

Parkinson's Disease

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Virtual reality helping people with Parkinson's

BBC News, 28 March 2024

Virtual reality headsets are helping alleviate the symptoms of people with Parkinson's, a charity has said. Up to 12 people a week have been wearing the headsets in a trial at a fitness and well-being gym based at Teesside Airport, near Darlington.

They take part in virtual activities, such as visiting the Taj Mahal, participating in an exercise class, or climbing the Acropolis. A spokesperson from charity Parkinson's UK called the trial of virtual reality "really exciting". The stimulus from the virtual activity produces adrenaline and dopamine in the body, both of which alleviate symptoms. These can include tremors, balance problems and slow and stiff movements.

1. Increasing number of deaths related to Parkinson's disease (PD) and Parkinsonism

Item Type: Conference Proceeding

Authors: Adhiyaman, V. and Hobson, P.

Publication Date: 2024

Publication Details: Age and Ageing. Conference: British Geriatrics Society Autumn Meeting, BGS 2023. Birmingham United Kingdom. 53(Supplement 1) (pp i33); Oxford University Press,

Abstract: Introduction: The burden of PD has exponentially risen from 2.5 million in 1990, to 6.1 million in 2016 (PD Collaborators. Lancet Neurol. 2018; 17(11):939-53). This is due to ageing population, increased longevity, increased duration of the disease and improved diagnosis. The aim of our study was to identify the trend on deaths related to PD and Parkinsonism over the last decade. Method(s): We collected our data from the Office of the National Statistics, using codes G20 (PD), G21 (Secondary Parkinsonism) and G22 (Parkinsonism classified elsewhere), to extract the number of deaths coded under these conditions from 2013 to 2021. The data was only available for England and Wales. Result(s): Total number of deaths including all codes from 2013 to 2021 were 4518, 4950, 5542, 5734, 5936, 6508, 6207, 7414 and 7117. Deaths coded under G.20 are far higher compared to deaths coded under the others. Conclusion(s): The number of deaths related to PD has been gradually increasing and has nearly doubled over the last 9 years. Although Covid 19 may have contributed to this increase over the last two years, there is an overall rising trend. We think this is primarily due to people with PD living longer leading to an increased prevalence and duration of the condition. This is linked to sarcopenia, frailty, immobility, cognitive impairment and dysphagia contributing to increased mortality in later years. Another reason could be due to more accurate documentation in death certificates. Even though there has been concerns that death certificates have not been accurately coded to include PD, (Hobson, Meara. 2018; 8(2):e018969), there is probably an improvement after the introduction of Medical Examiner services. It is important to recognise the increasing burden of PD to enable us to plan and invest in resources to improve the care of these patients..

2. Causal association between long-term exposure to air pollution and incident Parkinson's disease.

Authors: Ai, Baozhuo;Zhang, Jiayue;Zhang, Shiyu;Chen, Ge;Tian, Fei;Chen, Lan;Li, Haitao;Guo, Yuming;Jerath, Angela;Lin, Hualiang and Zhang, Zilong

Publication Date: May 05 ,2024

Journal: Journal of Hazardous Materials 469, pp. 133944

Abstract: Epidemiological evidence for long-term air pollution exposure and Parkinson's disease (PD) is controversial, and analysis of causality is limited. We identified 293,888 participants who were free of PD at baseline in the UK Biobank (2006-2010). Time-varying air pollution [fine particulate (PM_{2.5}) and ozone (O₃)] exposures were estimated using spatio-temporal models. Incident cases of PD were identified using validated algorithms. Four methods were used to investigate the associations between air pollution and PD, including (1) standard time-varying Cox proportional-hazard model; (2) Cox models weighted by generalized propensity score (GPS) and inverse-probability weights (IPW); (3) instrumental variable (IV) analysis; and (4) negative control outcome analysis. During a median of 11.6 years of follow-up, 1822 incident PD cases were identified. Based on standard Cox regression, the hazard ratios (95% confidence interval) for a 1 microg/m³ or ppb increase in PM_{2.5} and O₃ were 1.23 (1.17, 1.30) and 1.02 (0.98, 1.05), respectively. Consistent results were found in models weighted by GPS and IPW, and in IV analysis. There were no significant associations between air pollution and negative control outcomes. This study provides evidence to support a causal association between PM_{2.5} exposure and PD. Mitigation of air pollution could be a protective measure against PD. Copyright © 2024 Elsevier B.V. All rights reserved.

3. Risk of Parkinson's disease in people with New Onset Anxiety over 50 years - Incidence and Associated Features.

Authors: BazoAlvarez, J. C.;Nimmons, D.;Walters, K.;Petersen, I. and Schrag, A.

Publication Date: 2024

Journal: The British Journal of General Practice : The Journal of the Royal College of General Practitioners (pagination), pp. Date of Publication: 21 Mar 2024

Abstract: BACKGROUND: Anxiety has been identified as a prodromal feature of Parkinson's disease (PD). The prospective risk of PD in those newly presenting with anxiety and factors that increase the risk of PD in patients with anxiety have not been investigated. AIM: To investigate the incidence of PD in people with anxiety above the age 50 years and clinical features associated with later diagnosis of PD in people with anxiety. DESIGN AND SETTING: Retrospective cohort study using UK primary care data of people between 2008 and 2018 who had new onset anxiety over the age of 50 years. METHOD(S): We fitted Weibull survival regression models and estimated hazard ratios (HR) for modelling time-to-PD in those with and without anxiety and when determining the risk of developing PD in those with anxiety. Results were adjusted for sociodemographic and lifestyle factors and relevant physical and mental health conditions. RESULT(S): The risk of PD was increased 2-fold compared to the

non-anxiety group after adjustment for age, sex, social deprivation, lifestyle factors, severe mental illness, head trauma and dementia HR 2.1 (CI: 1.9-2.4). In those with anxiety, the presence of depression, hypotension, tremor, rigidity, balance impairment, constipation, sleep disturbance, fatigue, and cognitive impairment were associated with an increased risk of developing PD. CONCLUSION(S): The risk of developing PD was at least doubled in people with anxiety compared to those without. The clinical features of those who developed PD can help identify patients presenting with anxiety who are in the prodromal phase of PD. Copyright © 2024, The Authors.

4. Disease progression strikingly differs in research and real-world Parkinson's populations.

Authors: Beaulieu-Jones, Brett K.;Frau, Francesca;Bozzi, Sylvie;Chandross, Karen J.;Peterschmitt, M. Judith;Cohen, Caroline;Coulovrat, Catherine;Kumar, Dinesh;Krugger, Mark J.;Lipnick, Scott L.;Fitzsimmons, Lane;Kohane, Isaac S. and Scherzer, Clemens R.

Publication Date: Mar 13 ,2024

Journal: Npj Parkinsons Disease 10(1), pp. 58

Abstract: Characterization of Parkinson's disease (PD) progression using real-world evidence could guide clinical trial design and identify subpopulations. Efforts to curate research populations, the increasing availability of real-world data, and advances in natural language processing, particularly large language models, allow for a more granular comparison of populations than previously possible. This study includes two research populations and two real-world data-derived (RWD) populations. The research populations are the Harvard Biomarkers Study (HBS, N = 935), a longitudinal biomarkers cohort study with in-person structured study visits; and Fox Insights (N = 36,660), an online self-survey-based research study of the Michael J. Fox Foundation. Real-world cohorts are the Optum Integrated Claims-electronic health records (N = 157,475), representing wide-scale linked medical and claims data and de-identified data from Mass General Brigham (MGB, N = 22,949), an academic hospital system. Structured, de-identified electronic health records data at MGB are supplemented using a manually validated natural language processing with a large language model to extract measurements of PD progression. Motor and cognitive progression scores change more rapidly in MGB than HBS (median survival until H&Y 3: 5.6 years vs. >10, p Copyright © 2024. The Author(s).

5. Oral health experiences of people living with Parkinson's disease: a scoping review.

Authors: E Tebbutt J.;Marshman, Z. and R Baker, S.

Publication Date: 2024

Journal: British Dental Journal (pagination), pp. Date of Publication: 07 Feb 2024

Abstract: Background and aim Parkinson's disease is the fastest growing and second most common progressive neurodegenerative condition in the UK; poised to represent a major

societal and health care challenge. The scoping review aims to provide an overview of the literature on the oral health (OH) experiences of people living with Parkinson's, identifying current research gaps and future priorities. Method Search strategies included three electronic databases, two grey literature databases, relevant organisations, specialist journals and hand searching of the reference lists. A data extraction tool was developed and piloted. Results A total of 121 items were included in the review. Four themes were identified: OH impact, education and training, service delivery and wider impacts of OH for people with Parkinson's (PwP). The majority of studies included were cross-sectional in design, describing the OH status of PwP. Conclusion The majority of research to date has focused on OH impact. Areas for future research include use of qualitative studies exploring the experiences, attitudes and priorities of PwP and their care partners. Inclusion of medical, dental and allied health care professionals, together with people with lived experience, is required to develop, implement and evaluate interventions to support OH. Copyright © 2024. The Author(s).

6. The effects of treatment with pimavanserin on activities of daily living in patients with Parkinson's disease psychosis: a 16-week, single-arm, open-label study.

Authors: Evidente, Virgilio G. H.; DeKarske, Daryl; Coate, Bruce and Abler, Victor

Publication Date: 2024

Journal: Therapeutic Advances in Neurological Disorders 17, pp. 17562864241228350

Abstract: Background: More than half of patients with Parkinson's disease will experience psychosis symptoms in the form of hallucinations or delusions at some point over the course of their disease. These symptoms can significantly impact patients' health-related quality of life, cognitive abilities, and activities of daily living (ADLs) and function. Clinical assessment of how psychosis impacts these measures is crucial; however, few studies have assessed this sufficiently, in part due to a lack of appropriate scales for comprehensively assessing function. Objective: The objective was to assess how symptoms of Parkinson's disease psychosis (PDP) impact ADLs and function, cognitive function, and health-related quality of life. Design: To address this unmet need, we utilized a modified version of the Functional Status Questionnaire (mFSQ) to measure the impact of psychosis on ADLs and function in patients with PDP treated with pimavanserin, a US Food and Drug Administration-approved medication to treat hallucinations and delusions associated with PDP. Methods: Eligible patients entered a 16-week, single-arm, open-label study of oral pimavanserin (34 mg) taken once daily. The primary endpoint was change from baseline to Week 16 on the mFSQ. Secondary endpoints included the Movement Disorders Society-modified Unified Parkinson's Disease Rating Scale (MDS-UPDRS) I and II; Schwab and England ADL; Clinical Global Impression-Severity of Illness (CGI-S), Clinical Global Impression-Improvement (CGI-I), and Patient Global Impression-Improvement (PGI-I), and were also measured as change from baseline to Week 16 using mixed-effects model for repeated measures (MMRM) and least-squares mean (LSM). Results: Our results in a proof-of-concept, 16-week, open-label clinical study in 29 patients demonstrated that an improvement in psychosis symptoms following treatment with pimavanserin was associated with improvements in multiple measures of ADLs and function. Notably, a significant improvement was found on the primary endpoint, change from baseline to Week 16 in mFSQ score [LSM [SE] 14.0 [2.50], n = 17; 95% CI (8.8, 19.3); p Conclusion: These findings highlight the potential for improvement in function with improvement of

psychosis symptoms in patients with PDP and suggest that the mFSQ may be a measurement tool to evaluate the level of improvement in function. Trial registration: ClinicalTrials.gov Identifier: NCT04292223. Copyright © The Author(s), 2024.

7. Delirium is more common and associated with worse outcomes in Parkinson's disease compared to older adult controls: results of two prospective longitudinal cohort studies.

Authors: Gerakios, Florence;Yarnall, Alison J.;Bate, Gemma;Wright, Laura;Davis, Daniel;Stephan, Blossom C. M.;Robinson, Louise;Brayne, Carol;Stebbins, Glenn;Taylor, John-Paul;Burn, David J.;Allan, Louise M.;Richardson, Sarah J. and Lawson, Rachael A.

Publication Date: Mar 01 ,2024

Journal: Age & Ageing 53(3)

Abstract: BACKGROUND: Inpatient prevalence of Parkinson's disease (PD) delirium varies widely across the literature. Delirium in general older populations is associated with adverse outcomes, such as increased mortality, dementia, and institutionalisation. However, to date there are no comprehensive prospective studies in PD delirium. This study aimed to determine delirium prevalence in hospitalised PD participants and the association with adverse outcomes, compared to a control group of older adults without PD. METHODS: Participants were hospitalised inpatients from the 'Defining Delirium and its Impact in Parkinson's Disease' and the 'Delirium and Cognitive Impact in Dementia' studies comprising 121 PD participants and 199 older adult controls. Delirium was diagnosed prospectively using the Diagnostic and Statistical Manual of Mental Disorders 5th Edition criteria. Outcomes were determined by medical note reviews and/or home visits 12 months post hospital discharge. RESULTS: Delirium was identified in 66.9% of PD participants compared to 38.7% of controls (p : Delirium was identified in 66.9% of PD participants compared to 38.7% of controls (p CONCLUSION: Delirium is common in hospitalised PD patients, affecting two thirds of patients, and is associated with increased mortality, institutionalisation, and dementia. Further research is essential to understand how to accurately identify, prevent and manage delirium in people with PD who are in hospital. Copyright © The Author(s) 2024. Published by Oxford University Press on behalf of the British Geriatrics Society.

8. Perspectives of People At-Risk on Parkinson's Prevention Research.

Authors: Keavney, J. L.;Mathur, S.;Schroeder, K.;Merrell, R.;CastilloTorres, S. A.;Gao, V.;Crotty, G. F.;Schwarzschild, M. A. and Poma, J. M.

Publication Date: 2024

Journal: Journal of Parkinson's Disease (pagination), pp. Date of Publication: 14 Mar 2024

Abstract: The movement toward prevention trials in people at-risk for Parkinson's disease (PD) is rapidly becoming a reality. The authors of this article include a genetically at-risk advocate with the LRRK2 G2019 S variant and two patients with rapid eye movement sleep

behavior disorder (RBD), one of whom has now been diagnosed with PD. These authors participated as speakers, panelists, and moderators in the "Planning for Prevention of Parkinson's: A Trial Design Forum" hosted by Massachusetts General Hospital in 2021 and 2022. Other authors include a young onset person with Parkinson's (PwP) and retired family physician, an expert in patient engagement in Parkinson's, and early career and veteran movement disorders clinician researchers. Several themes emerged from the at-risk participant voice concerning the importance of early intervention, the legitimacy of their input in decision-making, and the desire for transparent communication and feedback throughout the entire research study process. Challenges and opportunities in the current environment include lack of awareness among primary care physicians and general neurologists about PD risk, legal and psychological implications of risk disclosure, limited return of individual research study results, and undefined engagement and integration of individuals at-risk into the broader Parkinson's community. Incorporating the perspectives of individuals at-risk as well as those living with PD at this early stage of prevention trial development is crucial to success.

9. Short term effects of contralateral tendon vibration on motor unit discharge rate variability and force steadiness in people with Parkinson's disease.

Authors: Kim, Changki;Wile, Daryl J.;Kraeutner, Sarah N.;Larocque, Kaylee A. and Jakobi, Jennifer M.

Publication Date: 2024

Journal: Frontiers in Aging Neuroscience 16, pp. 1301012

Abstract: Background: Vibration of one limb affects motor performance of the contralateral limb, and this may have clinical implications for people with lateralized motor impairments through vibration-induced increase in cortical activation, descending neural drive, or spinal excitability. Objective: The objective of this study was to evaluate the effects of acute biceps brachii tendon vibration on force steadiness and motor unit activity in the contralateral limb of persons with Parkinson's disease. Methods: Ten participants with mild to moderate Parkinson's disease severity performed a ramp, hold and de-ramp isometric elbow flexion at 5% of maximum voluntary contraction with the more-affected arm while vibration was applied to the distal biceps brachii tendon on the contralateral, less-affected arm. Using intramuscular fine wire electrodes, 33 MUs in the biceps brachii were recorded across three conditions (baseline, vibration, and post-vibration). Motor unit recruitment & derecruitment thresholds, discharge rates & variability, and elbow flexion force steadiness were compared between conditions with and without vibration. Results: Coefficient of variation of force and discharge rate variability decreased 37 and 17%, respectively in post-vibration compared with baseline and vibration conditions. Although the motor unit discharge rates did not differ between conditions the total number of motor units active at rest after de-ramp were fewer in the post-vibration condition. Conclusion: Contralateral tendon vibration reduces MU discharge rate variability and enhances force control on the more affected side in persons with Parkinson's disease. Copyright © 2024 Kim, Wile, Kraeutner, Larocque and Jakobi.

10. Care of Late-Stage Parkinsonism: Resource Utilization of the Disease in Five European Countries.

Authors: Kruse, Christopher;Lipinski, Anna;Verheyen, Malte;Balzer-Geldsetzer, Monika;Wittenberg, Michael;Lorenzl, Stefan;Richinger, Carmen;Schmotz, Christian;Tonges, Lars;Woitalla, Dirk;Klebe, Stephan;Bloem, Bastiaan R.;Hommel, Adrianus;Meissner, Wassilios G.;Laurens, Brice;Boraud, Thomas;Foubert-Samier, Alexandra;Vergnet, Sylvain;Tison, Francois;Costa, Nadege, et al

Publication Date: Mar ,2024

Journal: Movement Disorders 39(3), pp. 571-584

Abstract: BACKGROUND: Parkinson's disease (PD) is a neurodegenerative disease that leads to progressive disability. Cost studies have mainly explored the early stages of the disease, whereas late-stage patients are underrepresented. OBJECTIVE: The aim is to evaluate the resource utilization and costs of PD management in people with late-stage disease. METHODS: The Care of Late-Stage Parkinsonism (CLaSP) study collected economic data from patients with late-stage PD and their caregivers in five European countries (France, Germany, the Netherlands, UK, Sweden) in a range of different settings. Patients were eligible to be included if they were in Hoehn and Yahr stage >3 in the on state or Schwab and England stage at 50% or less. In total, 592 patients met the inclusion criteria and provided information on their resource utilization. Costs were calculated from a societal perspective for a 3-month period. A least absolute shrinkage and selection operator approach was utilized to identify the most influential independent variables for explaining and predicting costs. RESULTS: During the 3-month period, the costs were 20,573 (France), 19,959 (Germany), 18,319 (the Netherlands), 25,649 (Sweden), and 12,156 (UK). The main contributors across sites were formal care, hospitalization, and informal care. Gender, age, duration of the disease, Unified Parkinson's Disease Rating Scale 2, the EQ-5D-3L, and the Schwab and England Scale were identified as predictors of costs. CONCLUSION: Costs in this cohort of individuals with late-stage PD were substantially higher compared to previously published data on individuals living in earlier stages of the disease. Resource utilization in the individual sites differed in part considerably among these three parameters mentioned. © 2024 The Authors. Movement Disorders published by Wiley Periodicals LLC on behalf of International Parkinson and Movement Disorder Society. Copyright © 2024 The Authors. Movement Disorders published by Wiley Periodicals LLC on behalf of International Parkinson and Movement Disorder Society.

11. Assessment of Psychometric Characteristics of Parkinson's Disease Sleep Scale 2 and Analysis of a Cut-Off Score for Detecting Insomnia in Italian Patients with Parkinson's Disease: A Validation Study.

Authors: Liguori, Claudio;Frontani, Francesco;Francescangeli, Giulia;Pierantozzi, Mariangela;Cerroni, Rocco;Schirinzi, Tommaso;Stefani, Alessandro;Mercuri, Nicola Biagio and Galeoto, Giovanni

Publication Date: Mar 10 ,2024

Journal: Journal of Personalized Medicine 14(3)

Abstract: INTRODUCTION: Sleep disorders are frequent non-motor symptoms affecting patients with Parkinson's disease (PD). Insomnia represents the most common sleep disorder. Parkinson's disease Sleep Scale 2 (PDSS-2) is a specific tool to investigate sleep problems in PD. The General Sleep Disturbances Scale (GSDS) was a general scale validated for the Italian population. Our goal was to assess the psychometric characteristics of PDSS-2 and the GSDS in this population, calculating a cut-off score for insomnia symptoms by using subitems of PDSS-2. METHODS: Patients admitted at the PD Unit of the Hospital of Rome Tor Vergata outpatient clinic and those afferent to PD associations were asked to complete PDSS-2 and GSDS to be correlated to identify a cut-off for insomnia symptoms. Items 1,2,3,8,13 of PDSS-2 were used to detect insomnia. An ROC curve to assess a cut-off score for insomnia was determined. A cross-cultural analysis of PD population characteristics was performed. RESULTS: In total, 350 PD patients were recruited. Cronbach's alpha was high for the total score (0.828 for PDSS-2 and 0.832 for GSDS). A cross-cultural analysis did not show any significant p-value. The ROC curve yielded an AUC of 0.79 (CI: 0.75-0.84). The cut-off value for insomnia disorder based on items 1,2,3,8,13 of PDSS-2 was >10, demonstrating a sensitivity of 76% and a specificity of 69% in determining the presence of subjective insomnia symptoms in PD. DISCUSSION: PDSS-2 is demonstrated to be a valid, specific tool to address sleep disturbances in PD patients. A cut-off score of 10 for items 1,2,3,8,13 was identified for detecting insomnia symptoms in PD patients.

12. Machine-learning model for the prediction of acute orthostatic hypotension after levodopa administration.

Authors: Liu, Zhu;Lin, Shinuan;Zhou, Junhong;Wang, Xuemei;Wang, Zhan;Yang, Yaqin;Ma, Huizi;Chen, Zhonglue;Ren, Kang;Wu, Lingyu;Zhuang, Haimei;Ling, Yun and Feng, Tao

Publication Date: 2024

Journal: CNS Neuroscience & Therapeutics 30(3), pp. e14575

Abstract: BACKGROUND: Levodopa could induce orthostatic hypotension (OH) in Parkinson's disease (PD) patients. Accurate prediction of acute OH post levodopa (AOHPL) is important for rational drug use in PD patients. Here, we develop and validate a prediction model of AOHPL to facilitate physicians in identifying patients at higher probability of developing AOHPL. METHODS: The study involved 497 PD inpatients who underwent a levodopa challenge test (LCT) and the supine-to-standing test (STS) four times during LCT. Patients were divided into two groups based on whether OH occurred during levodopa effectiveness (AOHPL) or not (non-AOHPL). The dataset was randomly split into training (80%) and independent test data (20%). Several models were trained and compared for discrimination between AOHPL and non-AOHPL. Final model was evaluated on independent test data. Shapley additive explanations (SHAP) values were employed to reveal how variables explain specific predictions for given observations in the independent test data. RESULTS: We included 180 PD patients without AOHPL and 194 PD patients with AOHPL to develop and validate predictive models. Random Forest was selected as our final model as its leave-one-out cross validation performance [AUC_ROC 0.776, accuracy 73.6%, sensitivity 71.6%, specificity 75.7%] outperformed other models. The most crucial features in this predictive model were the maximal SBP drop and DBP drop of STS before medication (DELTASBP/DELTADBP). We achieved a prediction accuracy of 72% on independent test

data. DELTASBP, DELTADBP, and standing mean artery pressure were the top three variables that contributed most to the predictions across all individual observations in the independent test data. CONCLUSIONS: The validated classifier could serve as a valuable tool for clinicians, offering the probability of a patient developing AOHPL at an early stage. This supports clinical decision-making, potentially enhancing the quality of life for PD patients. Copyright © 2023 The Authors. CNS Neuroscience & Therapeutics published by John Wiley & Sons Ltd.

13. The effects of genetic and modifiable risk factors on brain regions vulnerable to ageing and disease.

Authors: Manuello, Jordi;Min, Joosung;McCarthy, Paul;Alfaro-Almagro, Fidel;Lee, Soojin;Smith, Stephen;Elliott, Lloyd T.;Winkler, Anderson M. and Douaud, Gwenaelle

Publication Date: Mar 27 ,2024

Journal: Nature Communications 15(1), pp. 2576

Abstract: We have previously identified a network of higher-order brain regions particularly vulnerable to the ageing process, schizophrenia and Alzheimer's disease. However, it remains unknown what the genetic influences on this fragile brain network are, and whether it can be altered by the most common modifiable risk factors for dementia. Here, in ~40,000 UK Biobank participants, we first show significant genome-wide associations between this brain network and seven genetic clusters implicated in cardiovascular deaths, schizophrenia, Alzheimer's and Parkinson's disease, and with the two antigens of the XG blood group located in the pseudoautosomal region of the sex chromosomes. We further reveal that the most deleterious modifiable risk factors for this vulnerable brain network are diabetes, nitrogen dioxide - a proxy for traffic-related air pollution - and alcohol intake frequency. The extent of these associations was uncovered by examining these modifiable risk factors in a single model to assess the unique contribution of each on the vulnerable brain network, above and beyond the dominating effects of age and sex. These results provide a comprehensive picture of the role played by genetic and modifiable risk factors on these fragile parts of the brain. Copyright © 2024. The Author(s).

14. Factors Associated with Preferred Place of Care and Death in Patients with Parkinson's Disease: A Cross-Sectional Study.

Authors: Pedrosa, A. J.;Feldmann, S.;Klippel, J.;Volberg, C.;Weck, C.;Stefan, L. and Pedrosa, D. J.

Publication Date: 2024

Journal: Journal of Parkinson's Disease (pagination), pp. Date of Publication: 04 Mar 2024

Abstract: Background: A significant proportion of people with Parkinson's disease (PwPD) die in hospital settings. Although one could presume that most PwPD would favor being cared for and die at home, there is currently no evidence to support this assumption. Objective(s): We

aimed at exploring PwPD's preferences for place of end-of-life care and place of death, along with associated factors. Method(s): A cross-sectional study was conducted to investigate PwPD's end-of life wishes regarding their preferred place of care and preferred place of death. Using different approaches within a generalized linear model framework, we additionally explored factors possibly associated with preferences for home care and home death. Result(s): Although most PwPD wished to be cared for and die at home, about one-third reported feeling indifferent about their place of death. Preferred home care was associated with the preference for home death. Furthermore, a preference for dying at home was more likely among PwPD's with informal care support and spiritual/religious affiliation, but less likely if they preferred institutional care towards the end of life. Conclusion(s): The variation in responses regarding the preferred place of care and place of death highlights the need to distinguish between the concepts when discussing end-of-life care. However, it is worth noting that the majority of PwPD preferred care and death at home. The factors identified in relation to preferred place of care and death provide an initial understanding of PwPD decision-making, but call for further research to confirm our findings, explore causality and identify additional influencing factors.

15. Association between cytomegalovirus infection and neurological disorders: A systematic review

Authors: Sanami, Samira;Shamsabadi, Shahnam;Dayhimi, Amir;Pirhayati, Mohammad;Ahmad, Sajjad;Pirhayati, Ahmadreza;Ajami, Marjan;Hemati, Sara;Shirvani, Masoud;Alagha, Ahmad;Abbarin, Davood;Alizadeh, Akram and Pazoki-Toroudi, Hamidreza

Publication Date: May ,2024

Journal: Reviews in Medical Virology 34(3), pp. e2532

Abstract: Cytomegalovirus (CMV) belongs to the Herpesviridae family and is also known as human herpesvirus type 5. It is a common virus that usually doesn't cause any symptoms in healthy individuals. However, once infected, the virus remains in the host's body for life and can reactivate when the host's immune system weakens. This virus has been linked to several neurological disorders, including Alzheimer's disease, Parkinson's disease, Autism spectrum disorder, Huntington's disease (HD), ataxia, Bell's palsy (BP), and brain tumours, which can cause a wide range of symptoms and challenges for those affected. CMV may influence inflammation, contribute to brain tissue damage, and elevate the risk of moderate-to-severe dementia. Multiple studies suggest a potential association between CMV and ataxia in various conditions, including Guillain-Barre syndrome, chronic inflammatory demyelinating polyneuropathy, acute cerebellitis, etc. On the other hand, the evidence regarding CMV involvement in BP is conflicting, and also early indications of a link between CMV and HD were challenged by subsequent research disproving CMV's presence. This systematic review aims to comprehensively investigate any link between the pathogenesis of CMV and its potential role in neurological disorders and follows the preferred reporting items for systematic review and meta-analysis checklist. Despite significant research into the potential links between CMV infection and various neurological disorders, the direct cause-effect relationship is not fully understood and several gaps in knowledge persist. Therefore, continued research is necessary to gain a better understanding of the role of CMV in neurological disorders and potential treatment avenues. Copyright © 2024 John Wiley & Sons Ltd.

16. Validation of the Distress Thermometer as a Screening Tool for Psychosocial Distress and Resilience in Parkinson's Disease.

Authors: Schnalke, Nils;Tekampe, Esther;Feige, Tim;Frank, Anika;Reichmann, Heinz;Falkenburger, Bjorn and D'Souza, Simone

Publication Date: Mar ,2024

Journal: Movement Disorders Clinical Practice 11(3), pp. 257-264

Abstract: BACKGROUND: Parkinson's disease (PD) is associated with psychosocial distress that affects patients' quality of life. The distress thermometer (DT) is an 11-point visual analogue scale that is used as a screening tool for the assessment of psychosocial distress, originally developed for oncological diseases. OBJECTIVES: To validate the DT for PD and to explore contributing factors. METHODS: The DT scale was administered to 105 people with Parkinson's Disease (PwPD). Along with it, we assessed motor symptoms (Unified Parkinson's Disease Rating Scale part III [UPDRS III], Hoehn and Yahr-stage [H&Y]), non-motor symptoms (Non-motor Symptom Questionnaire [NMSQ]), anxiety and depression (Hospital Anxiety and Depression Scale [HADS], Fear of Progression-Questionnaire Short Form [FOP-Q-SF], Generalized Anxiety Disorder Scale-7 [GAD-7], 9-question Patient Health Questionnaire [PHQ-9]), the feeling of hope (Herth Hope Index [HHI]) and quality of life (Schedule for the Evaluation of Individual Quality of Life [SEIQoL]). RESULTS: With a cut-off of 4, the DT identified PwPD with distress with a sensitivity of 97% and a specificity of 38%. With this cut-off, the DT will yield false negative results in 1 out of 100 cases. Factor analyses and a random forest regression of the dataset revealed that distress can be predicted by two factors, which we termed "anxiety" and "depression/resilience/motor symptoms". CONCLUSION: The DT is an ultra-short and reliable screening tool for distress in PwPD. DT values below 4 rule out distress with a high degree of certainty. Anxiety and depression are important factors in distress but are counterbalanced by the individuals' psychological resilience. Copyright © 2023 The Authors. Movement Disorders Clinical Practice published by Wiley Periodicals LLC on behalf of International Parkinson and Movement Disorder Society.

17. "It is great what we have learned from each other!" - Bedside teaching in interprofessional small groups using the example of Parkinson's disease.

Authors: Schneider, Christine;Anders, Petra and Rotthoff, Thomas

Publication Date: 2024

Journal: GMS Journal for Medical Education 41(1), pp. Doc6

Abstract: Background: While patient care often involves interprofessional collaboration, interprofessional teaching formats with participants from medical and physiotherapy fields are still rare. Furthermore, interprofessional education often takes place as separate courses and is not integrated into the clinical curriculum. Therefore, the goal of this project was to develop and implement interprofessional content into bedside teaching. Course development: The clinical subject of the course was "Parkinson's disease", as this condition allowed for the exemplary demonstration of interprofessional teamwork and different competencies. Through

interprofessional bedside teaching and a specific clinical context, interprofessionalism was intended to be integrated and experienced as natural part of clinical practice. The bedside teaching was complemented with work in break-out groups and a lecture. Evaluation: The course was first conducted in the winter semester 2021/22. Participants were medical and physiotherapy students. Teaching teams were also interprofessional. A concurrent evaluation was carried out using the University of the West of England Interprofessional Questionnaire (UWE-IP) before and after course participation. UWE-IP scores in all sub-scales indicated a positive attitude, except for the "Interprofessional Learning" scale among physiotherapy students, which reflected a neutral attitude. Significant group differences were observed in the same scale at the pre-course time point between medical and physiotherapy students (p: The course was first conducted in the winter semester 2021/22. Participants were medical and physiotherapy students. Teaching teams were also interprofessional. A concurrent evaluation was carried out using the University of the West of England Interprofessional Questionnaire (UWE-IP) before and after course participation. UWE-IP scores in all sub-scales indicated a positive attitude, except for the "Interprofessional Learning" scale among physiotherapy students, which reflected a neutral attitude. Significant group differences were observed in the same scale at the pre-course time point between medical and physiotherapy students (pConclusion: The course proved to be well-suited for integrating interprofessional content into clinical education and can serve as a model for future teaching units. The evaluation reflected a positive attitude toward interprofessional learning. Copyright © 2024 Schneider et al.;

Publisher Hintergrund: Während Patientenversorgung häufig interprofessionell erfolgt, sind interprofessionelle Lehreinheiten mit teilnehmenden Personen aus Humanmedizin und Physiotherapie noch eine Seltenheit. Zudem findet interprofessionelle Lehre häufig immer noch in Form von gesonderten Veranstaltungen mit interprofessionellen Inhalten statt und sind nicht in das klinische Curriculum integriert. Ziel dieses Projekts war daher die Entwicklung und Implementierung eines interprofessionellen Unterrichts an Patient*innen (UaP).

Kursentwicklung: Klinisches Thema des Kurses war Morbus Parkinson", da sich anhand dieser Erkrankung interprofessionelle Teamarbeit und unterschiedliche Kompetenzen exemplarisch darstellen lassen. Anhand eines interprofessionellen UaP und konkretem klinischen Kontext sollte Interprofessionalität als selbstverständlicher Teil des klinischen Handelns integriert und erlebbar gemacht werden. Eine Ummantelung des UaP erfolgte mit einer Vorlesung und eigenverantwortlicher Kleingruppenarbeit. Evaluation: Der Kurs wurde erstmals im Wintersemester 2021/22 durchgeführt. Teilnehmende Personen waren Medizinstudierende und Physiotherapieschuler*innen, die Dozierendenteams waren ebenfalls interprofessionell. Eine begleitende Evaluation erfolgte mit Hilfe des University of the West of England Interprofessional Questionnaire (UWE-IP) vor und nach Kursteilnahme. Im UWE-IP ergaben sich in allen Subskalen Summenscores, die einer positiven Einstellung entsprachen. Einzige Ausnahme war die Skala Interprofessionelles Lernen" bei Physiotherapieschuler*innen, die einer neutralen Einstellung entsprachen. Signifikante Gruppenunterschiede ergaben sich in derselben Skala zum Zeitpunkt vor Kursteilnahme zwischen Medizinstudierenden und Physiotherapieschuler*innen ($p < 0,01$) sowie bei Medizinstudierenden vor und nach Kursteilnahme ($p = 0,02$). Schlussfolgerung: Der Kurs erwies sich als gut geeignet, um interprofessionelle Lehrinhalte in die klinische Lehre zu integrieren und kann als Modell für weitere Lehreinheiten dienen. Die Evaluation spiegelte eine positive Einstellung bezüglich interprofessionellem Lernen wieder. Language: German

18. Impact of Acute Dopamine Replacement on Cognitive Function in Parkinson's Disease.

Authors: Seemiller, J.;Morrow, C.;Hinkle, J. T.;Perepezko, K.;Kamath, V.;Pontone, G. M. and Mills, K. A.

Publication Date: 2024

Journal: Movement Disorders Clinical Practice (pagination), pp. Date of Publication: 2024

Abstract: Background: PD causes striatal dopaminergic denervation in a posterior/dorsal to anterior/ventral gradient, leaving motor and associative cortico-striato-pallido-thalamic loops differentially susceptible to hyperdopaminergic effects with treatment. As the choice and titration of symptomatic PD medications are guided primarily by motor symptoms, it is important to understand their cognitive implications. Objective(s): To investigate the effects of acute dopaminergic medication administration on executive function in Parkinson's disease (PD). Method(s): Participants with idiopathic PD were administered the oral Symbol Digit Modalities Test (SDMT; n = 181) and the Stroop test (n = 172) in the off-medication and "best on" medication states. ANCOVA was used to test for differences between off-medication and on-medication scores corrected for age and years of education. Result(s): After administration of symptomatic medications, scores worsened on the SDMT (F = 11.70, P Result(s): After administration of symptomatic medications, scores worsened on the SDMT (F = 11.70, P Result(s): After administration of symptomatic medications, scores worsened on the SDMT (F = 11.70, P Result(s): After administration of symptomatic medications, scores worsened on the SDMT (F = 11.70, P Conclusion(s): Symptomatic medication differentially affects performance on two cognitive tests in PD. After acute treatment, core Stroop measures improved, Stroop interference was unchanged, and SDMT performance worsened, likely reflecting complex changes in processing speed and executive function related to acute treatment. When considering motor symptom therapies in PD, an individual's cognitive demands and expectations, especially regarding executive function, should be considered. Copyright © 2024 International Parkinson and Movement Disorder Society.

19. Correlation Between Depression and Quality of Life Among Patients With Parkinson's Disease: An Analytical Cross-Sectional Study.

Authors: Sujith, Priya;Arjunan, Porkodi;lype, Thomas and Natarajan, Venkatesh

Publication Date: Feb ,2024

Journal: Cureus 16(2), pp. e54736

Abstract: Introduction Parkinson's disease (PD) is a progressive complex degenerative disorder characterised by several motor and non-motor symptoms that result in disability and deterioration of the patient's quality of life (QOL). Depression is the most common non-motor symptom that may severely alter the QOL. The objective of this study was to examine the correlation between depression and QOL among patients with PD who received treatment from a movement disorder clinic of a tertiary care teaching hospital in South India. Methods This was an analytical cross-sectional study conducted among 220 PD patients who received

treatment from a movement disorder clinic of a tertiary care teaching hospital in South India. The participants aged between 40 and 80 years, who can comprehend Malayalam or English and were clinically diagnosed with PD according to United Kingdom PD Society Brain Bank criteria were included in the study. Depression was assessed using the Hospital Anxiety and Depression Scale, motor function using the Movement Disorder Society Unified Parkinson's Disease Rating Scale Part III, and the quality of life was assessed using the Parkinson's Disease Questionnaire 39. Results The results of this study showed that there was a significant positive correlation between depression and QOL ($r=0.699$, p Copyright © 2024, Sujith et al.

20. Altered functional-structural coupling may predict Parkinson's patient's depression.

Authors: Wang, Min;Tan, Changlian;Shen, Qin;Cai, Sainan;Liu, Qinru and Liao, Haiyan

Publication Date: May ,2024

Journal: Brain Structure & Function 229(4), pp. 897-907

Abstract: We aimed to elucidate the neurobiological basis of depression in Parkinson's disease and identify potential imaging markers for depression in patients with Parkinson's disease. We recruited 43 normal controls (NC), 46 depressed Parkinson's disease patients (DPD) and 56 non-depressed Parkinson's disease (NDPD). All participants underwent routine T2-weighted, T2Flair, and resting-state scans on the same 3.0 T magnetic resonance imaging (MRI) scanner at our hospital. Pre-processing includes calculating surface-based Regional Homogeneity (2DReHo) and cortical thickness. Then we defined the correlation coefficient between 2DReHo and cortical thickness as the functional-structural coupling index. Between-group comparisons were conducted on the Fisher's Z-transformed correlation coefficients. To identify specific regions of decoupling, the 2DReHo for each participant were divided by cortical thickness at each vertex, followed by threshold-free cluster enhancement (TFCE) multiple comparison correction. Binary logistic regression analysis was performed with DPD as the dependent variable, and significantly altered indicators as the independent variables. Receiver operating characteristic curves were constructed to compare the diagnostic performance of individual predictors and combinations using R and MedCalc software. DPD patients exhibited a significantly lower whole-brain functional-structural coupling index than NDPD patients and NC. Abnormal functional-structural coupling was primarily observed in the left inferior parietal lobule and right primary and early visual cortices in DPD patients. Receiver operating characteristic analysis revealed that the combination of cortical functional-structural coupling, surface-based ReHo, and thickness had the best diagnostic performance, achieving a sensitivity of 65% and specificity of 77.7%. This is the first study to explore the relationship between functional and structural changes in DPD patients and evaluate the diagnostic performance of these altered correlations to predict depression in Parkinson's disease patients. We posit that these changes in functional-structural relationships may serve as imaging biomarkers for depression in Parkinson's disease patients, potentially aiding in the classification and diagnosis of Parkinson's disease. Additionally, our findings provide functional and structural imaging evidence for exploring the neurobiological basis of depression in Parkinson's disease. Copyright © 2024. The Author(s), under exclusive licence to Springer-Verlag GmbH Germany, part of Springer Nature.

21. Association between irritable bowel syndrome and Parkinson's disease by Cohort study and Mendelian randomization analysis.

Authors: Wang, Zhi-Yun;Ma, Dong-Rui;Li, Meng-Jie;Liang, Yuan-Yuan;Hu, Zheng-Wei;Li, Shuang-Jie;Zuo, Chun-Yan;Hao, Chen-Wei;Feng, Yan-Mei;Guo, Meng-Nan;Hao, Xiao-Yan;Guo, Yuan-Li;Ma, Ke-Ke;Guo, Li-Na;Zhang, Chan;Xu, Yu-Ming;Mao, Cheng-Yuan and Shi, Chang-He

Publication Date: Mar 28 ,2024

Journal: Npj Parkinsons Disease 10(1), pp. 70

Abstract: This study aimed to investigate the association between irritable bowel syndrome (IBS) and Parkinson's disease (PD) utilizing prospective cohort study and Mendelian randomization. The dataset contained a substantial cohort of 426,911 participants from the UK Biobank, discussing the association between IBS and PD with Cox proportional hazards models and case-control analysis while adjusting for covariates such as age, gender, ethnicity and education level. In univariate Cox regression model, the risk of PD was reduced in IBS patients (HR: 0.774, 95%CI: 0.625-0.956, P = 0.017), but the statistical significance diminished in the three models after adjusting for other variables. In a few subgroup analyses, IBS patients are less likely to develop into PD, and patients diagnosed with IBS after 2000 also had a lower risk (HR: 0.633, 95%CI: 0.403-0.994, P = 0.047) of subsequently developing PD. In addition, we matched five healthy control participants based on gender and age at the end of the study for each IBS patient diagnosed during the follow-up period, and logistic regression results (OR:1.239, 95%CI: 0.896-1.680, P = 0.181) showed that IBS was not associated with the risk of PD. Mendelian randomization did not find significant evidence of the causal relationship between IBS and Parkinson's disease (OR: 0.801, 95%CI: 0.570-1.278, P = 0.204). Overall, we suggest that IBS status is not associated with the risk of developing PD, and that these findings provide valuable insights into the clinical management and resource allocation of patients with IBS. Copyright © 2024. The Author(s).

22. Place of death in Parkinson's disease and related disorders in England and Wales: post-pandemic trends and implications for care planning.

Authors: Wilson, Elisabeth;Baker, Amy;Stockley, Lauren;Allgar, Victoria and Richfield, Edward

Publication Date: Mar 01 ,2024

Journal: Age & Ageing 53(3)

Abstract: BACKGROUND: With growing emphasis on palliative care for neurodegenerative conditions, understanding trends in place of death helps improve quality of end-of-life care for people with Parkinson's disease and related disorders (PDRDs), focusing allocation of resources and training and identifying inequalities. OBJECTIVES: Review national and regional place of death trends for people with PDRD including pre- and post-pandemic trends. METHODS: Mortality data for England and Wales (March 2018 and July 2022) were analysed with summary statistics and interrupted time series, exploring place of death for those who

died with PDRD, with and without coexisting dementia, with reference to all deaths in England and Wales. RESULTS: Of 2,415,566 adult deaths, 56,790 included mention of PDRD. Hospital deaths were most common in people with PDRD (39.17%), followed by care homes (38.84%). People with PDRD were half as likely to die in hospice compared with the general population (2.03 vs 4.94%). Proportion of care home deaths fell significantly after March 2020 (40.6-37%, $P = 0.035$). Regionally, London was an outlier with a lower proportion of deaths occurring in care homes with a higher proportion of hospital deaths. CONCLUSION: Place of death for people with PDRD is changing, with more hospice and home deaths. People with PDRD, particularly those with co-existent dementia, are less likely to access inpatient hospice care than the general population. Since the COVID-19 pandemic, the proportion of care home deaths has reduced significantly with an increase in home deaths, with implications for service and resource allocation. Copyright © The Author(s) 2024. Published by Oxford University Press on behalf of the British Geriatrics Society. All rights reserved. For permissions, please email: journals.permissions@oup.com.

23. Higher serum Lp-PLA2 is associated with cognitive impairment in Parkinson's disease patients.

Authors: Wu, Zubo;Shu, Defeng;Wu, Suyuan;Cai, Pengcheng and Liang, Tao

Publication Date: 2024

Journal: Frontiers in Neuroscience 18, pp. 1374567

Abstract: Objective: To explore the association between lipoprotein-associated phospholipase A2 (Lp-PLA2) and the risk of cognitive impairment in Parkinson's disease (PD-CI). Methods: A case-control study involving 100 hospitalized PD patients and 60 healthy controls was carried out. Serum Lp-PLA2 level was detected by automatic biochemical analyzer. Based on whether Parkinson's patients have cognitive impairment, PD patients were subdivided to analyze the clinical value of Lp-PLA2. Relationship between Lp-PLA2 and PD-CI risk was analyzed by logistic regression. Diagnostic value of Lp-PLA2 in PD-CI patients was investigated using receiver's operator characteristic curves. Results: The levels of serum Lp-PLA2 activity in Parkinson's disease with normal cognition (PD-NC) and PD-CI patients were significantly higher than those in healthy controls (HCs), respectively. Furthermore, compared to the PD-NC group, the serum Lp-PLA2 activity level was significantly higher in PD-CI patients. Multivariable logistic regression analysis indicated that higher Lp-PLA2 level was an independent risk factor for PD patients with cognitive impairment. Moreover, the area under the efficacy curve of Lp-PLA2 for predicting PD-CI is 0.659. Conclusion: Our study shows that higher levels of Lp-PLA2 activity in PD patients are associated with the risk of developing cognitive impairment. Therefore, given the wide availability, safety, and convenience of monitoring serum Lp-PLA2 activity, it may serve as an early biomarker for cognitive impairment in PD patients. Copyright © 2024 Wu, Shu, Wu, Cai and Liang.

24. Development and validation of fall risk perception scale for patients with Parkinson's disease.

Authors: Yang, Xin;Yao, Meiqi;Guo, Zhiting;Shen, Xuhui and Jin, Jingfen

Publication Date: 2024

Journal: *Frontiers in Psychology* 15, pp. 1289067

Abstract: Background: Perception assessment plays an important role in fall risk awareness and fall prevention. Parkinson's disease patients with motor dysfunction are at high risk of falling. Currently, no instrument has been explicitly crafted to assess the risk perception of fall in PD patients. The purpose of this study was to develop and validate the fall risk perception scale for PD patients (FRPS-PD), providing healthcare professionals with an effective assessment tool to enhance proactive fall prevention initiatives. Method: Based on the Proactive Health theory and Risk Perception Attitude (RPA) Framework, the questionnaire was developed through literature review, semi-structure interview, expert consultation and pilot testing. A total of 428 patients with PD from Grade A tertiary hospitals in Shanghai, Hangzhou and Anhui from January 2023 to July 2023 were recruited. The items and dimensions in the scale were explored and confirmed using item-analysis, content validity, exploratory factor analytical (EFA), confirmatory factor analytical (CFA), internal consistency and test-retest reliability analysis. Results: A total of 16-items, 2-dimensions structure were identified, including 12 items of risk perception and 4 items of self-efficacy dimension. The cumulative variance of EFA model was 73.669%, further CFA showed that acceptable model fit ($\chi^2/df = 2.226$, RMSEA = 0.074, NF = 0.928, TLI = 0.951, CFI = 0.959, GFI = 0.887 and AGFI = 0.848). The content validity index was 0.956. The reliability of the scale was 0.952 using Cronbach's alpha coefficient method. The test-retest reliability was 0.944. Conclusion: The FRPS-PD is a valid and reliable measurement for evaluating fall risk perception level for individuals with PD in mainland China. Copyright © 2024 Yang, Yao, Guo, Shen and Jin.

25. The Levels and Associated Factors for Participation and Autonomy Among People with Parkinson's Disease: A Cross-Sectional Study.

Authors: Zhang, Tingting; Yao, Lan; Li, Tao; Tian, Haoxin and Song, Guirong

Publication Date: 2024

Journal: *Psychology Research & Behavior Management* 17, pp. 1045-1055

Abstract: Background: Promoting participation and autonomy (PA) in society has been highlighted as an ultimate goal of rehabilitation for people with chronic diseases by the World Health Organization, but few studies have focused on PA in people with Parkinson's disease (PD). Therefore, this study aimed to determine the level of PA in PD patients and investigate the associated psychological and behavioural factors. Methods: PD patients were recruited from the Department of Neurology of the First Hospital Affiliated with Dalian Medical University using convenience sampling for this cross-sectional study. A questionnaire covering social-demographic and disease-related characteristics, Chinese version of Impact on Participation and Autonomy (IPA) Questionnaire, Connor-Davidson Resilience Scale (CD-RISC), Self-rating Depression Scale (SDS), Self-rating Anxiety Scale (SAS), Medical Coping Modes Questionnaire (MCMQ), Social Support Rating Scale (SSRS), Hoehn-Yahr Staging System and Unified Parkinson's Disease Rating Scale (UPDRS) were used for investigation. A multivariate stepwise linear regression analysis was used to determine the factors that influence IPA. Results: A total of 326 PD patients responded to all the questionnaires. The

patients had a mean IPA score of 46.6 (SD 21.79). Multiple linear regression analyses revealed that UPDRS II (beta = 0.35, p beta = 0.19, p beta = -0.12, p = 0.001) were also strong factors. Conclusion: The average level of PA among PD patients was at the lower middle-level. Among PD patients, physical function, psychological resilience and social support were the strongest factors associated with PA. These findings provide valuable insights into PD patients' PA and can help medical professionals identify the early risks of restricted PA among PD patients, implement interventions to promote PA and ultimately achieve rehabilitation. Copyright © 2024 Zhang et al.

26. Prospective cohort study evaluating the association between influenza vaccination and neurodegenerative diseases.

Authors: Zhao, Houyu; Zhou, Xuan; Fu, Kexin; Duan, Yunxiao; Wen, Qiaorui; Wang, Shengfeng and Zhan, Siyan

Publication Date: Mar 02, 2024

Journal: Npj Vaccines 9(1), pp. 51

Abstract: The effect of influenza vaccination (FluVac) on the risk of neurodegenerative diseases has not been well evaluated in prospective populations. We aimed to assess the association between FluVac and the risk of dementia and Parkinson's disease (PD) in people aged 60 years or older through a prospective population-based cohort from the UK Biobank. A time-varying Cox regression model adjusted for baseline and repeatedly measured covariates was used to estimate the hazard ratio (HR) and 95% confidence interval (CI) of the association between influenza vaccination and risk of dementia/PD. We took into account 70,938 participants in the cohort, including 38,328 participants who got vaccinated. During a median follow-up period of 12.2 years, 2087 incident dementia cases occurred, including 281 cases who received FluVac and 1806 cases who were not vaccinated. In addition, 742 incident PD cases occurred, among whom 131 cases received FluVac and 611 PD cases did not receive FluVac. FluVac was associated with reduced dementia risk with an HR of 0.83 (95% CI, 0.72-0.95) but was not associated with PD incidence (HR = 1.07; 95% CI, 0.87-1.32) after controlling baseline and repeatedly measured covariates. Further, among all dementia cases, there were 733 Alzheimer's disease (AD) (94 vaccinated cases and 639 non-vaccinated cases), 307 vascular dementia (VD) (34 vaccinated cases and 273 non-vaccinated cases), and 1047 cases with other dementias (OD) (153 vaccinated cases and 894 non-vaccinated cases). The HRs for the associations between FluVac and AD, VD, and OD were 0.79 (95% CI, 0.63-1.00), 0.58 (95% CI, 0.39-0.86), and 0.94 (95% CI, 0.78-1.14) respectively. A dose-response relationship was found in the association between FluVac and dementia but not in the association with PD. A major limitation of the study is the low accuracy in the diagnosis of dementia subtypes, namely AD, VD, and OD. However, Results of sensitivity analyses were consistent with the primary analyses. In conclusion, influenza vaccination is significantly associated with a reduced risk of incident dementia but not PD in community-dwelling adults in the UK Biobank population. Copyright © 2024. The Author(s).

27. Establishment and Corresponding Nursing Measures of Intelligent Health Education Platform for Parkinson's Patients Based on Behavior Change Theory.

Authors: Zhou, W.;Tao, X.;Wang, J.;Shen, B. and Huang, C.

Publication Date: 2024

Journal: Alternative Therapies in Health and Medicine (pagination), pp. Date of Publication: 09 Feb 2024

Abstract: Objective: Parkinson's disease is a brain disorder that can cause mobility problems as well as mental health, sleep, pain and other health problems. To analyze the establishment of a platform for Parkinson's patients to cooperate with intelligent health education based on behavior change theory and the corresponding nursing measures. Method(s): 80 patients with Parkinson's disease in the Affiliated Brain Hospital of Nanjing Medical University from October 2021 to September 2022 were selected and included in the conventional and wisdom education groups according to different health education methods, with 40 patients in each group. The conventional education group carried out routine health education and nursing. Based on routine health education and nursing, the wisdom education group established a smart health education platform based on behavior change theory. It implemented corresponding health education and nursing measures. The knowledge, belief and practice (KAP score), psychological status, self-efficacy [General self-efficacy scale (GSES) score], motor function [Parkinson's disease Uniform Scoring Scale (UPDRS) - III score], daily living ability (Barthel index), sleep quality (PSQI score), quality of life (QOL score), complication rate (pressure sores, constipation, bruises), and education satisfaction of the two groups were compared. Result(s): The KAP score of the wisdom education group after health education was higher than that of the conventional education group (P Result(s): The KAP score of the wisdom education group after health education was higher than that of the conventional education group (P Result(s): The KAP score of the wisdom education group after health education was higher than that of the conventional education group (P Result(s): The KAP score of the wisdom education group after health education was higher than that of the conventional education group (P Result(s): The KAP score of the wisdom education group after health education was higher than that of the conventional education group (P Result(s): The KAP score of the wisdom education group after health education was higher than that of the conventional education group (P Result(s): The KAP score of the wisdom education group after health education was higher than that of the conventional education group (P Conclusion(s): The establishment of an intelligent health education platform based on behavior change theory for Parkinson's patients and the implementation of corresponding health education and nursing measures can significantly improve the knowledge, belief, practice, and psychological status of patients. This will be helpful for those patients and clinicians. There are also limitations, such as little numbers of patients and no mechanisms.

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

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