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AN EXPLORATION OF THE FEASIBILITY AND ACCEPTABILITY OF WEARABLE TECHNOLOGY IN PARKINSON'S DISEASE

Lorna Kenny¹, Cliona O'Riordan¹, Tony Wilkinson², Mary O'Sullivan², Janis Agurjanovs³, Salvatore Tedesco⁴, Marco Sica⁴, Colum Crowe⁴, John Barton⁴, Suzanne Timmons¹

¹Centre for Gerontology and Rehabilitation, University College Cork, Cork, Ireland

²Parkinson's Association of Ireland, Cork Branch, Cork, Ireland

³Department of Accounting, Finance and Information Systems, Cork University Business School, Cork, Ireland

⁴Tyndall National Institute, University College Cork, Cork, Ireland

Background: Wearable technology is increasingly used to diagnose, monitor and manage neurological disorders such as Parkinson's Disease (PD). This study aims to gain information about the views and needs of people with Parkinson's (PwP's) regarding wearable technology for monitoring the disease and assisting its management.

Methods: The study employed a mixed methods parallel design, wherein focus-groups and questionnaires were concurrently conducted with people with PwP's in Munster.

Questionnaires and topic guides were developed with significant input from PwP's. The participants for focus-groups were purposively sampled for variation in PD stage, age (all >50 years) and sex. Questionnaire and focus-group results were analysed together, using a pragmatic triangulation protocol.

Results: Thirty-two questionnaires were completed by PwP's. Four semi-structured focus-groups were held (n=24 participants). Participants were overall positive about wearable technology in PD, and perceived benefits in wearable technology for improved management of symptoms. Wearables should be user-friendly, have an appealing design, and demonstrate clinical usefulness. Comfort and discrete design were emphasised for greater usability.

The value of sharing information between PwP's and health professionals for improved outcomes was highlighted. PwP's perceived that increased patient data in the form of reliable information from a wearable device may allow for more accurate management of PD. Participants also felt that a device could help increase physical activity, and potentially track compliance with medication. There was little focus on device safety and privacy/ownership of data. While participants anticipated that there may be challenges for some in wearing a device, they believed overall potential benefits would outweigh these.

Conclusion: Engagement of PwP's in the design of wearable technology is vital for the development of devices that improve the management of PD. This study will directly inform a multi-country feasibility study of wearable devices for older people, with a particular focus on the needs of PwP's.