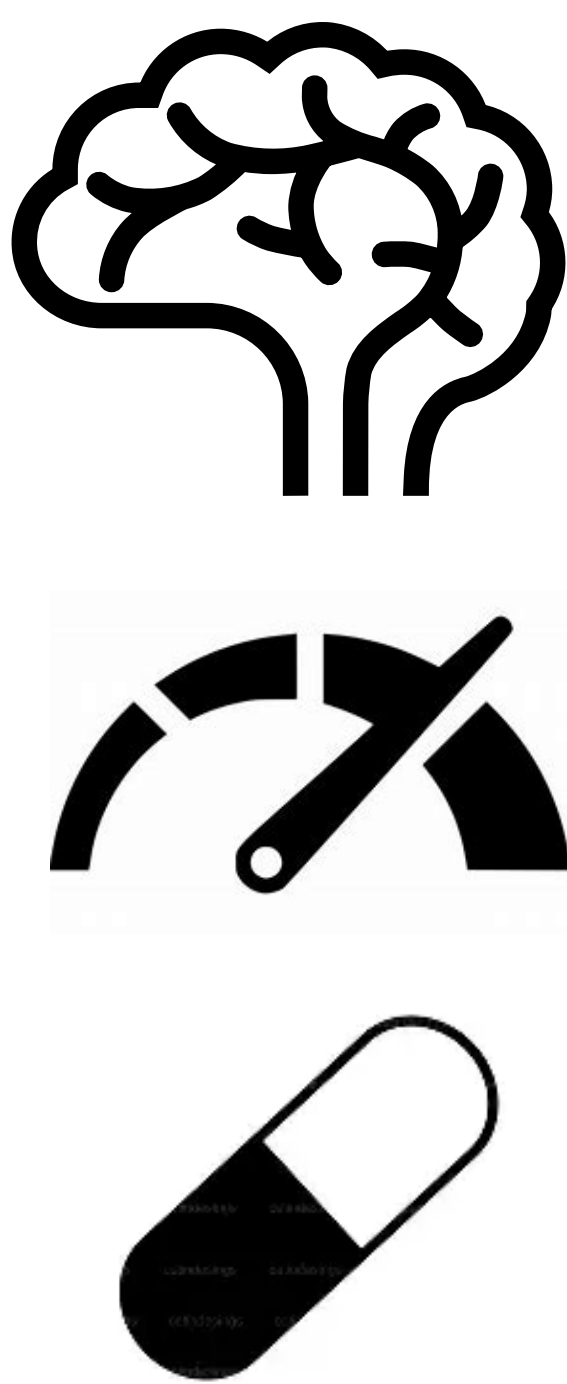


Aim: To investigate whether neuropsychiatric symptoms (NPS) and anticholinergic burden are risk factors for poor health outcomes within 10 years of a Parkinson's Disease (PD) diagnosis

Background

- PD patients are five times more likely to develop Parkinson's disease dementia (PDD), compared to controls.¹
- Within 12 years of a PD diagnosis, 53% of patients are living in some form of supported living.²
- Mortality risk is higher in PD patients compared to the general population.³
- There is contradiction within the literature as to whether baseline NPS and anticholinergic burden are risk factors for poor health outcomes as the disease progresses.



Methods

Figure 1: Flow diagram of ICICLE-PD methods



Table 1: Risk Factors and Measures

Visual Hallucinations
North East Visual Hallucination Inventory (NEVHI)
Depression
Geriatric Depression Scale (GDS-15); scores range 0-15
Anxiety
PD Non-Motor Symptoms Questionnaire (NMS-Quest); anxiety: yes/no
Apathy
Movement Disorders Society Unified PD Rating Scale (Item 1.5); scores range 0-4
Anticholinergic Burden
Anticholinergic Drug Scale (ACB); ACB=0 vs. ACB≥1

Results

Figure 2: Frequency of participants experiencing poor health outcomes

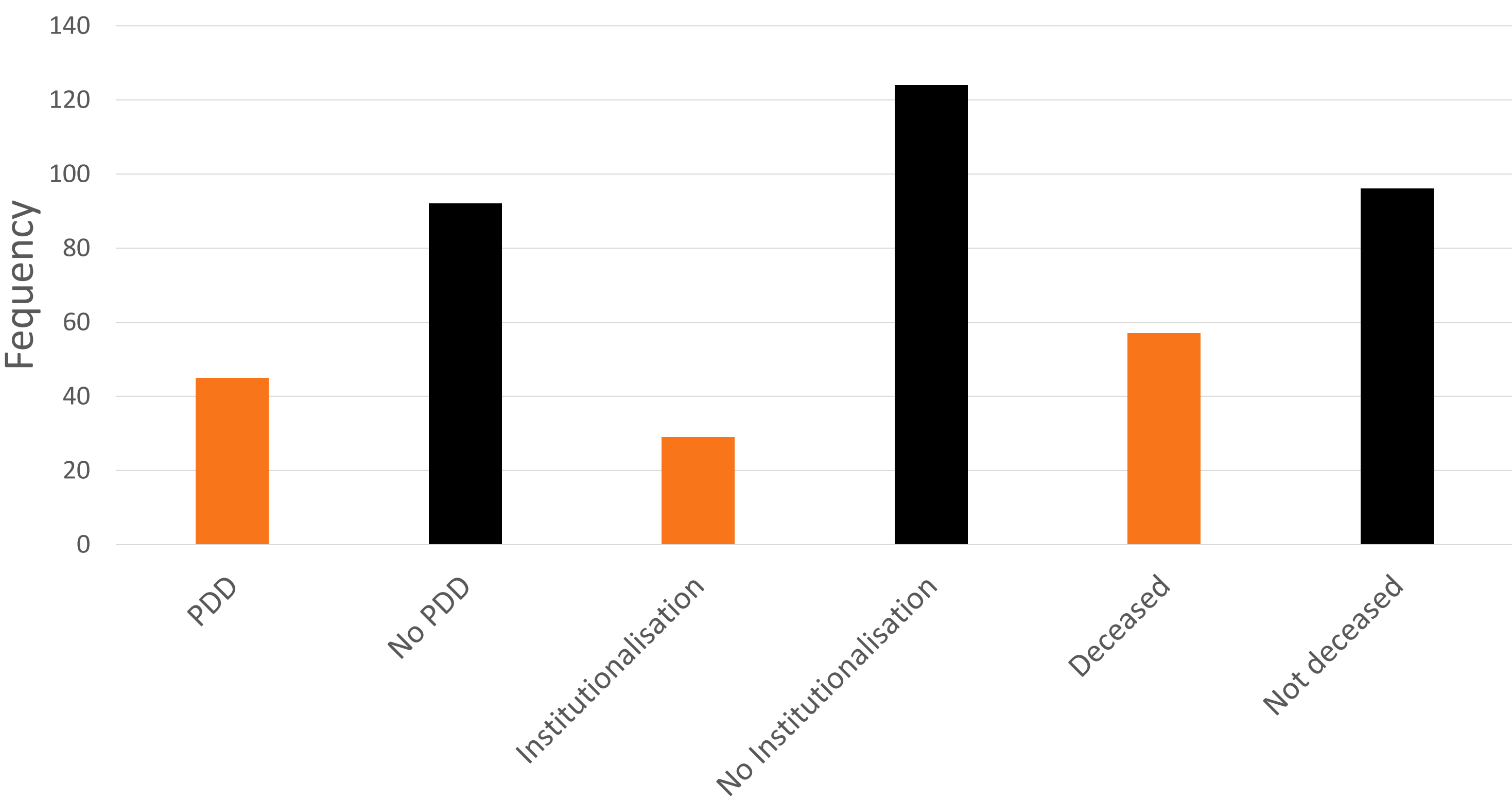


Figure 3: Cumulative survival probability of Parkinson's dementia associated with illusions and hallucinating shadows

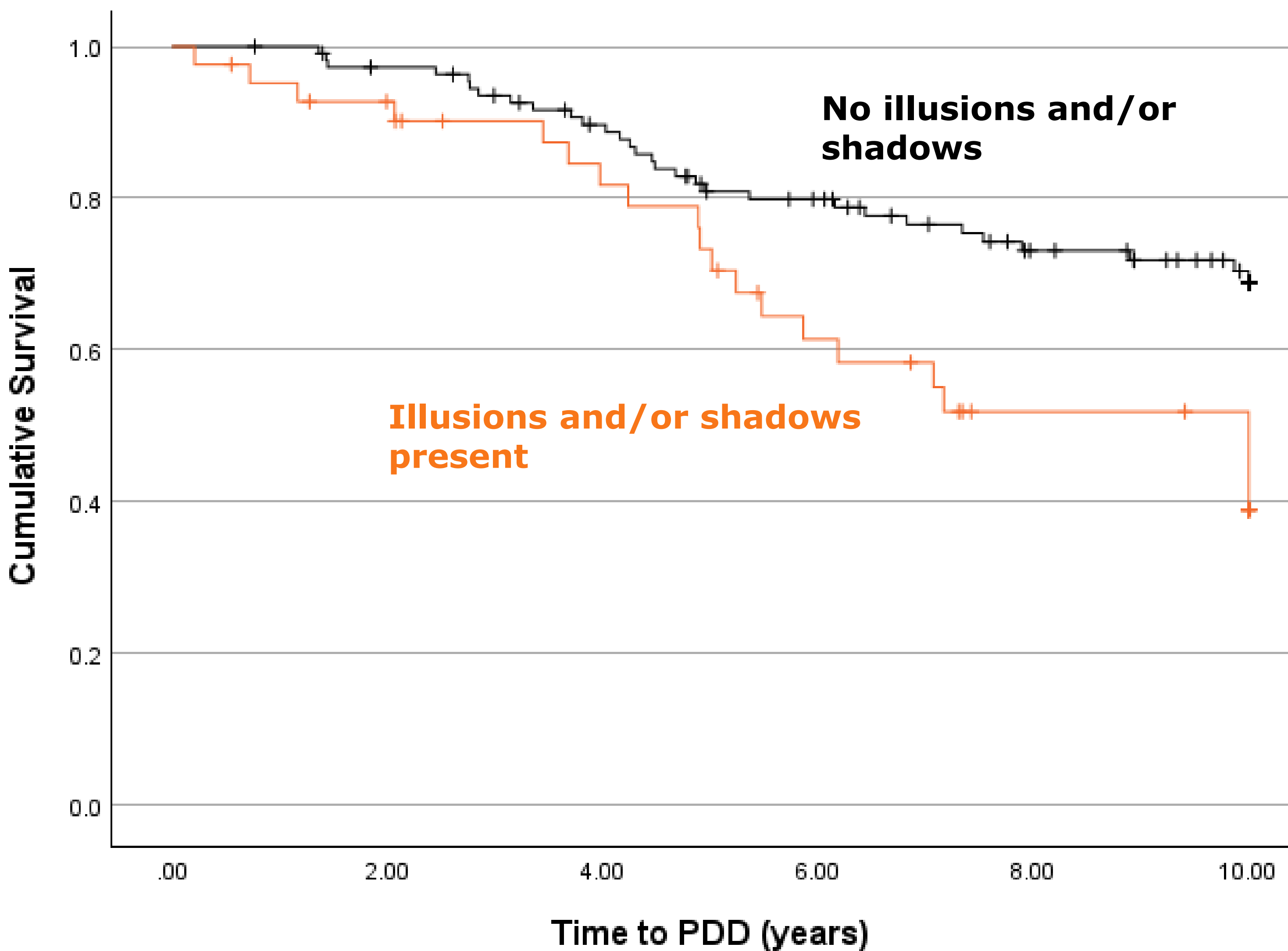


Table 2: Risk of developing dementia associated with types of visual hallucinations

Symptom	Hazard ratio	p value
Illusions*	2.202	.038
Shadows*	2.239	.013
Illusions and/or Shadows*	2.271	.005

* Covariates included in the model= baseline age, MDS-UPDRS II/III, MMSE

Conclusions

Early presentations of hallucinations (illusions and/or shadows) was associated with a greater risk of developing Parkinson's dementia within 10 years compared to those who did not report these symptoms.

Early symptoms of depression, anxiety, apathy or anticholinergic burden were not associated with poor outcomes at 10 years.

Further research is required to understand possible associations between sub-types of visual hallucinations and other risk factors in progression to poor health outcomes.

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