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Centre for Research on Ageing,  
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# **Living with Dementia: understanding behavioural problems**

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**1,700 new cases** of dementia  
per week.

**1 in 10 Australians** over the  
age of 65 has dementia.



**900,000 Australians will be living with dementia by 2050**





# Impact of Dementia in Australia

- Dementia is a leading cause of disability in Australians above the age of 65.
- It is the third leading cause of death in Australia.
- Dementia costs the health and aged care sectors around AU\$4.9 billion per year.
- Approximately 1.2 million Australians care for someone with dementia.
- Dementia management is considerably complicated by the presence of **Behavioural and Psychological Symptoms of Dementia (BPSD)**.

# Behavioural and Psychological Symptoms of Dementia (BPSD)



- BPSD are non-cognitive symptoms and behaviours.
- Occur frequently in people with dementia and milder forms of cognitive impairment.
- Considered intrinsic conditions associated with the neurodegenerative process of dementia.
- Affect ability to perform activities of daily living (e.g. eating, bathing), reduce quality of life and increase disease burden.



# Types of BPSD

## ➤ Psychotic Syndromes:

- *Delusions*
- *Hallucinations*

## ➤ Affective Syndromes:

- *Agitation*
- *Depression*
- *Anxiety*
- *Irritability*

## ➤ Behavioural Syndromes:

- *Euphoria*
- *Apathy*
- *Disinhibition*
- *Aberrant Motor Behaviour*

## ➤ Neurovegetative Behaviours

- *Sleep disturbances*
- *Appetite disturbances*



# Characteristics of individual BPSD

## ➤ **Depression:**

- pathological feelings of sadness, unhappiness, and preoccupation with depressing topics, hopeless (strongly associated with suicidal ideation) and loss of self-esteem.

## ➤ **Anxiety:**

- subjective unpleasant experience of fear manifested as apprehension, tension, panic, or worry associated with autonomic activation and observable physical and motor manifestations of tension.

## ➤ **Apathy:**

- a disorder of motivation with additional loss or diminished goal-directed behaviours, cognitive activities and emotions.



# Characteristics of individual BPSD

## ➤ **Delusions:**

- delusional ideas (false beliefs strongly held, enduring, and irrefutable).
- can vary widely in respect to complexity, systematisation, conviction, and the extent to which patients take action in response to them.

## ➤ **Hallucinations:**

- most common in dementia with Lewy bodies.
- recurrent and typically consist of well formed images of animals or persons that are described in detail.



# Characteristics of individual BPSD

## ➤ **Aberrant motor behaviour:**

- encompasses a range of activities such as wandering away from home.
- repetitive, purposeless behaviours.
- social inappropriate activities including those associated with disinhibition (tendency to disregard social and cultural norms and not restrain inner feelings, such as sexual drives).

## ➤ **Agitation/aggression:**

- inappropriate verbal, vocal, or motor activity that is not judged by an outside observer to result directly from the needs or confusion of the agitated individual.





# Characteristics of individual BPSD

- **Sleep disturbance:**
  - hypersomnia, insomnia, sleep-wake cycle reversal, fragmented sleep, and rapid eye movement sleep behaviour disorder.
  
- **Appetite disturbance:**
  - changes can be quantitative (anorexia) or qualitative (changes in preference for particular foods).



# Prevalence and Impact of BPSD

- Almost all people with dementia will experience at least one symptom at some point over the course of the illness.
- Prevalence rates of BPSD:
  - 61-88% of community-dwelling people with dementia.
  - 29-90% of Australian nursing home residents.
  - 95% of long-term acute care hospitalised patients.
- Can occur individually or in combination and fluctuate over time.
- Associated with faster rates of cognitive decline and earlier mortality.
- Often more disturbing to carers than cognitive decline, requiring timely identification and treatment.



# BPSD: an early marker of dementia risk?

Recent shift towards recognizing the importance of **behavioural problems** as an

- intrinsic aspect of prodromal dementia
- early marker of dementia risk, which precedes the onset of cognitive symptoms and clinical diagnosis.

- **Mild Behavioural Impairment:** a syndrome considered to be a late-life transitional stage between normal ageing and dementia.
  - Behavioural problems are the first sign of change, before the occurrence of cognitive symptoms.
  - Presence of behavioural problems in the absence of cognitive symptoms considered to confer increased risk of developing dementia.



Table 3

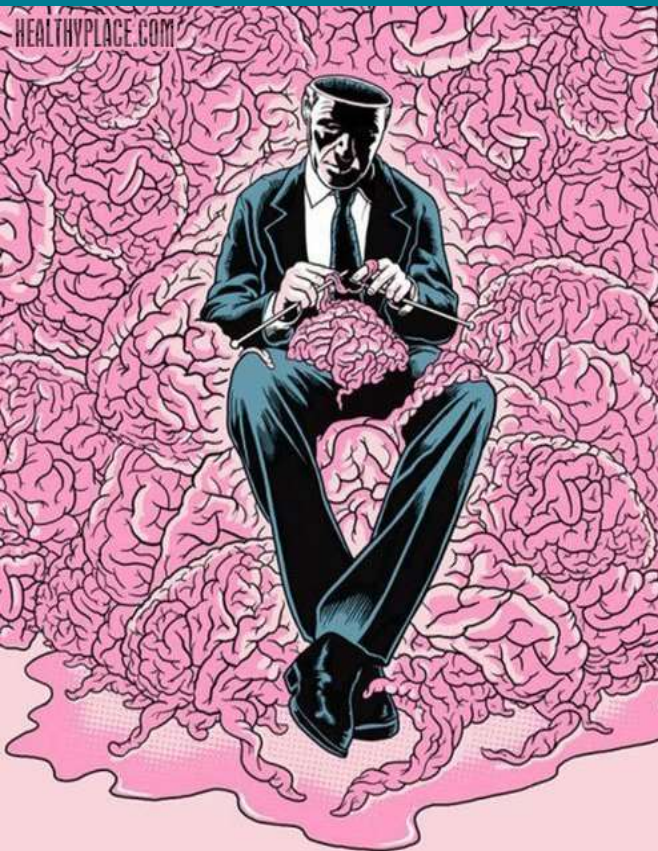
ISTAART research diagnostic criteria for MBI

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1. Changes in behavior or personality observed by patient, informant, or clinician, starting later in life (age  $\geq 50$  years) and persisting at least intermittently for  $\geq 6$  months. These represent clear change from the person's usual behavior or personality as evidenced by at least one of the following:
    - a. Decreased motivation (e.g., apathy, asponaneity, indifference)
    - b. Affective dysregulation (e.g., anxiety, dysphoria, changeability, euphoria, irritability)
    - c. Impulse dyscontrol (e.g., agitation, disinhibition, gambling, obsessiveness, behavioral perseveration, stimulus bind)
    - d. Social inappropriateness (e.g., lack of empathy, loss of insight, loss of social graces or tact, rigidity, exaggeration of previous personality traits)
    - e. Abnormal perception or thought content (e.g., delusions, hallucinations)
  2. Behaviors are of sufficient severity to produce at least minimal impairment in at least one of the following areas:
    - a. Interpersonal relationships
    - b. Other aspects of social functioning
    - c. Ability to perform in the workplace

The patient should generally maintain his/her independence of function in daily life, with minimal aids or assistance.
  3. Although comorbid conditions may be present, the behavioral or personality changes are not attributable to another current psychiatric disorder (e.g., generalized anxiety disorder, major depression, manic or psychotic disorders), traumatic or general medical causes, or the physiological effects of a substance or medication.
  4. The patient does not meet criteria for a dementia syndrome (e.g., Alzheimer's disease, frontotemporal dementia, dementia with Lewy bodies, vascular dementia, other dementia). MCI can be concurrently diagnosed with MBI.
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Abbreviations: ISTAART, International Society to Advance Alzheimer's Research and Treatment; MBI, mild behavioral impairment; MCI, mild cognitive impairment.



**FROM THE OUTSIDE LOOKING IN,  
IT'S HARD TO UNDERSTAND.  
FROM THE INSIDE LOOKING OUT,  
IT'S HARD TO EXPLAIN.**

## Impact of PTSD

- Source of significant distress and poor quality of life for both the person with dementia and their carer.
- Profound physical and psychological impact on formal and informal carers.
- Result in earlier institutionalisation and higher dementia care costs.
- Psychotic symptoms (e.g. delusions) and disruptive behaviours (e.g. aggression) the most burdensome for carers.