matched to the psychosis group. Data on CV diagnoses and death were collected along with metabolic markers including body weight (BMI), glucose and lipids, haematological and inflammatory markers, basic vital and epidemiological data and drug treatment.

Results: An initial sample of 1669 people with psychosis and 35763 control subjects were identified. Preliminary analysis confirms that individuals with psychosis have a significantly higher risk of a diagnosis of CVD compared to the control sample (36.79% vs 6.56%, $p<0.0001$), with differences observed across multiple CVD subtypes. Subjects with a psychosis diagnosis had a subsequent higher mortality (21.75% vs 2.94%, $p<0.0001$) than the control group. Of these, CVD was associated with 32.51% psychosis vs 35.45% control deaths ($p=0.016$). However, in people with CVD, a diagnosis of psychosis was related to greater mortality (19.22% vs 15.87%, $p=0.047$).

Conclusions: These preliminary results demonstrate a very strong association between cardiovascular disease and psychotic illness in a cohort from a relatively deprived UK region. All-cause death is also substantially elevated in people with psychosis, although CVD does not demonstrate a disproportionately greater contribution to death in this cohort. This suggests that, unless CVD is underdiagnosed in subjects dying with psychosis, which is certainly a possibility, there are other factors contributing equally to the low life expectancy of people with psychosis.

It is intended to build on these preliminary findings to investigate the contributing factors to CVD diagnosis and mortality in this patient group from the various biochemical, epidemiological and drug treatment data available. Nevertheless, the current results underscore the necessity for vigilant cardiovascular risk monitoring in individuals with a schizophrenia spectrum diagnosis.

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SLEEP HEALTH DISPARITIES ACROSS GENDER IDENTITY AND SEXUAL ORIENTATION: A CROSS-SECTIONAL STUDY IN THE ITALIAN LGBTQIA+ POPULATION

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Introduction. Sleep health in the LGBTQIA+ population can be compromised by factors such as minority stress and discrimination [1]. Chronic exposure to stigma and exclusion often affects psychological and physical health, leading to poorer sleep quality [2]. Moreover, transgender individuals undergoing gender-affirming hormone therapy experience alterations in sleep patterns related to circadian regulation and sleep architecture [3]. The aim of the present study was to investigate sleep health among LGBTQIA+ individuals compared to the heterosexual cisgender population.

Methods. A cross-sectional observational study was conducted on a large sample ($N = 754$) recruited in various Italian regions. Participants completed two validated instruments: the Pittsburgh Sleep Quality Index (PSQI) to assess sleep quality across several domains (subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of hypnotic medication, and daytime dysfunction), and the Nightmare Distress Questionnaire (NDQ) to evaluate distress related to nightmares (arousal, sleep disturbance, cognitive impact, and total distress). Differences across gender identity (cisgender females, cisgender males, transgender individuals – including both transgender binary and transgender non-binary individuals) and sexual orientation (heterosexual, homosexual, bisexual, other) were analyzed separately. Group comparisons were conducted using the non-parametric Kruskal-Wallis test, followed by post-hoc pairwise analyses with Bonferroni correction to identify specific differences between subgroups.

Results. Among gender groups, transgender individuals showed significantly poorer sleep outcomes across all PSQI and NDQ dimensions compared to cisgender females and males, including lower subjective sleep quality (1.5 vs 1.3 and 1.1), longer sleep latency (1.7 vs 1.2 and 1.0), greater use of hypnotics (0.7 vs 0.3 and 0.2), more daytime dysfunction (1.4 vs 1.1 and 1.0), and a higher global PSQI score (8.3 vs 6.2 and 5.4). Similarly, transgender individuals exhibited greater nightmare-related distress, with higher scores in arousal (6.3), sleep disturbance (6.0), cognitive impact (5.2), and total NDQ scores (17.5). Regarding sexual orientation, unexpectedly individuals identifying as bisexuals reported the worst sleep parameters: they had higher subjective sleep quality impairments (1.5 and 1.3), longer sleep latency (1.6 and 1.3), and greater sleep disturbances compared to heterosexual and homosexual individuals. Their global PSQI scores were also higher (7.8 and 6.6, respectively). In the NDQ, bisexual participants had the highest total distress scores (17.0 and 15.2).The Kruskal-Wallis test confirmed statistically significant differences across all variables examined ($p < 0.001$), with post-hoc analyses clarifying the specific group differences.

Conclusion. These findings underscore that sleep, often one of the first indicators of compromised mental health, is of lower quality in LGBTQIA+ individuals. This can reflect broader psychological distress among gender and sexual minorities, pointing out the need for special attention to this population, which often faces stigma and institutional barriers. These data represent further confirmation that the LGBTQIA+ population has a lower quality of mental health, yet another reflection of an often repressive and discriminatory climate in the modern world.

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TRENDS IN INSOMNIA-RELATED BENZODIAZEPINE AND Z-DRUG PRESCRIPTIONS IN CROATIA

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Introduction: Benzodiazepines and Z-drugs continue to play a central role in the pharmacological treatment of insomnia (ICD-10 diagnosis F51.0). Although international guidelines recommend short-term use [1] of these pharmaceutical agents, real-world data suggests long-term reliance and shifting prescribing patterns [2]. This paper examines trends in prescriptions of these medications in Croatia between 2010 and 2023, with a focus on patients diagnosed with F51 diagnoses. The findings are part of a larger national study on the prescribing of benzodiazepines and Z-drugs.

Methods: Prescription data were obtained from the Croatian Institute of Public Health, encompassing over 65 million prescriptions for benzodiazepines and Z-drugs issued between January 2010 and May 2023. The primary focus of the analysis was on agents with clinical relevance in the treatment of sleep disorders, specifically zolpidem, zopiclone, and nitrazepam. Diazepam was also included, as it is widely used in the region for a variety of indications, including the off-label management of insomnia. The study aimed to evaluate the relationship between these medications and F51 diagnoses (sleep disorders not due to a substance or known physiological condition), with particular attention to prescription counts, patient demographics, and treatment durations. Temporal trends and patterns in prescribing behavior were analyzed and visualized using Python-based statistical tools.

Results: Between 2013 and 2022, the number of individuals diagnosed with F51 increased significantly, from 81,293 to 114,525 (40.89% increase), which may reflect either a rising prevalence or heightened clinical recognition of insomnia.