Methods: A realist inquiry framework, utilizing the Context-Intervention-Actor-Response Mechanism-Outcome Configuration (CIAMOc), guided the evaluation. Data collection, aligned with RAMESIS II reporting standards, spanned six months (March–October 2023) and employed a mixed-methods approach. This included 85 hours of ethnographic observation on the ward, semi-structured interviews with 18 staff and 9 patients, and two staff focus groups. Data analysis involved iterative coding and theory refinement using a CIAMO heuristic tool. Candidate programme theories, derived from a prior realist synthesis, were deductively explored and inductively refined through the three phases of realist interviewing (theory gleaning, refinement, and consolidation).

Results: Eighteen interlinked programme theories were developed, highlighting the critical role of leadership, the physical environment, and the social environment in PA service success. Findings emphasised that stable leadership, staff retention, and a cohesive team were foundational for creating a therapeutic culture conducive to PA implementation. Leadership "buy-in", demonstrated through valuing and supporting PA, empowered staff and facilitated efficient processes. Redeveloping the ward gym with safe, tailored equipment and maximizing access to diverse PA opportunities (gardening, sports) promoted patient agency and engagement. The dedicated Physical Activity Nurse (PAN) played a crucial role in motivating patients, fostering positive social interactions, and normalizing PA experiences. Preliminary findings suggest that the PA service contributed to reduced violent incidents, weight gain, and improved staff job satisfaction, though further analysis is exploring the specific mechanisms driving these outcomes.

Conclusion: This realist evaluation provides valuable insights into the complex factors influencing the success of PA programmes in PICU settings. The study demonstrates that a multi-component approach, addressing leadership, physical environment, and social dynamics, is essential for effective implementation. By understanding the underlying mechanisms and contextual influences, this research can inform the development of more effective and sustainable PA interventions that promote patient well-being, reduce restrictive practices, and enhance staff experiences within PICUs. Further analysis will explore the specific mechanisms linking PA to positive outcomes, providing a stronger evidence base for future programme design and implementation.

Overlooked Population: Physical Health Care for Young, Non-Binary, and Rural Patients With Severe Mental Illness

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Aims: Individuals with severe mental illness (SMI) experience significant physical comorbidities, contributing to a 20-year gap in life expectancy compared with the general Australian population. However, disparities persist in how their physical healthcare needs are addressed in healthcare settings. Recent full report from Unequally Unwell (2024) identifies age, gender and rurality as contributing factors to mortality in SMI patients, yet little research has examined how these factors influence access to physical healthcare. This study investigates whether age, gender and rurality predict healthcare engagement, specifically whether patients access their care and whether their physical health is addressed in general practitioner (GP) and psychiatric consultations.

Methods: This study analysed a de-identified dataset from 235 mental health patients and 96 carers who participated in a survey conducted by Lived Experience Australia. Participants provided demographic information and reported on their healthcare experiences, including whether they had visited a GP or a psychiatrist in the past 12 months, and whether their physical health was discussed. Chi-square tests and ordinal logistic regression were used to assess relationships between these variables.

Results: Results showed that age significantly influenced whether a psychiatrist inquired about physical health, with older individuals being more likely to be asked (B=0.879, SE=0.431, z=2.039, OR=2.41, p=0.041). No significant associations were found between rurality and healthcare engagement, though a non-significant trend suggested potential disparities. Similarly, gender identity did not significantly predict physical health discussions, though a weak-to-moderate association was observed for psychiatrist visits ($\chi^2(2)$=8.03, p=0.018); an effect which disappeared when non-binary individuals with SMI were removed from the analysis. Notably, engagement with GPs showed no significant differences across demographic groups.

Conclusion: These findings suggest that younger individuals with SMI may be at a greater risk of diagnostic overshadowing for psychiatric care, where their physical health concerns are overlooked. Additionally, non-binary individuals with SMI appear to have lower rates of psychiatric utilisation within 12 months. This disparity may be influenced by systemic barriers such as stigma and discrimination in healthcare settings, which can lead to decreased help-seeking behaviours or suboptimal care experiences for non-binary individuals. This highlights the need for targeted interventions to ensure routine physical health discussion/screening within mental health services, which could facilitate early detection of physical health issues, and help mitigate the mortality gap in this vulnerable population.

Climate-Related Anxiety in Child and Adolescent Mental Health Services (CAMHS): A Survey of Clinician Perspectives in Aberdeen, Scotland

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Aims: This study aimed to assess clinician-reported prevalence of climate-related anxiety among children and adolescents in CAMHS, evaluate awareness of its impact, and explore the perceived relevance of Aberdeen's oil and gas industry context to patient mental health.

Methods: A cross-sectional online survey was distributed to the CAMHS team at City Hospital Aberdeen, comprising four questions on climate-related anxiety and one open-text query. Sixteen clinicians participated. Data were collected anonymously via Microsoft Forms, with quantitative analysis of closed responses and thematic review of qualitative feedback.

Results: Prevalence and Impact: 37.5% (6/16) of clinicians reported encountering climate-related anxiety in patients over the past year, with 43.8% (7/16) ranking it as affecting young people "very much" or "quite so". Conversely, 50% (8/16) deemed it "not a significant issue".

Clinical Consideration: 93.8% (15/16) admitted they do not routinely assess climate-related concerns during patient evaluations.

Local Industry Context: Qualitative responses highlighted that Aberdeen's status as an oil and gas hub may indirectly affect patients through familial job instability, frequent relocations, and eco-guilt (e.g., "Yes, the nature of the work means children face big changes and school moves").

Awareness Gaps: Clinicians acknowledged systemic oversight in addressing climate-related anxiety during assessments.

Conclusion: Climate-related anxiety is inconsistently recognised and addressed in CAMHS practice, despite emerging cases and contextual ties to local industry stressors. Clinician responses reflect uncertainty about its significance, compounded by a lack of structured assessment protocols. These findings underscore the need for training to integrate climate-related concerns into routine evaluations, particularly in regions with economic dependencies on environmentally impactful industries. Recommendations include developing evidence-based screening tools, fostering interdisciplinary collaboration with environmental health sectors, and addressing systemic gaps to ensure holistic, context-sensitive care for young people.

Hypothalamic Structure and Function in Alzheimer's Disease and Lewy-Body Dementia: A Systematic Review and Meta-Analysis

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Aims: Changes to sleep, weight, and endocrine function are common in Alzheimer's disease (AD) and Lewy-body dementia (LBD). The cause of these is not known, but they may be related to hypothalamic neurodegeneration. Our aim was to assess whether hypothalamic volume is reduced in people with AD and LBD, and whether hypothalamic volume is associated with these common symptoms.

Methods: We performed a systematic search of MEDLINE and EMBASE for studies using structural magnetic resonance imaging to examine hypothalamic volume in AD or LBD. The Newcastle–Ottawa scale was used to assess the risk of bias. A random-effects meta-analysis was conducted using the standardised mean difference (SMD) in hypothalamic volume, and a narrative synthesis was used to examine the relationship between hypothalamic volume and sleep, weight, and endocrine function.

Results: We screened 6542 articles which identified 12 studies for inclusion, of which 10 had a low to moderate risk of bias. People with mild-moderate AD had a significantly smaller hypothalamus (−10.1%) compared with controls (pooled SMD= −0.49 (−0.86 to −0.13), p=0.018; I^2=67% (21.5–86.1%); n= 454 (AD), 715 (controls)). The only study in people with LBD found grey matter loss in the hypothalamus compared with controls using voxel-based morphometry. Hypothalamic volume loss in AD was more marked in men and was associated with plasma levels of sex hormones and reduced bone mineral density. Body mass index, appetite and sleep were not associated with hypothalamic volume in AD.

Conclusion: Reduced hypothalamic volume is seen early in AD and this may influence endocrine function. A better understanding of hypothalamic degeneration in dementia may help elucidate how pathology relates to symptoms in AD and LBD and reveal new targets for intervention.

Is There ANA Risk? A Retrospective Analysis Assessing the Long-Term Psychiatric Outcomes in Patients Testing Positive for Anti-Nuclear Antibodies, in the Absence of an Autoimmune Disease diagnosis

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Aims: Antinuclear antibody (ANA) is a sensitive but non-specific blood test frequently undertaken as part of the clinical assessment for a number of autoimmune diseases. While ANA positivity is associated with a number of autoimmune diseases, such as systemic lupus erythematosus (SLE), approximately one fifth of the population will test positive without having or subsequently developing an autoimmune disease. While there is a growing body of evidence demonstrating that patients with an autoimmune disease are more likely to develop psychiatric disorders, such as schizophrenia, the risk in patients who test positive for ANA but who never develop an autoimmune disease has not been established.

Methods: We undertook a retrospective cohort analysis using TriNetX, a large real-world population database, consisting of anonymised health records of over 250 million patients across 19 countries. Patients aged 16–90 years, without a recorded ICD diagnosis of an autoimmune disease were identified and divided into two cohorts – those with at least one positive ANA blood test, matched against those with at least one negative ANA blood test in the absence of any positive ANA antibody results. Confounding risk factors were controlled through propensity score matching for age, sex, sociodemographics, clinical characteristics and psychotropic medication use. Primary outcome was the incidence of and hazard ratios for psychiatric diagnoses from 3 months–10 years after the ANA test result.

Results: 454,740 patients were included in the primary analysis, 227,370 in the ANA positive group, 227,370 in the ANA negative group. There was no statistically significant difference in the risk of diagnosis of overall F20–29 diagnosis (HR 0.939, p=0.0674) and specifically F20 Schizophrenia (HR 0.964, p=0.5870).

Conclusion: A positive ANA blood test in the absence of an autoimmune disease was not associated with an increased long-term risk of psychiatric disorders. This result suggests that clinical testing of ANA in patients presenting with psychiatric disorders without