"SEX, GENDER AND THE BRAIN: TOWARDS AN INCLUSIVE RESEARCH AGENDA"

Alzheimer's Disease (AD) Through a Sex and Gender Lens

Alzheimer's Disease (AD) is a neurodegenerative disease that usually starts slowly and progressively worsens and is the cause of 60–70% of cases of dementia.

Sex and Gender Differences in Disease Burden and Treatment

AD predominantly impacts older females who constitute approximately two-thirds of the disease burden.

Sex differences in the clinical presentation of AD varies according to the disease stage.

Females show faster cognitive decline after diagnosis of Mild Cognitive Impairment (MCI) or AD dementia.
Females with MCI perform better on verbal memory tests in comparison to males, despite having similar AD presentations.
While this indicates that females may have better cognitive functioning during the early stages of the disease, **a disadvantage is that it may mask the condition and prevent early diagnosis of AD, leading to delays in treatment.**

While **female enrolment is higher in clinical drug trials for Alzheimer's**, very few trials report sex differences in outcomes or drug adherence.

Sex and Gender Differences in Caregiving

Women account for almost 60% of Alzheimer's disease caregivers.

Sex and Gender Differences in Employment

Women caregivers often have to quit their jobs in order to meet the full-time care needs of people with Alzheimer's, resulting in significant indirect costs.

The WBP-Commissioned Economist Impact White Paper

AD imposes the greatest economic burden of all brain disorders, with total healthcare costs from treatment alone standing at $305bn in the US, and expected to increase to $1trn with the ageing of the population. Total lifetime costs for an American with dementia is around $341,840, **70% of which is the cost of family care**.
The Conceptual Framework in the WBP-Commission Economist Impact White Paper *Sex, Gender and the Brain: Towards an Inclusive Research Agenda* suggests that **investing in this area will improve the diagnosis and management of Alzheimer's disease and help reduce the burden on all patients and caregivers.**

A conceptual framework for investing in sex and gender-specific research in the area of Alzheimer's Disease

