

Parkinson Disease with and Without Dementia: A Prevalence Study and Future Projections

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Introduction:

PD is the second most common neurodegenerative disease after Alzheimer's Disease, with an estimated incidence of 14.2 per 100,000 people. It is more common in men than woman and diagnosis is more prevalent with increased age.

Goal of Study: This study aimed to explore and clarify the burden of PD with and without dementia in the aging population by calculating its prevalence on January 1, 2006 (in a county in Minnesota) and projecting the number of persons affected by PD from 2015 to 2060 in the US.

Dementia is diagnosed when cognitive deficits (i.e., memory and other thinking skills) are severe enough to impair engagement in and completion of activities of daily living (i.e., managing schedules, preparing food/eating, engaging in house chores, managing medications, driving, etc.).

Prevalence rates of PD by age within the general population:

Persons aged 40-49 years: 0.04%

Persons aged 80 and older: 1.9%

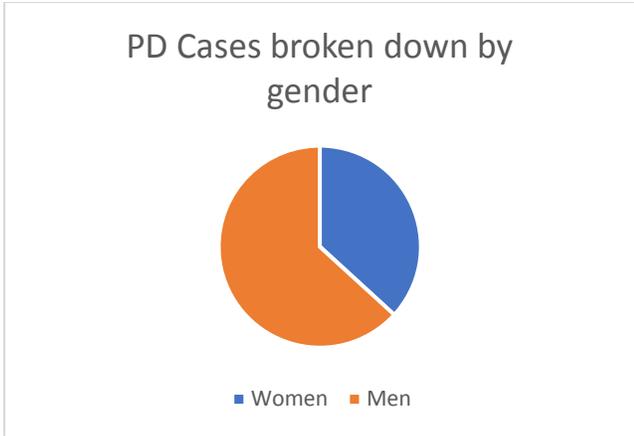
- Earlier recognition and better therapeutic management of symptoms in the last several years have increased PD prevalence rates because of improved survival.

Methods: The Rochester Epidemiology Project medical records-linkage system was used to identify all persons with PD with or without dementia residing in Olmstead County, Minnesota on January 1, 2006. Records of all individuals were reviewed by a movement disorder specialist to confirm PD diagnosis. Age and sex specific prevalence of PD with and without dementia was calculated and US prevalence through 2060 was projected.

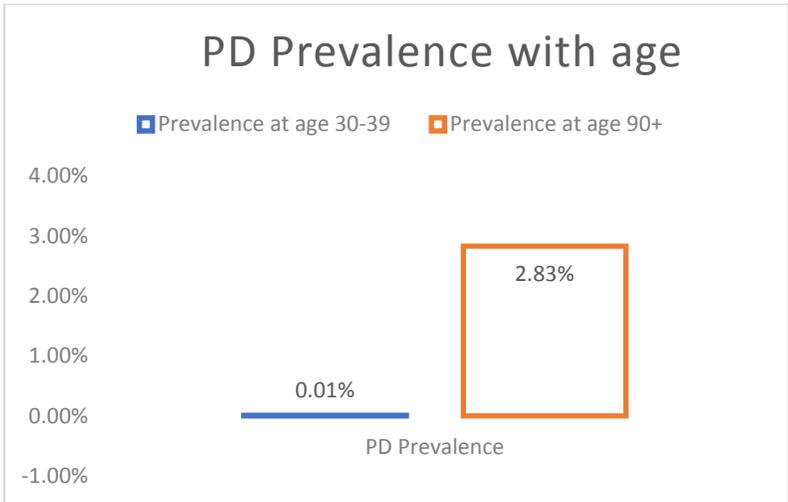
Results:

Researchers identified 296 persons with PD of all types:

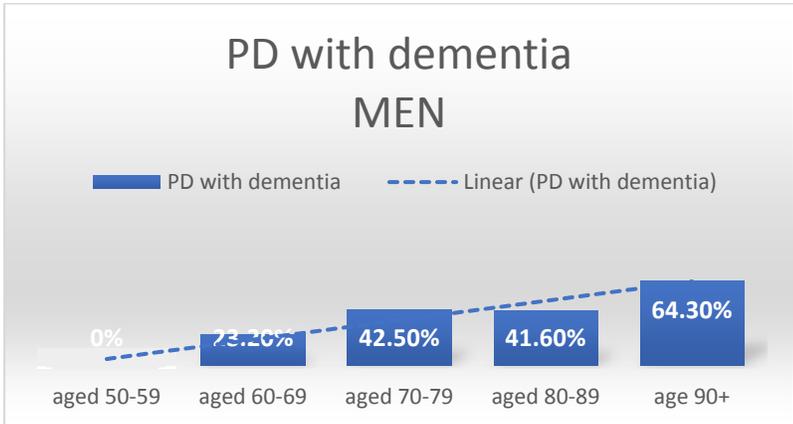
187 (63.2%) were men; 109 (36.8%) were women.

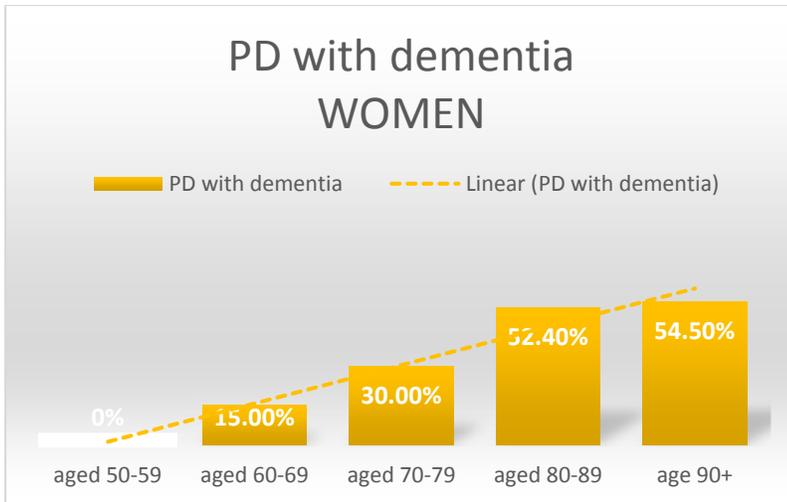


Overall PD prevalence increased with age from 0.01% at 30-39 years to 2.83% at 90 years and older.



Prevalence of PD with dementia increased with age from 0.10% at age 60-69 years to 1.59% at 90 years and older.





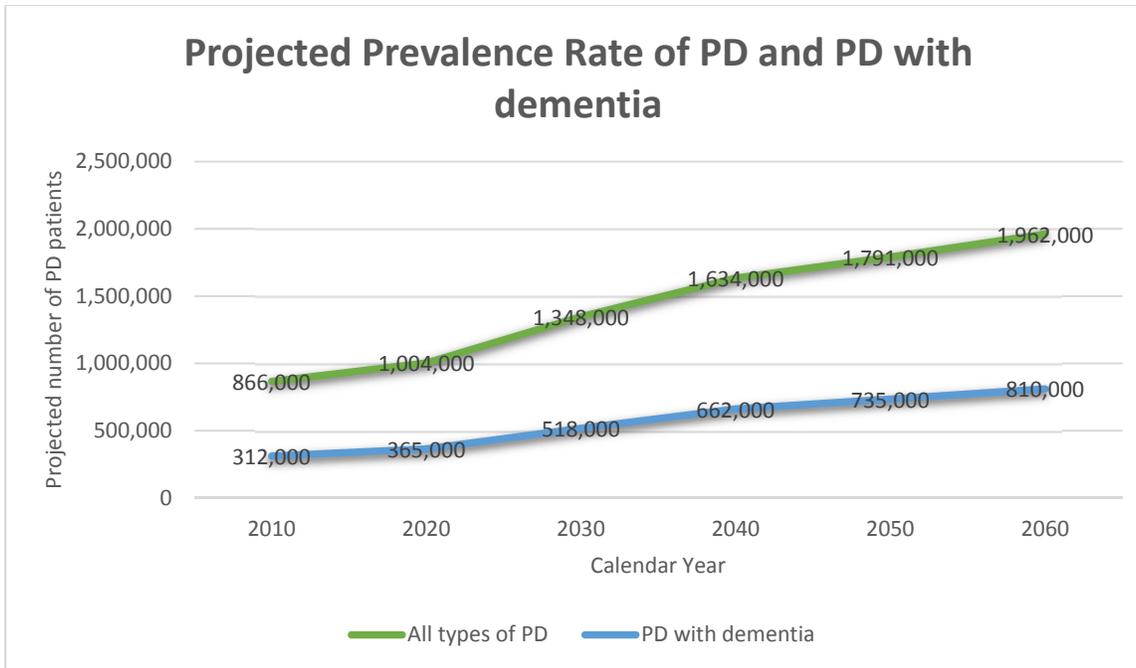
Overall results:

- Prevalence of PD increased with age
- Men were more affected than women

Projections:

Researchers predict that the number of persons living with PD of all types will increase significantly from approximately 866,000 persons in 2015 to 1.96 million by 2060 (an approximate doubling).

Researchers also predict that during the same period, the number of persons living with PD with dementia will increase from 312,000 persons in 2015 to 810,000 by 2060 (approximate tripling).



Discussion:

These results are consistent with findings from a recent meta-analysis comparing the prevalence of PD across several studies.

Some research has indicated geographical differences with lower prevalence of PD in Asia when compared with Europe, North America, and Australia.

The use of different clinical criteria may explain some of the variability in prevalence estimates. However, despite some methodological differences across studies, some patterns are consistent:

- Prevalence of PD consistently increases with older age
- Prevalence is consistently higher in men than women across almost all studies

This study supports previous reports projecting a major increase in the number of persons living with PD in the US in the coming years.

- The development of disease modifying agents (leading to prolonged survival) and improved management of PD are likely to affect the projected increase in number of people living with PD in the next several decades.
- Early assessment and intervention by specialized medical providers may have significant benefit on brain health and quality of life.
- It is possible that the future introduction of preventative interventions or environmental and social changes may decrease the incidence of PD and related disorders.