



RESEARCH SYNOPSIS

Olley, J., Blaszczynski, A., & Lewis, S. (2015). Dopaminergic medication in Parkinson's disease and problem gambling. *Journal of Gambling Studies*, 31(3), 1085-1106. doi:10.1007/s10899-014-9503-0

RESEARCH QUESTIONS

Does dopaminergic medication lead to elevated rates of problem gambling in Parkinson's disease patients?

PURPOSE

Previous studies had suggested elevated rates of problem gambling in Parkinson's disease patients taking dopaminergic medication. However, these studies had not controlled for potential confounding factors independent of dopamine medication. The purpose of the present study was to explore temporal relationships between problem gambling and dopamine medication, while taking into account premorbid gambling risk factors, in a sample of Parkinson's disease patients.

HYPOTHESIS

The onset and cessation of problem gambling would emerge in parallel with the commencement and termination of dopaminergic agonist and/or Levodopa medication regimes. Non-medication external or intrapsychic pre-morbid and/or concurrent factors would be identified as possible alternative explanations to dopaminergic action accounting for manifest increased gambling in a proportion of such patients.

PARTICIPANTS

Participants were 40 patients with Parkinson's disease (75% males; average age = 66 years). Of these, 20 met criteria for moderate risk or problem gambling (PG) while 20 did not (NG).

PROCEDURE

Participants completed an in-depth interview and timeline follow back as well as measures of impulsivity, gambling status, affective states, and obsessionality.

MAIN OUTCOME MEASURES

The Problem Gambling Severity Index (PGSI) assessed for the presence and severity of problem gambling. The Gambling Treatment Outcome Monitoring System (GAMTOMS) assessed demographics, clinical and treatment history, recent

gambling behaviours including gambling frequency for each game and gambling debt/loss. The UPPS-P Impulsive Behaviour Scale (UPPS-P) assessed five impulsivity-related traits: Negative Urgency, Premeditation (lack of), Perseverance (lack of), Sensation Seeking, and Positive Urgency. The Hospital Anxiety Depression Scales (HADS) assessed current anxiety and depressive symptomatology. The Questionnaire for Impulsive-Compulsive Disorders in Parkinson's Disease (QUIP) and The Minnesota Impulsive Disorders Interview (MIDI) assessed for the presence of Impulse Control Disorders such as gambling, hypersexuality, excessive spending or buying, binge or compulsive eating, punting, hobbyism, and the Dopamine Dysregulation Syndrome. The Padua Inventory-Washington State University Revision (PI-WSUR) assessed levels of obsessive and compulsive symptoms. Addenbrooke's Cognitive Examination Revised (ACE-R) and the Mini Mental State Examination (MMSE) assessed cognitive domains such as memory, language, visuo-spatial components, and verbal fluency. A semi-structured Interview was used to obtain detailed information about gambling history, current family and social relationships, academic and work status/history, and social functioning.

KEY RESULTS

Ninety percent of the PG group identified a noticeable increase in gambling behaviours and urges within 6 months of commencing medication. The PG group had greater positive urgency and negative urgency compared to the NG group. PG reported greater problems with lack of planning compared to participants who had no change in gambling. PG reported more anxiety than NG. Seventy-five percent of PG experienced significant stressors (e.g., relationship discord, personal or family member's ill health or injury, financial concerns, employment difficulties) very close in time before or after commencing medication compared to 25% of the NG patients. An association between the presence of significant life stressors and the onset of gambling problems while on medication was found.

LIMITATIONS

The sample was relatively small and may have reduced the available power. The use of retrospective data was potentially problematic due to subjective bias, mistaken memory or misrepresentation.

CONCLUSIONS

Overall, the results suggest that gambling problems are associated with dopaminergic medication in a small number of Parkinson's disease patients. This

temporal relationship was shown to vary in strength and there was limited evidence to conclude a direct causal relationship without intervening factors.

KEYWORDS: pathological gambling, dopamine medication, Parkinson's disease, gambling, reward deficiency, urgency

URL: <http://link.springer.com/article/10.1007%2Fs10899-014-9503-0>

Filename: Dopaminergic medication in Parkinson's disease and problem
gambling.docx
Directory: S:\Knowledge Repository\Synopsis\Synopsis-
pdf_conversions_2017\Needs Citation
Template: C:\Users\krystal\AppData\Roaming\Microsoft\Templates\Normal.
dotm
Title:
Subject:
Author: Joseph Grady
Keywords:
Comments:
Creation Date: 2017-03-09 10:34:00 AM
Change Number: 5
Last Saved On: 2017-03-10 2:32:00 PM
Last Saved By: Krystal Luscombe
Total Editing Time: 5 Minutes
Last Printed On: 2017-03-10 2:32:00 PM
As of Last Complete Printing
Number of Pages: 2
Number of Words: 662 (approx.)
Number of Characters: 3,935 (approx.)