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Parkinson's Disease

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June 2025

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Book a session today at https://forms.office.com/e/HyiSXfDaYV (these sessions will be held on a monthly basis)

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1. **Predicting dementia in people with Parkinson's disease.**

Authors: Aborageh, Mohamed;Hahnel, Tom;Martins Conde, Patricia;Klucken, Jochen and Frohlich, Holger

Publication Date: May 13 ,2025

Journal: Npj Parkinsons Disease 11(1), pp. 126

Abstract: Parkinson's disease (PD) exhibits a variety of symptoms, with approximately 25% of patients experiencing mild cognitive impairment and 45% developing dementia within ten years of diagnosis. Predicting this progression and identifying its causes remains challenging. Our study utilizes machine learning and multimodal data from the UK Biobank to explore the predictability of Parkinson's dementia (PDD) post-diagnosis, further validated by data from the Parkinson's Progression Markers Initiative (PPMI) cohort. Using Shapley Additive Explanation (SHAP) and Bayesian Network structure learning, we analyzed interactions among genetic predisposition, comorbidities, lifestyle, and environmental factors. We concluded that genetic predisposition is the dominant factor, with significant influence from comorbidities. Additionally, we employed Mendelian randomization (MR) to establish potential causal links between hypertension, type 2 diabetes, and PDD, suggesting that managing blood pressure and glucose levels in Parkinson's patients may serve as a preventive strategy. This study identifies risk factors for PDD and proposes avenues for prevention.

2. **Socioeconomic area deprivation and its relationship with dementia, Parkinson's Disease and all-cause mortality among UK older adults: a multistate modeling approach.**

Authors: Beydoun M.A.;Georgescu M.F.;Weiss J.;Noren Hooten N.;Beydoun H.A.;Tsai J.;Maino Vieytes C.A.;Evans M.K. and Zonderman, A. B.

Publication Date: 2025

Journal: Social Science and Medicine 379(pagination), pp. Article Number: 118137. Date of Publication: 01 Aug 2025

Abstract: The study analyzed the association of area-level socioeconomic status (SES) with the risk of all-cause dementia, Parkinson's Disease (PD), and all-cause mortality using a multistate approach. Data from the UK Biobank were used (N = 363,663 50+y individuals, Dementia), 5 (PD->Death), or 6 (Dementia->Death). Cardiovascular health did not mediate these associations. Socioeconomic area-level deprivation was directly associated with reduced survival rates from Healthy into Dementia, PD and Death.Copyright © 2025

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3. **Palliative Care Need and Quality of Life Mediated by Psychological Distress in Neurologic Diseases.**

Authors: Chan L.M.L.;Choi E.P.H.;Lam W.W.T.;Chan K.H.;Pang S.Y.Y. and Kwok, J. Y. Y.

Publication Date: 2025

Journal: Journal of Pain and Symptom Management 69(6), pp. 641–653.e3

Abstract: Context: Patients with progressive neurologic diseases (PNDs) face a prolonged and fluctuating course of illness marked by increasing disability and a range of nonmotor symptoms. However, the impacts of nonmotor symptoms and unmet care needs remain underexplored. Palliative care needs arise from the multifaceted sufferings associated with PNDs, encompassing not only physical pain but also psychological, social, and spiritual distress. Despite recommendations for early palliative care for PNDs to address these multidimensional sufferings, access to such supportive care is often restricted to advanced stages of the disease. Objective(s): This cross-sectional study aimed to examine palliative care needs, psychological distress, health-related quality of life, and the mediating effects of psychological distress on palliative care needs and health-related quality of life among patients with PNDs. Method(s): A total of 210 patients with PNDs (Parkinson's disease or multiple sclerosis) were recruited using convenience sampling from regional neurology outpatient clinics and patient support groups in Hong Kong. Participants responded to Palliative Care Outcome Scale (POS), Hospital Anxiety and Depression Scale (HADS), and EQ-5D-5L surveys. Result(s): Most respondents (59.0%) walked without aid, whereas 26.2% required assistance and 14.8% were wheelchair-restricted. The most prevalent palliative care needs were physical symptoms other than pain, psychosocial support, and spiritual burden. A significant portion of participants exhibited possible anxiety (41.1%) or depression (48.6%). Hierarchical regression analysis indicated that mobility, palliative care needs, anxiety, and depression were significantly associated with the health-related quality of life. Anxiety and

depression partially mediated the relationship between palliative care needs and quality of life. Conclusion(s): Given the chronic, fluctuating illness trajectory, early recognition and management of emerging palliative care needs, particularly psychospiritual distress, is crucial for enhancing health-related quality of life for patients with PNDs. Copyright © 2025 The Authors

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4. **Correlation between motor symptoms, cognitive function, and optical coherence tomography findings in Parkinson's disease.**

Authors: Cunha L.P.;Martins P.N.;Martins L.C.;do Nascimento Almada F.M.;Shigaeff N.;de Araujo D.O.;Mello L.G.M.;Monteiro M.L.R.;Snyder P.J. and Vale, T. C.

Publication Date: 2025

Journal: ACTA Paulista De Enfermagem 88(3), pp. no pagination–0049. Date of Publication: 2025

Abstract: Purpose: This study aimed to evaluate the total macular thickness as well as the thickness of the inner and outer retinal layers in patients with Parkinson's disease. It also aimed to verify the correlation of these parameters with motor symptoms and cognitive function. Method(s): A total of 46 eyes of 23 patients with Parkinson's disease and 40 eyes of 20 healthy controls were included in the study. The patients' cognitive, functional, and nonmotor symptoms were evaluated using the Katz Index of Independence and Pfeffer's Activities of Daily Living, Mini-Mental State Examination, Frontal Assessment Battery, Schwab and England Staging Scales, and Movement Disorders Society Nonmotor Symptoms Scale. The macular thickness measurements obtained via total, inner, and outer optical coherence tomography were recorded. Furthermore, the correlation of the parameters of optical coherence tomography with cognitive, functional, and nonmotor symptoms was assessed. Result(s): The scores of the Katz Index of Independence and Pfeffer's Activities of Daily Living as well as the Movement Disorders Society Nonmotor Symptoms Scale were significantly lower in patients with Parkinson's disease than in healthy controls. Moreover, the former had greater total macular thickness. The temporal and inferior outer sectors were significantly greater for the ganglion cell complex thickness in patients. A significant correlation was observed between the total macular thickness and the Movement Disorder Society-Unified Parkinson's Disease Rating Scale, Parte III (MDS-UPDRS-III) values. Contrarily, there was a negative correlation between the outer macular thickness and the MDS-UPDRS-III values. Meanwhile, the total macular thickness and ganglion cell complex thickness were significantly correlated with the scores of the Mini-Mental State Examination, Schwab and England Staging Scale, Frontal Assessment Battery, and Katz Index of Independence and Pfeffer's Activities of Daily Living. In addition, the Schwab and England scale was correlated with the outer macular thickness. Conclusion(s): The total and inner macular thicknesses at the temporal and inferior outer sectors were greater in patients with Parkinson's disease than in the control group. These findings indicate that macular thickness may be greater in those with Parkinson's disease, particularly when associated with mild motor symptoms. In addition, the parameters of the total, inner, and outer optical coherence tomography were significantly associated with motor and nonmotor symptoms as well as cognitive function impairment.

5. **Secular Trends and Survival of Parkinson's Disease and Other Forms of Parkinsonism in the United Kingdom.**

Authors: Gandhi S.E.;Grosset K.A.;Iruthayaraj P.A.;Gravesande R.;Lee L.;Doyle C.;BenShlomo Y. and Grosset, D. G.

Publication Date: 2025

Journal: SSRN (pagination), pp. Date of Publication: 02 May 2025

Abstract: Background: Parkinson's disease (PD) prevalence is increasing worldwide, albeit less markedly in higher income countries, whilst incidence studies give contradictory findings. Comparative data for other parkinsonian disorders are rare. Method(s): We calculated incidence and prevalence of eight parkinsonian disorders in a population-based UK study using primary and secondary healthcare records. Temporal trends (2003 to 2023) and variations by demographic factors were examined using Poisson regression. Survival was calculated using Kaplan-Meier methods. Finding(s): In 2023, standardised incidence and prevalence rates for PD were 32.4 (95% CI 31.6, 33.3) and 240 (238, 242) per 100 000. The second commonest parkinsonism was Dementia with Lewy bodies, incidence rate 4.3 (4.0, 4.6), prevalence rate 13.9 (13.3, 14.4). Secular trends for PD prevalence rates before Covid-19 showed a slight reduction, but other degenerative parkinsonisms increased substantially. Post-Covid-19 rates were lower for all disorders, e.g. PD incidence fell by 21.4% (15.3, 27.1%). Numbers of people with parkinsonism increased to 2019, then declined, but are predicted to exceed pre-Covid levels in 2025.PD incidence and prevalence were lower with increasing deprivation. Incidence was 43% lower (16, 62%) in people of African or Caribbean ethnicity, but similar for Asian and White ethnicities. Of the degenerative parkinsonisms, 5-year survival was worst for Progressive Supranuclear Palsy at 30.5% (29.3, 31.8%) and best for PD at 64.2% (64.0, 64.4%). Younger onset cases had the greatest absolute reductions in life expectancy. Interpretation(s): Increasing diagnosis of atypical parkinsonisms has contributed to changing temporal trends for PD. Ethnic variations justify further exploration in terms of genetics, environmental exposures and access to healthcare. Increased mortality from degenerative parkinsonism, particularly younger onset, serves as a baseline for assessing disease-modifying therapies. Greater social care and health service provision will be required for progressively greater numbers of people with parkinsonism.

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6. **Early thinking palliative care for people with Parkinson's disease: A thematic synthesis based on a systematic mixed-methods review.**

Authors: Garon M.;Weck C.;Leta V.;Dijkstra B.W.;Muente C.;Gentile G.;Trivedi D.;Groot M.M.;Lorenzl S.;Odin P.;Konitsiotis S.;Pedrosa D.J.;Fotiadis D.I.;Meinders M.J.;Bloem B.R.;Schrag A.E.;Grover L.;Taba P.;Ray Chaudhuri K.;Antonini A., et al

Publication Date: 2025

Journal: Journal of Parkinson's Disease , pp. 1877718X251321110

Abstract: BackgroundParkinson's disease is a progressive neurodegenerative disorder.

Awareness and the evidence supporting the merits of palliative care (PC) approaches to people with Parkinson's disease (PwP) are increasing.ObjectiveThis review aimed to address four key questions related to PC for PwPs and their caregivers: i) What are the indicators for timely access to PC? ii) When should PC be introduced? iii) What are the current care models for providing PC? iv) What are the barriers and facilitators at the organizational level?MethodsA systematic literature search was conducted in PubMed, CINAHL, Cochrane, EMBASE, and MEDLINE (2006-2024). Six reviewers independently screened abstracts and full texts, and thematic synthesis was applied to develop analytical themes. Reporting followed PRISMA guidelines.ResultsOut of 894 studies, 70 were included. PwPs were infrequently referred to PC services, and while several referral criteria were identified, no consensus emerged. Barriers to accessing PC included insufficient information, inadequate education, difficulties determining referral timing, limited home-based care options, inconsistent provider support, and disparities linked to socioeconomic and cultural factors. Facilitators included improved care coordination and education for PwPs, caregivers, and healthcare providers. Effective PC models were identified, including home-based, hospital-based, and community-based approaches, which improved quality of life and reduced healthcare costs.ConclusionsEstablishing consensus on referral timing and criteria is essential for integrating PC into Parkinson's disease care. Overcoming barriers requires enhanced education, better care coordination, and targeted interventions to address disparities, ensuring comprehensive, patient-centred care for PwPs and their caregivers.

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7. **Residential exposure to road and railway traffic noise and incidence of dementia: The UK Biobank cohort study.**

Authors: Havyarimana E.;Gong X.;Jephcote C.;Johnson S.;Suri S.;Xie W.;Clark C.;Hansell A.L. and Cai, Y. S.

Publication Date: 2025

Journal: Environmental Research 279(pagination), pp. Article Number: 121787. Date of Publication: 15 Aug 2025

Abstract: Background: Evidence linking noise pollution and brain health, particularly at mid-to-late life, remains scarce. We investigated the associations between long-term exposure to road and railway traffic noise and incident dementia in the UK Biobank cohort. Method(s): Participants with available data for dementia incidence and linked traffic noise exposure during follow-up were included. Residential road traffic noise from both minor and major roads were calculated in accordance with CNOSSOS-EU framework; railway noise estimates were created by Extrium, with the raster datasets representing noise contributions from major railway corridors. Cox regression was used to quantify the associations between transport noise and incident dementia (incl. its subtypes), adjusting for potential confounders, air pollution and greenness. Result(s): Of the full cohort (n = 502,416), 7668 participants had incident dementia during a median follow-up period of 9.67 years. No associations were found between all cause dementia incidence and road or railway noise. However, a 10-dB (dB) higher exposure in annual mean road traffic noise (Lden) was significantly associated with incident Alzheimer's disease (HR:1.150, 95 % CI: 1.022-1.294). The effect estimate was slightly higher when participants were exposed to night-time road noise above 45 dB (HR:1.188, 95 % CI:1.012-1.394) and this was mediated by the cardiovascular health profile.

Railway noise (Lden) was significantly associated with incident Parkinson's disease related dementia (HR:1.042, 95 % CI:1.005-1.081), however, the effect estimate was slightly reduced after further adjustment of air pollution and residential greenness (HR:1.037, 95 % CI:0.998-1.077). Conclusion(s): Distinct associations between different traffic noise exposures and incident dementia subtypes were found in this large UK prospective cohort study.

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8. **Plasma proteomic profiling reveals Parkinson's disease-associated proteins: A UK Biobank study.**

Authors: Jiao X.;Lu Y.;Huang Y.;Chen J.;Gu Z.;Gao X.;Yuan L.;Du B. and Bi, X.

Publication Date: 2025

Journal: Parkinsonism and Related Disorders 135(pagination), pp. Article Number: 107851. Date of Publication: 01 Jun 2025

Abstract: Introduction: The rapid advancement of proteomics has provided new insights into early detection and prediction of Parkinson's disease (PD), particularly in identifying risk factors for PD. This study aims to develop a proteomics-based model to predict the risk of PD in patients. Method(s): We analyzed data from the UK Biobank cohort, including 52,851 PD-free participants at baseline, with a median follow-up of 15.3 years and 811 newly diagnosed PD cases. A prospective proteomic analysis was conducted to assess the predictive value of 2,923 plasma proteins, and LightGBM models were used to calculate protein importance, followed by an evaluation of the proteins' predictive performance. Result(s): The study found that higher levels of NEFL and MERTK were significantly associated with future PD events, while lower levels of ITGAV, BAG3, CLEC10A, ITGAM, HNMT, and TPK1 were identified as potential risk factors for PD. Notably, the axonal injury marker NEFL and the thiamine metabolism-related protein TPK1 ranked higher than other proteins in terms of importance. The combination of NEFL and TPK1 significantly enhanced the predictive accuracy of conventional clinical models, increasing the Area Under the Curve (AUC) of the full-cohort prediction model from 0.784 to 0.842 and the 5-year prediction model from 0.780 to 0.908. Conclusion(s): This study provides a novel insight for screening high-risk PD populations and underscores the significant role of nutritional metabolism in PD development, offering valuable insights for precision prevention strategies.

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9. **Clinical Assessment of Walking Capacity in People With Parkinson Disease: Are 2 Minutes Sufficient?.**

Authors: Johansson H.;Rennie L.;Grooten W.J.A. and Leavy, B.

Publication Date: 2025

Journal: Physical Therapy 105(5), pp. no pagination

Abstract: Objective. Walking capacity progressively declines in people with Parkinson disease (PD), and assessment of walking is imperative for monitoring disease progression and evaluating intervention efficacy. The main aim of this study was to explore whether the 2-

minute walk test (2MWT) could be substituted for the 6-minute walk test (6MWT) as a measure of walking capacity in people with PD. We also sought to investigate construct and known-groups validity of the 2MWT. Methods. A cross-sectional analysis based on data from the Supported Home Training in Everyday Life for Parkinson Disease trial was conducted in a hospital setting. Sixty-three people with idiopathic, mild to moderate PD (29 women; mean age=69.2 years) were included. Spatiotemporal gait parameters during the 2MWT and the 6MWT were captured by wearable sensors. Linear regression was used to analyze the association between distances walked, whereas paired-samples t tests and repeated-measures analysis of variance were used to explore mean differences in gait parameters. Results. Distance walked over the 2MWT was very strongly associated with the 6MWT. Gait speed was higher during the shorter test, and several speed-related parameters significantly differed between the tests. There was a trend over the 6MWT, whereby participants performed better during the last 2 minutes of the test. Analyses revealed convergent, discriminant, and known-groups validity of the 2MWT. Conclusion. These findings suggest that the 2MWT adequately captures walking capacity among people with mild to moderate PD and demonstrates robust convergent validity and ability to discriminate between people at different levels of disease severity. Impact. The 2MWT is a sufficient and valid alternative for physical therapists who wish to assess walking capacity in people with mild to moderate PD.

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10. **Altered cerebral perfusion in Parkinson's disease patients with anxiety: an arterial spin labeling MRI study.**

Authors: Li, Lu;Song, Shiyuan;Hu, Yingying;Luo, Yuan;Wang, Lu and Zhang, Peiyao

Publication Date: 2025

Journal: Frontiers in Neurology [Electronic Resource] 16, pp. 1583451

Abstract: Purpose: In this study, we used arterial spin labeling (ASL) to explore altered cerebral blood flow perfusion in Parkinson's disease (PD) patients with anxiety and assessed the relationship between anxiety and perfusion in various brain regions to determine the pathophysiologic basis for the occurrence of anxiety in patients with PD. Materials and methods: Seventy-three patients with PD who were treated at China-Japan Friendship Hospital from September 2023 to November 2024 were enrolled: 36 PD patients with anxiety (PD-A) and 37 PD patients without anxiety (PD-NA); in addition, 37 healthy volunteers were recruited as healthy controls (HCs). All the subjects underwent three-dimensional T1-weighted imaging (3D-T1WI) and pseudo-continuous arterial spin labeling (pCASL) sequential scans via 3.0-T MRI, and cerebral blood flow (CBF) values were obtained from the whole brain. Independent samples t tests and non-parametric Mann-Whitney U tests were applied to test the differences in the CBF values of each brain region between the PD and HC groups, and between the PD-A and PD-NA groups. The relationships between CBF values and anxiety scores in the PD group were also investigated. Results: CBF values in the bilateral frontal lobes, parietal lobes, temporal lobes, occipital lobes, substantia nigra, striatum, caudate nuclei, left pallidum, and bilateral cerebellum were lower in the PD group than in the HC group (P P P = 0.024), right frontal lobe (r = -0.283, P = 0.015), left temporal lobe (r = -0.287, P = 0.014), and right temporal lobe (r = -0.275, P = 0.019) were negatively correlated with Hamilton

Anxiety Scale (HAMA) scores in PD patients. Conclusion: The development of PD-A may be associated with dysfunctional brain perfusion in multiple brain regions, notably the bilateral frontal lobes, temporal lobes, left putamen, and left pallidum. Abnormal CBF in these brain regions may serve as a neuroimaging marker for early PD-A diagnosis. Using ASL to identify perfusion changes in core regions may advance our understanding of the pathophysiological mechanisms underlying PD-A. Copyright © 2025 Li, Song, Hu, Luo, Wang and Zhang.

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11. **Influence of Sleep on the Progression of Parkinson's Disease - a Mendelian Randomization Study.**

Authors: Mahjoub M. and Matar, E.

Publication Date: 2025

Journal: SSRN (pagination), pp. Date of Publication: 16 Ar 2025

Abstract: Background Sleep disturbances are common in Parkinson's disease (PD) and growing evidence suggests a bidirectional relationship between sleep disruption and neurodegeneration. Objectives To study the causal relationship between sleep and rate of PD progression using two-sample Mendelian Randomisation (MR). Methods Mendelian Randomization was performed using genetic variants linked to sleep duration and insomnia within a GWAS combining 12 longitudinal cohorts of patients with PD (n=4093 patients) examining motor and cognitive progression. Self-reported sleep variables were obtained from GWAS performed on UK Biobank dataset. MR analysis was supplemented by sensitivity analysis to assess for weak instrument bias and pleiotropic effects. Results Genetic liability to insomnia was associated with greater cognitive decline measured by MMSE. Consistent trends across MR estimates suggested a protective effect of increased sleep duration, and detrimental effect of insomnia on motor decline measured using UPDRS-III. Sensitivity analyses reinforced these relationships. The strength of causality among these associations was limited by heterogeneity, balanced pleiotropy and collider bias. Conclusion Sleep related variables may alter the trajectory of cognitive and motor progression in PD and warrants further study.

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12. **Effectiveness of Group Cognitive Behavioral Therapy on Quality of Life and Psychological Wellbeing of Patients With Parkinson Disease A Randomized Controlled Trial.**

Authors: Narimisaei J.;Naeim M.;Nasiri Z.;Imannezhad S. and Mohammadi, Y.

Publication Date: 2025

Journal: Journal of Nervous and Mental Disease 213(3), pp. 78–81

Abstract: This study investigates the impact of group cognitive behavioral therapy (CBT) on depression reduction and quality of life improvement among individuals with Parkinson disease. A randomized clinical trial with pretest and posttest measurements involved 90 participants referred to Roozbeh Hospital in Tehran in 2023, who were randomly assigned to either an experimental group (n = 45) or a control group (n = 45). The experimental group

underwent a 3-month CBT intervention comprising 12 sessions of 90 minutes each. Both groups completed the Beck Depression Inventory and the World Health Organization Quality of Life Questionnaire preintervention and postintervention. Data analysis via multivariate analysis of covariance using SPSS-25 revealed significant improvements in reducing depression and enhancing quality of life in the experimental group compared with the control group (p

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13. **Association between Inflammation and Chronic Fatigue Syndrome in Parkinson's Disease.**

Authors: Nikitina M.A.;Bragina E.Y.;Ivanova S.A.;Boyko A.S.;Levchuk L.A.;Nazarenko M.S. and Alifirova, V. M.

Publication Date: 2025

Journal: Neuroscience and Behavioral Physiology 55(3), pp. 531–539

Abstract: Objective. To study the prevalence and associations of chronic fatigue syndrome (CFS) with other clinical and neuropsychological manifestations of Parkinson's disease (PD) and serum inflammatory markers and genetic polymorphisms. Materials and methods. The study involved 533 patients with PD. All patients underwent clinical neurological examination and neuropsychological testing using validated questionnaires: the Hospital Anxiety and Depression Scale, the Beck Depression Inventory II, the Montreal Cognitive Assessment Scale, the Apathy Scale, the SAQ questionnaire to assess the number of daytime sleep attacks, and scales for assessing autonomic disorders in patients with PD. Fatigue was assessed using the Fatigue Severity Scale (FSS). Serum concentrations of a group of inflammatory markers (slCAM-1, sVCAM-1, NCAM, CCL5, PAI-1, and MPO) were assessed in 144 PD patients. A case-control study of CCL5 (rs2107538) and PAI-1 (rs2227631) gene polymorphisms was performed in relation to the development of PD and in groups differing in terms of the presence/absence of CFS in patients with PD. In addition, the association of these polymorphisms with variation in the serum levels of the corresponding proteins was studied. Genotyping of the CCL5 (rs2107538) and PAI-1 (rs2227631) gene polymorphisms was performed using real-time PCR with TaqMan probes. Results. CFS was present in 66.7% of cases in the group of PD patients. In addition, non-motor symptoms were more common in patients with CFS, i.e., emotional-affective, cognitive, and autonomic disorders and pain. A strong correlation was found between the severity of CFS, assessed in points on the FSS questionnaire and the serum CCL5, sVCAM-1, NCAM, and slCAM-1 concentrations. In newly diagnosed patients with PD who were not taking antiparkinsonian drugs at the time of the study and had CFS, stronger correlations were noted between serum inflammatory markers and the severity of the signs of CFS. Comparison of the distributions of genotypes and alleles of the CCL5 (rs2107538) and PAI-1 (rs2227631) gene polymorphisms in the PD and control groups revealed a number of differences (p

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14. **Trends in Parkinson's disease medication prescribing patterns in the UK: An interrupted time series analysis (2019-2024).**

Authors: Orayj, Khalid

Publication Date: 2025

Journal: PLoS ONE [Electronic Resource] 20(5), pp. e0324999

Abstract: This study aimed to examine prescribing trends for Parkinson's disease (PD) medications in the United Kingdom from 2019 to 2024, focusing on the impact of guidelines from the American Academy of Neurology (AAN) and the National Institute for Health and Care Excellence (NICE) on the use of levodopa and dopamine agonists (DAs). A repeated cross-sectional design was employed, using publicly available data to assess prescribing patterns across the four UK countries. An interrupted time series analysis with linear regression was performed to identify trends, comparing regions with England as the reference point. Levodopa remained the most prescribed PD medication across all UK regions, as revealed by the analysis. In England, levodopa prescriptions increased significantly after the introduction of AAN guidelines, while other regions displayed more stable trends. Northern Ireland exhibited a distinct pattern, with DAs prescribed more frequently than levodopa. The findings also indicated that Scotland and Wales were less responsive to AAN guidance. This study highlights the influence of clinical guidelines on PD prescribing practices in the UK, with regional variations suggesting possible demographic or healthcare system factors. Further research is required to understand these disparities and their implications for PD management.

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15. **The barriers to receiving health care for people with Parkinson's from predominantly Asian backgrounds in the UK.**

Authors: Ramadhan M.;Stott J. and Schrag, A.

Publication Date: 2025

Journal: Npj Parkinson's Disease 11(1) (pagination), pp. Article Number: 131. Date of Publication: 01 Dec 2025

Abstract: Despite universal access to healthcare to eligible people of all ethnic backgrounds in the NHS, disparity in healthcare provision exists. Parkinson's disease (PD) is a chronic, progressive disorder with an insidious onset and increasing healthcare needs over time. However, there is little information on the experience of healthcare and barriers to access in people from minority ethnic (ME) backgrounds in the UK. Interviews were conducted with 21 People with Parkinson's (PwP) (38% female, mean age 54 (SD 10.67 years) from ME groups. Results were analysed using Braun and Clarke's thematic analysis. Four main themes were extracted: Awareness and Acceptance of Symptoms in the ME Community; Socio-cultural Expectations and Impacts; Access to Information on Parkinson's and Services; and Experiences of Healthcare. ME-PwP experience challenges in accessing healthcare, even in a universal healthcare system. Recognising these complex barriers may improve access and quality of life.

16. **Anxiety-related attentional characteristics and their relation to freezing of gait in people with Parkinson's: Cross-validation of the Adapted Gait Specific Attentional Profile (G-SAP).**

Authors: Rosenblum U.;Cocks A.J.;Norris M.;Kal E. and Young, W. R.

Publication Date: 2025

Journal: Journal of Parkinson's Disease , pp. 1877718X251326266

Abstract: BackgroundAnxiety often exacerbates freezing of gait (FOG) in people with Parkinson's (PwP). Anxiety-related attentional processes and associated processing inefficiencies, like conscious movement processing (CMP) and ruminations, can substantially impact movement control. However, their impact on FOG remains largely unexplored.ObjectiveTo validate an adapted 10-item (1-5 Likert scale) Gait-Specific Attentional Profile (G-SAP) in PwP and assess if adapted G-SAP-subscales (Physiological Arousal, CMP, Rumination, and Processing Inefficiencies) are associated with self-reported FOG frequency.MethodsWe recruited 440 PwP (Mage = 65.5 +/- 8.7; 5.8 +/- 5.0 years since diagnosis) across the UK. Participants completed the adapted G-SAP and questionnaires on demographics, medical background, and FOG frequency. We assessed adapted G-SAP's internal consistency, structural validity, and subscale scores associations with FOG frequency.ResultsThe adapted G-SAP showed acceptable internal consistency (alpha>=0.66) and acceptable/good model fit (comparative fit index = 0.976). Physiological Arousal and CMP subscale scores presented weaker correlations for PwP with FOG (PwP + FOG, r = 0.52) compared to PwP without FOG (PwP-FOG, r = 0.77; p = 0.006). Higher Rumination (OR: 1.323, 95%CI: [1.214-1.440]) and Physiological Arousal (OR: 1.195, 95%CI:[1.037-1.377]) were significantly associated with higher FOG frequency, controlling for age, time since diagnosis and balance/gait problems.ConclusionsThe adapted G-SAP is reliable and convenient to measure and identify potentially maladaptive anxiety-related attentional processes that may impact FOG. Results suggest that PwP who experience more worrisome thoughts and greater physiological arousal in daily life are likelier to freeze. Compared to PwP-FOG, for PwP + FOG high physiological arousal was associated with reduced goal-directed focus of attention. Future research will determine if this is a causal risk factor.

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17. **Assessment of Non-Motor Symptoms and Their Effect on Quality of Life in Parkinson's Disease: A Cross-Sectional Study.**

Authors: Singh N.;Kumar V. and Abhishek

Publication Date: 2025

Journal: International Journal of Current Pharmaceutical Review and Research 17(1), pp. 670–674

Abstract: Background: While Parkinson's Disease (PD) is classically known for its motor symptoms, non-motor symptoms (NMS) such as mood disorders, cognitive dysfunction, sleep disturbances, autonomic instability, and sensory issues are increasingly recognized as important contributors to disease burden. These symptoms often precede motor

manifestations and are strongly linked with poor quality of life. Objective(s): To evaluate the spectrum and frequency of non-motor symptoms in patients with Parkinson's Disease and to assess their impact on the patients' quality of life. Method(s): This cross-sectional study was conducted over a nine-month period at the Department of Neurology, Paras HMRI Hospital, Patna, Bihar, India. A total of 120 diagnosed PD patients were assessed using the Non-Motor Symptoms Scale (NMSS) and Parkinson's Disease Questionnaire-39 (PDQ-39). Data were analyzed to determine the correlation between NMS burden and quality of life. Result(s): All participants exhibited at least one non-motor symptom. The most commonly reported domains included sleep/fatigue (81.7%), mood/cognition (75%), and gastrointestinal symptoms (62.5%). A significant positive correlation (r = 0.70, p Result(s): All participants exhibited at least one non-motor symptom. The most commonly reported domains included sleep/fatigue (81.7%), mood/cognition (75%), and gastrointestinal symptoms (62.5%). A significant positive correlation (r = 0.70, p Result(s): All participants exhibited at least one non-motor symptom. The most commonly reported domains included sleep/fatigue (81.7%), mood/cognition (75%), and gastrointestinal symptoms (62.5%). A significant positive correlation (r = 0.70, p Conclusion(s): Non-motor symptoms are highly prevalent and have a profound negative impact on the quality of life in Parkinson's Disease patients. Routine screening for NMS and multidisciplinary management approaches are essential for comprehensive care and better clinical outcomes.

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18. **Basal ganglia theta power indexes trait anxiety in people with Parkinson's disease.**

Authors: Swinnen B.E.K.S.;Hoy C.W.;Pegolo E.;Ishihara B.;Matzilevich E.U.;Sun J.;Morgante F.;Pereira E.;Baig F.;Hart M.;Tan H.;Sawacha Z.;Beudel M.;Wang S.;Starr P.;Little S. and Ricciardi, L.

Publication Date: 2025

Journal: Brain 148(4), pp. 1228–1241

Abstract: Neuropsychiatric symptoms are common and disabling in Parkinson's disease, with troublesome anxiety occurring in one-third of patients. Management of anxiety in Parkinson's disease is challenging, hampered by insufficient insight into underlying mechanisms, lack of objective anxiety measurements and largely ineffective treatments. In this study, we assessed the intracranial neurophysiological correlates of anxiety in patients with Parkinson's disease treated with deep brain stimulation (DBS) in the laboratory and at home. We hypothesized that low-frequency (theta-alpha) activity would be associated with anxiety. We recorded local field potentials from subthalamic nucleus or globus pallidus pars interna DBS implants in three Parkinson's disease cohorts: (i) patients with recordings (subthalamic nucleus) performed in hospital at rest via perioperatively externalized leads, without active stimulation, both ON and OFF dopaminergic medication; (ii) patients with recordings (subthalamic nucleus or globus pallidus pars interna) performed at home while resting, via a chronically implanted commercially available sensing-enabled neurostimulator (Medtronic PerceptTM device), ON dopaminergic medication, with stimulation both on and off; and (iii) patients with recordings performed at home while engaging in a behavioural task via subthalamic nucleus and globus pallidus pars interna leads and electrocorticography paddles over the premotor cortex connected to an investigational sensing-enabled neurostimulator, ON dopaminergic medication, with stimulation both on and off. Trait anxiety was measured with validated clinical

scales in all participants, and state anxiety was measured with momentary assessment scales at multiple time points in the two at-home cohorts. Power in theta (4-8 Hz) and alpha (8-12 Hz) ranges was extracted from the local field potential recordings, and its relationship with anxiety ratings was assessed using linear mixed-effects models. In total, 33 patients with Parkinson's disease (59 hemispheres) were included. Across three independent cohorts, with stimulation off, basal ganglia theta power was positively related to trait anxiety (all P

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19. **Clinical Spectrum of Non-motor Symptoms in Correlation with Quality of Life in Parkinson's Disease and Atypical Parkinsonism: Evidence in Reaching Consensus.**

Authors: Tapdia M.;Kumar A.;Yadav A.K.;Singh V.K.;Pathak A.;Chaurasia R.N.;Mishra V.N.;Dubey N.K.;Dhiman N.R.;Shailesh M. and Joshi, D.

Publication Date: 2025

Journal: Annals of Neurosciences (pagination), pp. Date of Publication: 2025

Abstract: Background: Non-motor symptoms (NMS) are frequently overlooked, yet they significantly contribute to the progression of Parkinson's disease (PD) or atypical parkinsonism (AP), which include multiple system atrophy (MSA), progressive supranuclear palsy (PSP). Moreover, discrepancies exist in non-motor symptom scale (NMSS) scores for AP and PD, and no consensus has yet been reached. Purpose(s): We evaluated and compared the NMS and their association with life quality in patients with AP and PD. Method(s): This cross-sectional observational report at a single-centre enrolling 204 patients (155 PD, 49 AP (27 MSA), and 22 PSP) from a tertiary care hospital's movement disorder clinic. We used Movement Disorder Society Unified Parkinson's Disease Rating Scale (MDS UPDRS)-III and modified Hoehn and Yahr (H&Y) to compute a motor score and disease severity, respectively. We assessed patients' mental capabilities, such as cognitive impairment, through a Mini-Mental State Examination (MMSE). Meanwhile, the NMSS determined the NMSs. Quality of life (QoL) was estimated by PD Questionnaire-39 (PDQ-39). Result(s): We observed insignificant differences between the PD and atypical parkinsonian syndrome (APS) groups based on disease duration and gender. Worsened motor disability and disease severity were observed in AP (PSP>MSA) (P Result(s): We observed insignificant differences between the PD and atypical parkinsonian syndrome (APS) groups based on disease duration and gender. Worsened motor disability and disease severity were observed in AP (PSP>MSA) (P Result(s): We observed insignificant differences between the PD and atypical parkinsonian syndrome (APS) groups based on disease duration and gender. Worsened motor disability and disease severity were observed in AP (PSP>MSA) (P Conclusion(s): Compared to PD, NMS was severe and highly prevalent among AP (MSA > PSP), which could be confirmed through the prevalence of sexual cardiovascular and urinary domains in MSA, while attention and mood/cognition, and sleep in PSP.Copyright © The Author(s) 2025.

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20. **Profile of Independence in Activities of Daily Living Among Patients With Parkinson's Disease: A Retrospective Observational Study.**

Authors: Yokoi K.;Kawasaki I.;Takeda A.;Eakman A.M. and Hirayama, K.

Publication Date: 2025

Journal: American Journal of Occupational Therapy 79(3), pp. no pagination

Abstract: Importance: Persons with Parkinson's disease (PD) become more dependent in activities of daily living (ADL) as the disease progresses. Occupational therapy practitioners aware of the stages of PD can design interventions to promote and maintain occupational performance. Objective(s): To evaluate the ADL independence and dependence profiles of patients with PD on the basis of disease stages. Design(s): Retrospective observational study. Setting(s): Hospital in Japan. Participant(s): Patients with PD (N 5 209; 75 men and 134 women), with a mean age of 73.3 yr (SD 5 7.7). Outcomes and Measures: The Hoehn and Yahr (H-Y) stage was used to determine patients' disease severity. The Barthel Index (BI) was used to determine independence in performing ADLs. Result(s): In the H-Y Stage 2 group, the prevalence of independence in mobility and stairs was low, whereas that in other ADLs was high. In the H-Y Stage 3 group, more than half of the patients had limitations in bathing, mobility, and navigating stairs, although most patients remained independent in other ADLs. In the H-Y Stage 4 group, more than half of the patients required assistance with most ADLs, except feeding and bowel control. In the H-Y Stage 5 group, the prevalence of independence during feeding and grooming was relatively high. Conclusions and Relevance: Dependence in ADL domains differs by PD stage, with direct implications for occupational therapy intervention. Plain-Language Summary: Parkinson's disease (PD) is a progressive neurodegenerative disorder characterized by motor symptoms and nonmotor symptoms. The disease progression can gradually affect activities of daily living (ADLs), which can lead to decreased independence and quality of life as well as increased caregiver distress. This study evaluated the ADL independence and dependence of patients with PD based on each patient's disease stage. The study found that ADL dependence differs based on the PD stage (mild, moderate, severe), with direct implications for occupational therapy intervention. Occupational therapists can design interventions to improve and maintain the occupational performance of people with PD. Interventions that target ADLs should be based on the patient's PD stage.

Sources Used:

The following databases are used in the creation of this bulletin: EMBASE, EMCARE and Medline.

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