Aims. There is still little information available on the negative impact of online activities on psychotic experiences. This limitation is further compounded for online gaming, where even a beneficial impact has been suggested via the evocation of positive emotions. We aimed to examine how problematic online gaming (POG) is associated with subsequent psychotic experiences in adolescents.
Methods. This birth cohort study employed randomly sampled adolescents born between September 2002 and August 2004. The eligibility criterion was those who did not have psychotic experiences at age 14. We analyzed the association between POG at age 14 and subsequent psychotic experiences at age 16. Adolescents were categorized into the no, low, and high POG groups based on the behaviors and emotions related to online gaming at age 14. Missing data were handled using random forest imputations.
Results. A total of 1722 adolescents without psychotic experiences at age 14 were analyzed. At age 16, 55 adolescents exhibited psychotic experiences, while 225 showed potential psychotic experiences. Compared with the no POG group, a higher risk of psychotic experiences was shown in both the low (RR 1.93, 95% CI 1.74–2.15) and high (RR 2.81, 95% CI 2.50–3.15) POG groups. Findings were consistent when analyzing potential psychotic experiences.
Conclusion. POG appears detrimental to the development of psychotic experiences in adolescents. Our findings provide public health implications in the context of policymaking.

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Is Body Dissatisfaction a Risk Factor for Diabulimia and How Is It Assessed? A Rapid Systematic Review

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Aims. Diabulimia is an increasingly used term referring to "an eating disorder (ED) with type 1 diabetes". It is difficult to detect and presents in multiple ways, which can potentially include feelings of body dissatisfaction (BD), which in itself is a complex symptom to quantify clinically.

This rapid systematic review aimed to identify whether feelings of BD are a risk factor for diabulimia by researching if and how BD is assessed in patients with the condition.
Methods. A rapid systematic review was undertaken. A literature review was performed on Ovid Medline (all) and Ovid Embase databases using search terms for Type 1 Diabetes, ED, and BD and looked at cross-sectional studies only. One reviewer performed the literature search and screened titles and abstracts. Out of 589 papers screened, four papers met the inclusion criteria. These papers then went through critical appraising using the Appraisal tool for Cross-Sectional Studies, with all papers showing mid-level quality clearing 16 to 17/20 questions. Therefore, data was extracted from all of them.
Results. All four papers came from different countries and used a wide range of sample sizes (43–477).

There was widespread heterogeneity between the data collected in each study due to the various tools used to identify BD, paired with differences in analysing extracted data.

To ensure transparency and quality of the results provided, the Synthesis Without Meta-analysis tool was used. Three studies looked at effects on adolescents and three had a higher proportion of females. All papers used previously established and tested BD screening methods. Two papers found female diabetics were more likely to have BD symptoms, and one paper saw that males were more at risk. All four papers concluded that BD had some correlations with one or more aspects of diabetes and/or other ED symptoms related to diabulimia. Two commented on positive correlations between BD and HbA1c levels and one commented on BD symptoms and insulin restriction trending together. Two papers also saw BD symptoms and depressive symptoms correlating in patients as well.
Conclusion. All four studies showed that BD was related to diabulimia, both from a psychological and diabetic perspective, and most highlighted how BD manifested between the different sexes of diabetics. This review highlights the need for more standardised and comprehensive BD questionnaires to draw out key signs of EDs in diabetics that could improve screening, detection and management of diabulimia.

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Cognitive Behavioural Therapy Versus Psychodynamic Therapy for Medically Unexplained Symptoms: A Retrospective Study of Healthcare Utilisation and Cost Analysis

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Aims. Patients experiencing Medically Unexplained Symptoms (MUS) are some of the costliest in both primary and secondary care. Psychotherapy is one of the most efficacious ways of treating them although the most superior modality is unclear. Cognitive Behavioural Therapy (CBT) has the greatest evidence base, but a growing number of studies have investigated the role of Psychodynamic Psychotherapy (PPT). This is the first study to compare the two modalities concerning their impact on healthcare utilisation and cost to the NHS.
Methods. Patients referred to the Oxford Community Psychological Medicine Service in 2021 and who went on to complete a course of psychotherapy for MUS were included. 78 patients were referred, 66 patients were assessed, 16 patients began treatment and 9 patients completed treatment. 4 received CBT and 5 received PPT based on a 'best fit' assessment. Their healthcare utilisation (GP appointments, health investigations, A&E attendances, inpatient admissions and outpatient appointments) was assessed during the 6 months prior to their initial assessment and compared with the 6 months after therapy had ended using data from 'Health Information Exchange'.
Results. Overall, psychotherapy reduced primary care use but our data was insufficiently powered for this to be statistically significant. There was a significant reduction in outpatient appointments after psychotherapy, mostly representing mental health consults.

Significant differences between pre-therapy and post-therapy were only observed for the number of health investigations in the PPT group which, surprisingly, increased with a large effect size ($d = 1.19$ 95% CI 1.12–2.88, $P = 0.03$). The same trend towards increased utilisation were observed for every outcome measure in PPT besides outpatient appointments. Conversely, all outcome measures showed an improvement after CBT apart from the number of health investigations which marginally increased.

CBT significantly decreased GP appointments at 6 months follow-up compared with PPT with a large effect size ($\eta 2 = 0.5$, $p < 0.05$). A similar trend was seen for total cost ($\eta 2 = 0.5$, $p < 0.06$) with each PPT patient costing £790 more on average than their CBT counterparts during the 6 months after therapy.

Conclusion. Whilst CBT appears to be efficacious in the short-term, PPT caused significantly increased healthcare utilisation compared with CBT in the 6 months after therapy. This aligns with similar studies that demonstrate a 'sleeper effect' in which patients who receive PPT, but not CBT, deteriorate before improving over long-term follow-up.

Additional research is needed to correlate this data with symptoms and capture the long-term benefits of these psychotherapies for MUS.

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The Effects of Developmental Stress on Dopaminergic Function in Adulthood: A Systematic Review and Meta-Analysis

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Aims. Exposure to traumatic experiences during childhood and adolescence is a significant risk factor for the development of psychiatric disorders in adulthood. An estimated 50% of the worldwide incidence of depression and anxiety can be attributed to childhood maltreatment (Li et al., 2016). In addition, approximately one-third of psychotic experiences are attributable to a history of developmental trauma (McGrath et al., 2017). It is thought that long-lasting, trauma-induced adaptive changes in neurobiological function may lead to a predisposition towards pathophysiology (McCrory and Viding, 2015). However, the precise mechanisms through which developmental trauma exposure alters brain function on cellular and circuit levels remain poorly elucidated.

Methods. A systematic literature search and meta-analysis was performed to establish how dopaminergic functioning in adulthood is affected by developmental stress in rodents. Three databases, Medline®, Embase®, and PsycINFO®, were systematically searched initially on 2nd December 2023. Terms for three superordinate concepts ('childhood' terms, 'trauma' terms, and 'dopamine' terms) were combined. Cohen's d statistic was used for effect sizes. This protocol is pre-registered on PROSPERO® (ID: CRD42018106382).

Results. A total of 104 studies met our inclusion criteria. Meta-analysis indicated that developmental stress exposure leads to complex and long-lasting effects in basal and post-amphetamine extracellular dopamine concentrations in the medial prefrontal cortex, amygdala, and nucleus accumbens. In addition, there is a significant downregulation of D1 receptors and upregulation of D2 receptors in prefrontal and striatal regions involved in threat and reward processing. Effect sizes ranged from 0.36 to 1.55.

Conclusion. These findings strongly suggest that dopaminergic dysfunction is a mechanistic link between developmental trauma and vulnerability towards mental illness in adulthood.

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White Matter Microstructure Abnormalities in Individuals at High Risk for Psychosis: A Meta-Analysis of Fractional Anisotropic Changes Associated With Transition to Psychosis

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Aims. Recent studies have focussed on detecting white matter abnormalities in subjects who transition to psychosis (UHR-T). Research suggests that fractional anisotropy (FA), may be decreased in UHR-T. However, global and regional findings have been inconsistent. By objectively combining data in a meta-analysis, we have investigated white matter alterations associated with transition, by comparing FA in UHR-T with subjects that do not transition (UHR-NT) and healthy volunteers.

Methods. The meta-analysis was registered on PROSPERO (ID: CRD42021265348) and followed Preferred Reporting Items for Systematic Reviews and Meta-Analyses PRISMA guidance. A systematic database search of PUBMED and EMBASE identified reports, which were screened by 2 independent researchers (CN and DD) for inclusion, from inception to 20 July 2021. Discrepancies were decided on consensus with a third researcher (KM). Reference lists of eligible studies were also screened. Authors of screened reports were contacted to provide parametric maps. Coordinate-based meta-analysis was conducted using Seed-based *d*-Mapping software to combine parametric map and coordinate data from reports, using a random-effects model. Quality and risk of bias analysis were conducted using the Newcastle-Ottowa Scale. Heterogeneity and sensitivity analyses were also conducted.

Results. The search strategy identified 889 potential studies, from which 6 met eligibility criteria. A total of 71 UHR-T, 142 UHR-NT and 148 healthy volunteers were included. Weighted-mean decreases in FA were observed in UHR-T compared with: UHR-NT ($d = -0.99$; $p < 0.0001$; 95% CI −1.43 to −0.55); and healthy volunteers ($d = -0.91$; $p = 0.04$; 95% CI −1.78 to −0.05). The level of heterogeneity for the former was not significant. For UHR-T, regional FA decreases were observed in areas including the left genu of the corpus callosum (Z-score = −1.76, 204 voxels, $p < 0.0001$) compared with UHR-NT, while FA increases were most observed in the white matter region adjacent to the left postcentral gyrus (Z-score = 1.64, voxels = 16, $p < 0.0001$). These findings persisted despite sensitivity analyses.

Conclusion. The findings suggest that white matter alterations, specifically in left frontotemporal tracts, are associated with an increased risk of transition to psychosis. The neurobiological implications of these findings, and their contribution to UHR-T prediction efforts, are explored, as are avenues for further research.

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