studies were identified from the three databases, and after removing 42 duplicates, 274 studies were selected for title and abstract screening.

Abstracts were assessed for eligibility using the following inclusion criteria: original studies in peer-reviewed journals, clinical diagnosis of depressive disorder, measurement of rumination using a validated scale and resting state or task-based fMRI. 193 studies were excluded, and 58 studies were moved to full-text review. Intervention studies were also excluded at this stage. Following the above criteria, 25 studies were selected for full-text review.

Results: Out of the 25 studies, 9 used task-based fMRI and 16 used resting state fMRI. Only resting state fMRI studies were included for data extraction. Results from the 16 studies showed that depressed people had both increased and decreased functional connectivity between different regions of the brain during brooding rumination. The connectivity within the DMN was increased, while connectivity between DMN and other areas of brain, including between DMN and TPN (task-positive network) was reduced, when compared with healthy controls.

Conclusion: This review shows widespread associations between depression, rumination and functional connectivity within and between various brain regions. Increase of functional connectivity within the DMN during depression might be responsible for the increase in brooding rumination seen in depressed individuals. A decrease in connectivity of DMN to other areas of the brain might result in difficulties for depressed individuals to switch from a ruminating state into the executive network mode. Overall, this review provides an overview of the neurobiological underpinnings for the increase in brooding rumination in depression.

Hippocampal Basal Forebrain Connections Involved in Young Adolescents with Psychotic Experiences

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Aims: Changes in the hippocampus and amygdala are associated with psychotic illnesses. However, there is little research examining the output tracts of these regions in psychosis. The fornix connects the hippocampus to the basal forebrain anteriorly and to the hypothalamus posteriorly, while the stria terminalis (ST) connects the amygdala to these same areas. The anterior commissure divides these tracts into anterior (pre-commissural) and posterior (post-commissural) fibres. This study investigates these two tracts and their pre- and post-commissural fibres in young adolescents with psychotic experiences (PEs) as compared with controls across two timepoints (TP), 2 years apart.

Methods: 51 young adolescents with PEs (37 female) and 43 healthy controls (25 female) underwent high angular diffusion imaging at TP1, while 39 adolescents with PEs and 29 healthy controls underwent same at TP2. Images were processed using ExploreDTI and, using a bespoke method, the fornix and ST were separated and pre-commissural and post-commissural fibres isolated. Analysis of covariance was performed correcting for age, sex and intracranial volume.

Results: Right pre-commissural fornical Mean Diffusivity (MD) (p=0.035) and Radial Diffusivity (RD) (p=0.009) were increased, with decreased Fractional Anisotropy (FA) (p=0.045) at TP1. There was increase across MD (p=0.004), RD (p=0.005) and Axial Diffusivity (AD) (p=0.042) at TP2. Only right pre-commissural fornix MD and RD increases at TP2 survived Bonferroni correction at p=0.0083. No ST differences survived correction for multiple comparisons.

Conclusion: This study uses a novel method to separate the stria terminalis and fornix, using an anatomically driven approach. The results show that the hippocampal output fibres are involved in early psychosis, while the amygdala fibres are not affected. Of the hippocampal fibres, it is the fibres going to the basal forebrain, responsible for motivation and behaviour, that are specifically impacted. These changes in adolescents are entirely right sided, reflecting similar right sided hippocampal changes found in adults with psychotic illnesses. The right basal forebrain is known to influence vigilance, attention and emotional processing, which are affected in patients with psychosis. **The findings from this study suggest that the right basal forebrain is affected in children and adolescents with psychotic experiences, which are common in people who go on to develop psychotic illnesses, and thus supports the neurodevelopmental theory of psychosis.**

A Qualitative Study to Explore Perspectives Regarding the Use of Low Field Magnetic Resonance Imaging (LFMRI) Scanners, Within Dementia Diagnosis Pathways in the United Kingdom

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Aims: The national emphasis on improving rates and timeliness of dementia diagnosis is dependent on accessibility of investigative tools. Through locally accessible, point-of-care brain scans, LFMRI has the potential to improve the experience of dementia assessment pathways and time to diagnosis, and to reduce inequalities in access to dementia assessment.

The aim of this qualitative research was to explore perspectives regarding the use of LFMRI scanning within dementia diagnosis pathways, within communities where it may have the greatest impact. We also aimed to learn more about views regarding future LFMRI research, including priorities, concerns and potential facilitators and barriers to participation.

Methods: The qualitative design incorporated focus groups and interviews with individuals with dementia and their carers. The study took place within urban, rural and coastal communities in Kent. 35 participants took part in either a focus group (n=20) or interview (n=15) with an average age of 72 years. Focus groups and interviews were recorded and transcribed verbatim for thematic analysis using NVivo software.

Results: Participants described both positive views as well as caution about the use of this new investigative tool. Five subthemes were identified: access to local neuroimaging, improvement of assessment pathways, accuracy of LFMRI, concerns about expense to the NHS and engagement in future LFMRI research.

Participants were optimistic about the potential of LFMRI within dementia diagnosis pathways. They valued the possibility of access to local scanners and the benefit this would have on timely diagnosis with improved diagnostic pathways. However, there were concerns

about the accuracy of these scanners and the cost implications within the NHS.

Conclusion: While the technology will not mean the replacement of traditional MRI scans, LFMRI may have the potential to improve dementia diagnosis pathways. LFMRI may be a lower cost alternative to help to reduce wait times while improving access to pathways for those in underserved communities. This would be welcomed by people with dementia and their carers, if there was trust in the accuracy of the scans. Participants expressed willingness to be involved in further research using LFMRI scanners to support improvements in the dementia diagnostic pathways for others.

A Qualitative Research Study to Explore Perspectives From Individuals Involved in the ROCKET (Reading for Older People, Connecting With Kids and Enjoying Time Together) Intergenerational Reading Project

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Aims: Intergenerational programmes provide meaningful social contact for older people, and address negative stereotypes of ageing in children. Reading aloud improves language acquisition and literacy in children, however in regions of socio-economic deprivation, many children lack this opportunity. The aim of this qualitative research was to explore the experiences and perspectives of teachers and volunteers involved in an intergenerational reading project within a primary school in an area of high socioeconomic deprivation.

Methods: In the ROCKET project, senior volunteers (aged >75) were supported to join an established volunteer reading scheme in a primary school with the support of an existing volunteer. The students who took part in the project were those identified by teachers to have the greatest need for support with reading. This qualitative study incorporated semi-structured interviews with teachers and volunteers in June–August 2024, a year after the project began. Seven participants took part in an interview, including four teachers, an existing volunteer lead and two volunteers over the age of 75 years old. Videos were audio-recorded and transcribed before thematic analysis by two of the authors.

Results: Thematic analysis identified six subthemes: improved reading ability in children, children's social development, reduced loneliness, volunteers' sense of purpose/enjoyment and future potential of ROCKET and challenges to overcome.

Volunteers valued the social interaction, the sense of purpose, enjoyment and improved confidence that participating provided them. The teachers described students as benefiting from improved confidence and reading ability, and the positive impact of meeting people outside of their usual social sphere. Participants were optimistic about the future potential of ROCKET and felt it could expand beyond literacy to other subjects such as maths or comprehension, and include other year groups. They also felt that communication could be improved between teaching staff and volunteers involved within the project.

Conclusion: Data from this small qualitative study suggests that the ROCKET project has the potential to improve student's literacy skills and confidence, and to positively impact volunteers through reduced loneliness, a sense of purpose and being a part of a community. Participants felt that improved communication between volunteers and teacher would enhance its success, and that there was scope to broaden the project to include other school subjects and a wider range of students.

Antipsychotic Prescribing Trends for Autistic Adults with and without Intellectual Disability From 1997 to 2023: A Population-Based Cohort Study Using English Primary Care Records

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Aims: Concern that antipsychotic over-prescribing has been harmful for autistic adults has led to deprescribing initiatives, including NHS England's "Stopping the overmedication of people with ID, autism, or both" (STOMP) in 2015. It is unclear if there has been a subsequent change in prescribing rates or other possible aspects of over-prescribing. Thus, we sought to compare antipsychotic prescribing rates, recorded indications, mean doses and long-term use between autistic adults with and without intellectual disabilities (ID) and non-autistic adults in England from 1997 to 2023.

Methods: Using population-representative primary care records from the Clinical Practice Research Datalink Aurum, we identified adults 16–64 years old between 1997 and 2023 and stratified them into three groups: autistic adults with intellectual disability (ID), autistic adults without ID, and non-autistic adults. For each calendar year and group, we calculated (i) the proportion of adults prescribed an antipsychotic; (ii) the proportion of adults starting an antipsychotic; (iii) the proportion of first-time prescriptions with possible indications recorded 2 months either side; (iv) the mean daily doses for quetiapine, risperidone, aripiprazole and olanzapine; (v) the proportion of new courses that lasted over 1 year. We also performed analyses stratified by sex and age-group (16–29, 30–44, 45–64 years old).

Results: 45,143 autistic adults with ID, 121,071 autistic adults without ID, and 30,218,564 non-autistic adults entered the study. From 2001 to 2023 the percentage prescribed antipsychotics changed from 44% to 22% for autistic adults with ID, from 10% to 7% for autistic adults without ID, and from 1.1% to 1.2% for non-autistic adults. Over the same period, new prescription rates dropped from 5.2% to 1.6% for autistic adults with ID, from 2.0% to 1.1% for those without ID, and from 0.3% to 0.2% for non-autistic adults. Autistic adults with ID had consistently lower recording of possible indications: 40% in 2023 compared with 60% for the other two groups. They also had consistently higher proportions of courses