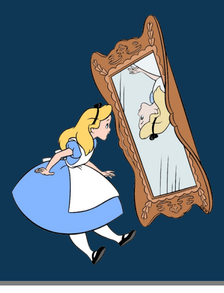

Through the looking glass: Intimate partner violence is associated with poorer cognitive performance in mid-life

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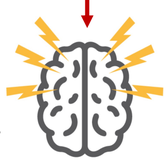
What is Intimate Partner Violence?

Definition: Any behaviour intended to gain power or control of an intimate partner.

Types:

Financial control | Sexual Abuse | Emotional Abuse | Coercive Control | Physical Abuse

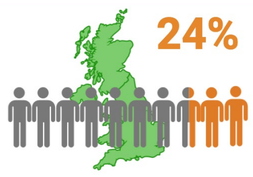
Brain health Outcomes: PTSD+ + 

90% report traumatic brain injuries.

IPV is a significant risk for traumatic brain injury.

National prevalence

- **24%** of women in the U.K will experience physical or sexual intimate partner violence in their lifetime.[1]



WHO European region

- The U.K. has the **4th** highest prevalence of IPV from 49 countries in the WHO European region.[1]

COVID UK

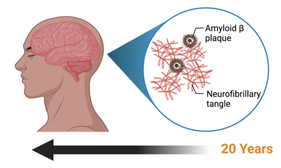
- **25%** police reports
- **49%** calls to helplines

Brain health & neurodegenerative disease risk

- There is a link between traumatic brain injury and neurodegenerative diseases, like Alzheimer's disease.[2]
- This has been studied in contact sports including football, boxing, and American football.
- **What about IPV related traumatic brain injury?** This is shockingly under researched.

IPV related brain injuries > Contact sports + Military

- Alzheimer's disease is the most common neurodegenerative disease.
- It can be seen in the brain decades before the onset of symptoms.
- It starts in and near an area of the brain called the hippocampus.



- The hippocampus is important for visuospatial tasks, these are tasks that help us identify, integrate, and analyse space and visual cues around us.
- Visuospatial memory is thought to be an early marker of Alzheimer's disease.[3]

Are there **differences** in **memory and thinking** between people with and without **IPV related brain injury?**

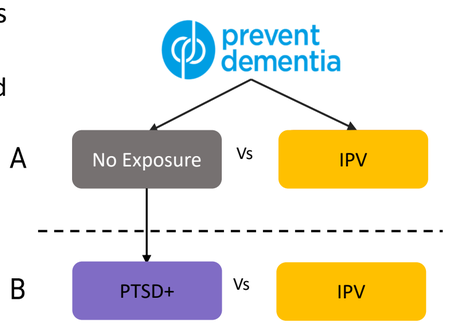
Who participated in the study?

Sample size: 632 participants

Location: 5 sites across U.K and Ireland

Aged: 40-59

Criteria: No history of neurodegenerative disease.



Questionnaires and interviews were used to record details including, age, sex, family history of dementia, education, physical abuse and PTSD symptomology.

What did we do?

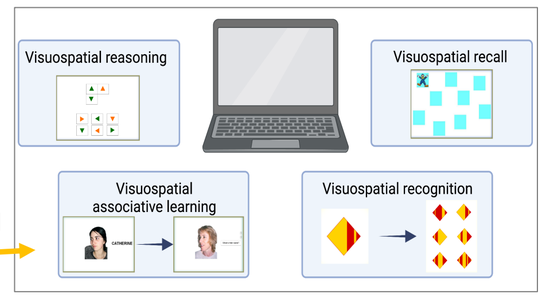
Memory and thinking: Participants undertook 11 tests of memory and thinking skills (cognitive performance) on a touch screen computer. These included tests of:

Attention skills

Verbal memory (like learning and remembering lists of words)

Executive function skills (which measure things like planning, decision making, switching tasks and staying focused)

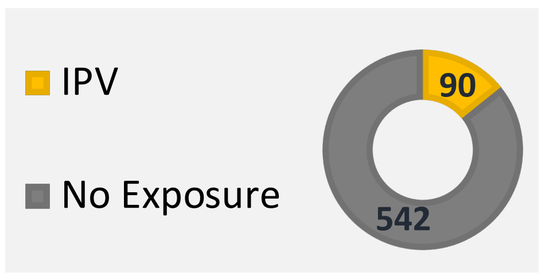
Visuospatial skills (which measure things like navigation, visual problem solving, or spatial awareness)

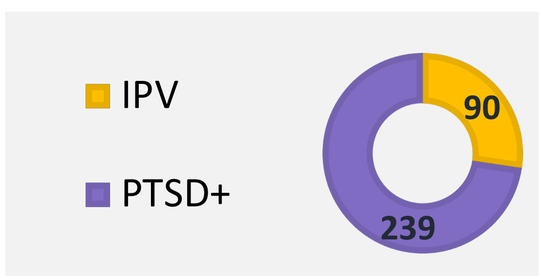


Results: What is through the looking glass?

Average age: 51.2 years

Female %: 81% IPV
61% No Exposure
60% PTSD+





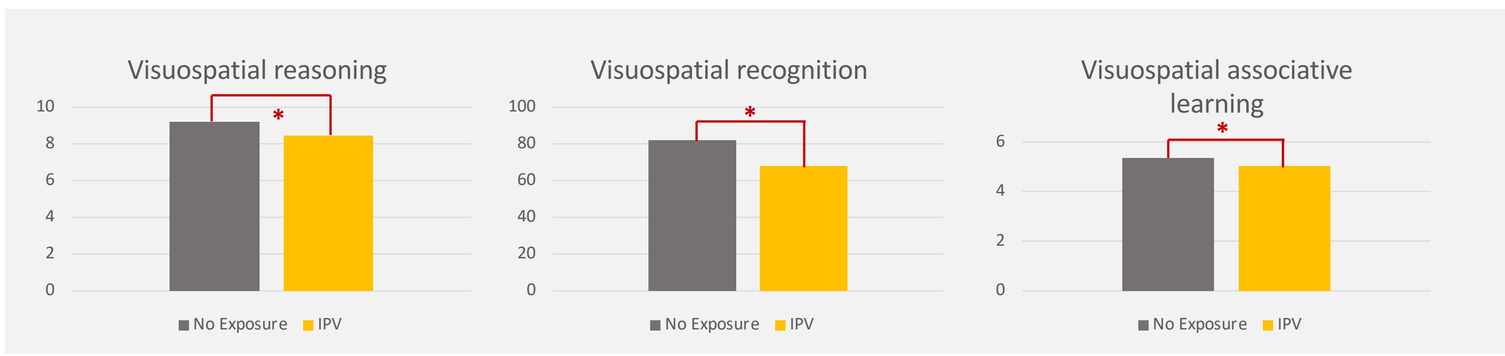
Age at onset of abuse: 20.70 years

Duration of abuse: 6.57 years

Years since abuse ended: 24.30

A

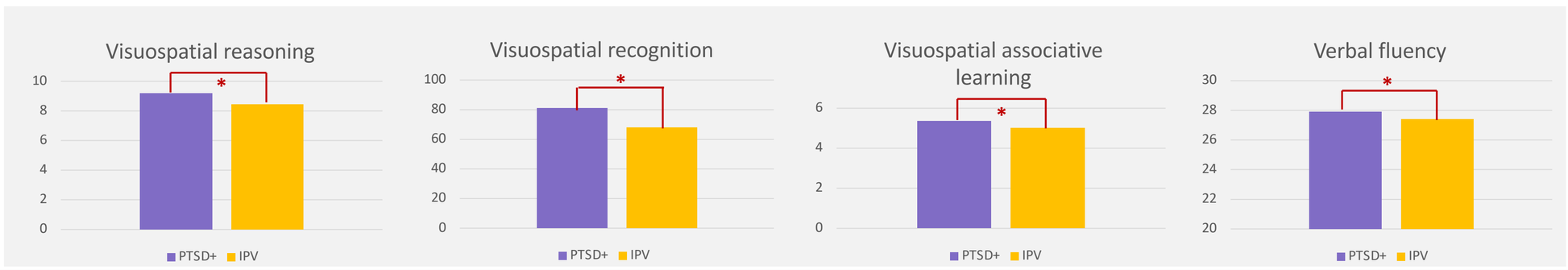
- There were **no** differences between people with and without a history of IPV in **verbal memory, attention or executive function** tests.
- Visuospatial tests were different.



* People with a history of IPV were significantly worse at these tests than people with no exposure OR people with PTSD.

B

- There were **no** differences between people with a history of IPV and people with PTSD in **verbal memory or attention tests.**
- Visuospatial tests were still different.
- Executive function was also different. People with traumatic brain injuries are often worse at these types of test.



What is the bottom line?

- These results show that problems with memory and thinking skills can be seen in people with a history of intimate partner related traumatic brain injury which occurred an average of 24 years before testing.
- **These problems are primarily seen in visuospatial tasks which have been shown to predict Alzheimer's disease risk 20 years before diagnosis.**
- We know that contact sports players who are exposed to repeated traumatic brain injuries have a higher risk of neurodegenerative disease, like Alzheimer's disease, compared to the general population.
- Despite a high prevalence of brain injury, there is hardly any research in intimate partner violence. **We are NOT LOOKING.**
- **This research shows, for the first time, long-term brain health consequences of traumatic brain injury from IPV.**

What happens to Alice?

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1. Violence against women Prevalence Estimates, 2018. Global, regional and national prevalence estimates for intimate partner violence against women. WHO: Geneva, 2021;
2. Livingston et al (2020). *The Lancet*, *396*, 413-446;
3. Kawas et al (2003). *Neurology*, *60*(7), 1089-1093.

Helpline