Views about the disease and brain disease model of addiction: An international survey of addiction treatment providers in the US, UK and Australia

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Background

- Disease model has long history (traced back to Benjamin Rush in the US; Trotter in UK; *see* Berridge; Courtwright)

- Addiction a 'chronic relapsing brain disease' (Leshner, 1997)

- "Addiction is a primary, chronic disease of brain reward, motivation, memory and related circuitry" (AMA, 2017; ASAM, 2011)

The *brain disease model of addiction*

Proposed Benefits

(Leshner, 1997; Volkow, 2016)

Proposed Criticisms

(Hall & Carter, 2015; Lewis, 2015)

- More effective treatments (e.g., pharmacotherapies)
- Greater investment in research and treatment
- Clinical benefits:
    - Reduces stigma (medical rather than moral problem)
    - Useful explanatory model

- Reductionist (ignores social, environmental factors)
- Neurobiological evidence does not support the BDMA
- Clinical risks:
    - Increases stigma (ppl with addiction as dangerous)
    - Reduces self-efficacy

Aim

- To explore addiction treatment providers' views about the aetiology of addiction and support for the disease and brain disease model

Why are their views important?

- Policy design
- Treatment and service provision

Research questions

In Australia, the UK and US:

1. What are treatment providers' levels of support for the disease and brain disease model?

2. Which individual characteristics (e.g., age, previous addiction status) predict support for different models?

3. What are treatment providers' views about the potential clinical impact of framing addiction as a brain disease?

Methods

Participants
- 1,438 completed responses
  - Australia: 337; UK; 165; US: 936
- Range of providers (e.g., social workers, nurses, doctors)
- Self-selected by responding to advertisement

Measures
- Online survey in Qualtrics
- Disease model: *Short Understanding of Substance Abuse Scale* (Humphreys et al., 1996)
- BDMA: Ad hoc Likert scale probing questions
- Demographics (age, gender, addiction/12-step history)

Data analysis
- ANOVAs
- Hierarchical multiple regressions

Results 1: Support for disease model

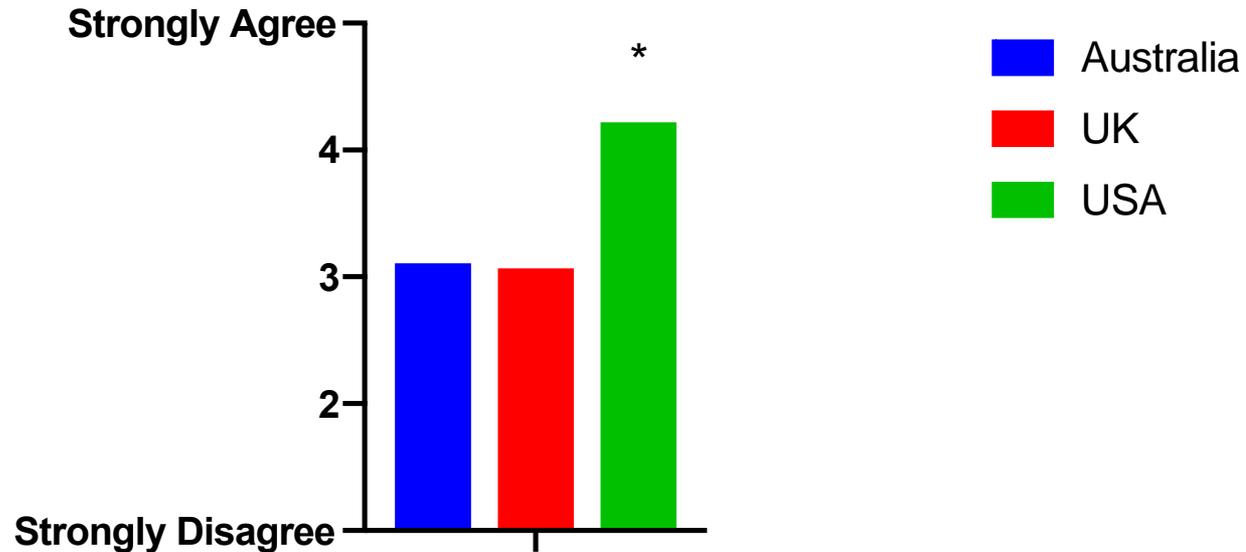**Mean Psychosocial and
Disease Model Score by Country**
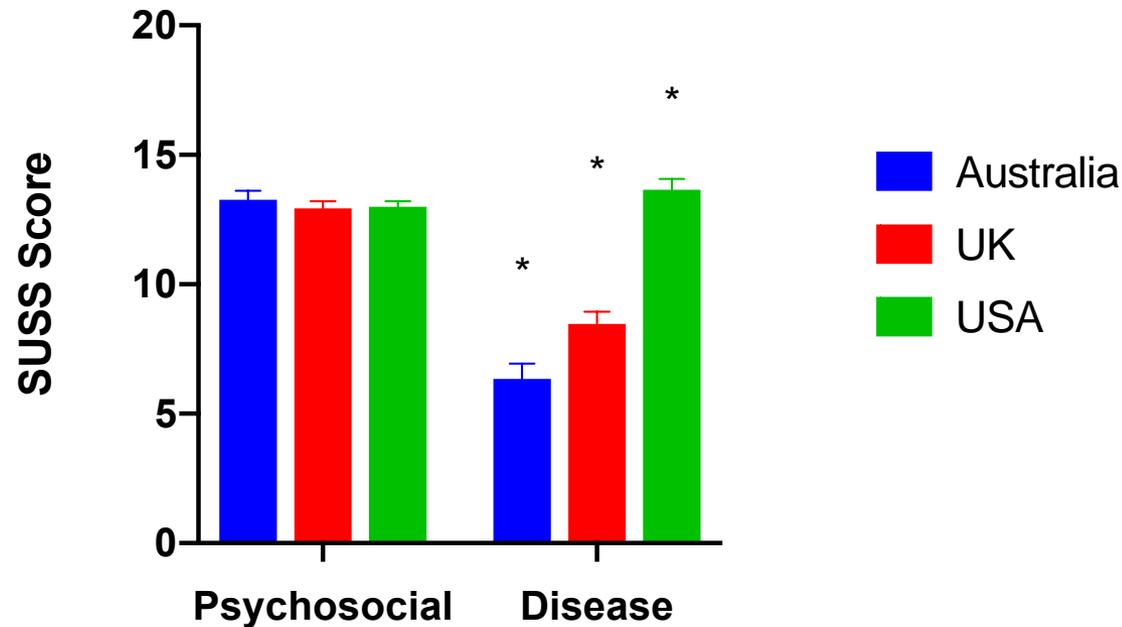
SUSS = *Short Understanding of Substance Abuse* Scale (Humphreys et al., 1996)

*p < .05.

Results 1: Support for BDMA

"Addiction is a chronic, relapsing brain disease"


*p < .05.

Results 2: Predictors of DMA/BDMA support

Step	Predictor	Disease Model			Brain Disease Model		
		Aus	UK	US	Aus	UK	US
		Adj β	Adj β	Adj β	Adj β	Adj β	Adj β
1	Age	.197***	.011	.089*	.114	.004	.023
	Gender	-.043	-.024	-.001	-.027	-.048	.017
	Education	-.077	.013	-.113**	.073	.128	-.020
2	Addiction (No 12-Step)	-.135*	-.225**	-.047	-.150*	-.150	-.086*
3	Addiction (Attended 12-Step)	.242***	.317***	.201***	.015	.042	.085*

*p < .05. **p < .01. ***p < .001.

Results 3: Clinical impact of BDMA

"If addiction is talked about as a brain disease with clients, it …"

*p < .05.
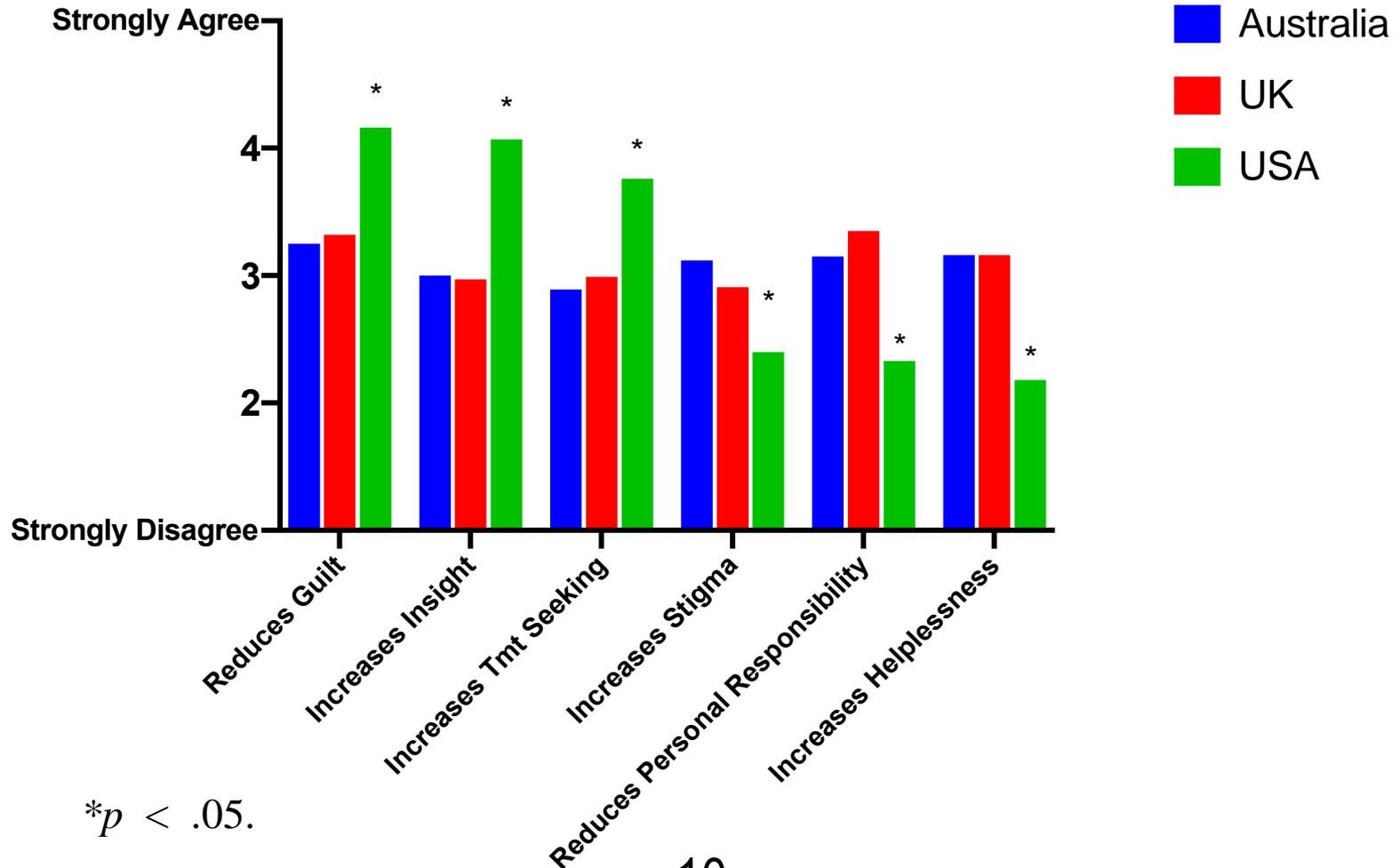
Implications: Policy

Important to remain cautious about integrating the brain disease model within Australian and UK drug and alcohol policy

- Evidence suggesting the disease / brain disease concept viewed more favourably by treatment providers in the USA, in comparison to UK and Australia (see also: Barnett et al., 2018; Russell et al., 2011)

Implications: Treatment and service provision

Treatment providers from different personal backgrounds (e.g., having had a personal experience of addiction) may view the aetiology of addiction differently

- If these views translate into different practices (e.g., favouring abstinence over harm reduction), treatment seekers may receive different explanations about their drug use

- Client treatment provider matching
    - Centralised intake and assessment systems? (Barnett et al., 2018)

- Treatment provider reflexivity on how their views impact care (Refer to Webinar link on my Twitter)

Limitations

- **Non-random sampling**

  - Need to be cautious about drawing inferences to the wider treatment provider workforce

- **Measuring support for the BDMA**

  - We used an ad-hoc, non-validated tool

  - Future research would be useful to:
    - Design a psychometrically validated tool tested in different languages to enable cross-cultural research

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