

# Psychological interventions for homelessness

A systematic review and meta-analysis

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# Background / Rationale

- People who are homeless are disproportionately affected by childhood trauma, and mental health and substance use issues
- Psychological interventions – some good evidence-bases in the treatment of mental health issues in clinical populations
- Additional research required to establish the most effective psychological interventions for chronic homelessness

(Sundin & Baugley, 2015; Fazel et al., 2008)

# Objectives

1. What psychological interventions are being used in the treatment of problems suffered by homeless people?
2. How are researchers measuring the effectiveness of the interventions? (i.e. outcomes)
3. How effective are the interventions in improving the measured outcomes?

# Systematic Search

- Search criteria:
  - Search terms included a combination of the keywords homeless\*, intervention, therapy, treatment, management, and randomised controlled trial.
- Used PICOS to define inclusion/exclusion criteria
  - Limited studies to RCTs
- 31 studies involving 3815 individual participants
- Two reviewers extracted pertinent data
- Quality assessment using Cochrane RoB tool

# Interventions

The included studies investigated thirteen types of intervention:

## **Established talking therapies:**

- Motivational interviewing (MI)
- Cognitive behavioural therapy (CBT)
- A combination of CBT and MI (CBT+MI)
- Mindfulness-based intervention (MBI)
- A combination of mindfulness and CBT (MBI+CBT)
- Dialectical behavioural therapy (DBT)

## **Behavioural interventions:**

- Contingency management (CM)
- Community Reinforcement Approach (CRA)
- Life coaching (reinforcement)

## **Other psychological interventions:**

- Peer navigation (PN)
- Cognitive remediation therapy (CRT)
- Houvast
- The Healthy Living Project (HLP)

# Narrative Analysis

- We grouped similar outcomes into six overarching categories to allow for narrative analysis.
- The categories included:
  1. Substance use
  2. Mental health symptoms
  3. Psychological wellbeing
  4. Health behaviour
  5. Antisocial behaviour and consequences
  6. Social outcomes

# Results - Narrative Analysis

## **CBT**

- Good evidence for CBT for substance use and a variety of MH conditions (particularly PTSD)
- May improve outcomes relating to psychological wellbeing and reduce antisocial behaviour – more research required

## **DBT**

- Good results for DBT for substance use – more research required

## **Motivational interviewing**

- Evidence for MI for substance use is mixed

## **Mindfulness**

- Increased mindfulness

# Results - Narrative Analysis

## Peer navigation

- May be effective for psychological distress and psychological wellbeing – more research required

## Behavioural interventions

- Good evidence for CM on substance use
- CM may also be effective in improving mental health symptomology
- CRA shows some effectiveness for substance use
- Behavioural interventions effective for improving *social stability*



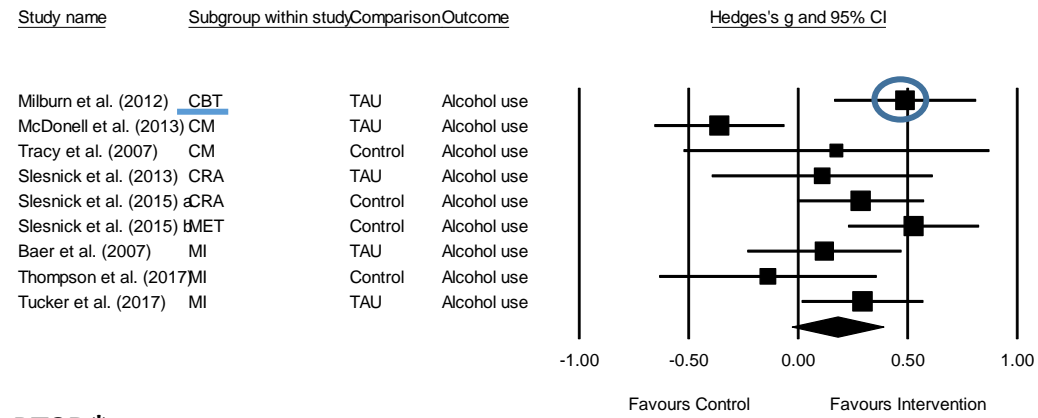
# Statistical Analysis

- Ten separate meta-analyses were performed for:
  1. Depression
  2. Anxiety
  3. Psychological distress
  4. PTSD
  5. Coping skills
  6. Quality of life
  7. Mindfulness
  8. Cannabis use
  9. Drug use
  10. Alcohol use

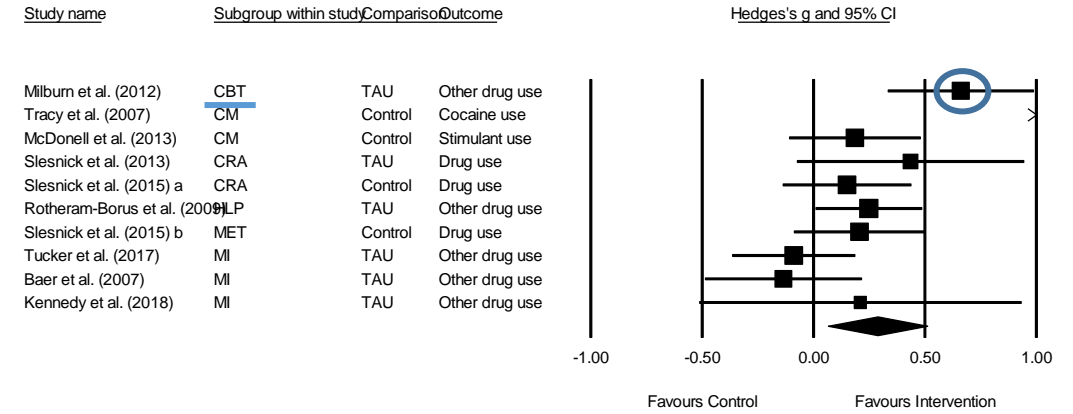
**Table 1. Summary of Meta-Analysis Statistics**

<b>Outcome</b>	<b>Number of studies</b>	<b>Hedges g</b>	<b>p</b>	<b>p(Q)</b>	<b>I<sup>2</sup></b>
<b>Depression</b>	10	0.10	0.16	0.14	33.40
<b>Anxiety</b>	6	0.26	0.21	0.00	85.85
<b>Psychological distress</b>	5	0.17	0.30	0.00	76.55
<b>PTSD</b>	4	0.69	<b>0.04</b>	0.00	87.64
<b>Coping skills</b>	5	0.40	0.15	0.00	92.64
<b>Quality of life</b>	3	0.37	0.24	0.00	84.68
<b>Mindfulness</b>	2	0.34	<b>0.02</b>	0.38	0.00
<b>Cannabis use</b>	4	-0.11	0.61	0.00	78.67
<b>Hard drug use</b>	10	0.29	<b>0.01</b>	0.00	74.67
<b>Alcohol use</b>	8	0.18	<b>0.09</b>	0.00	66.94

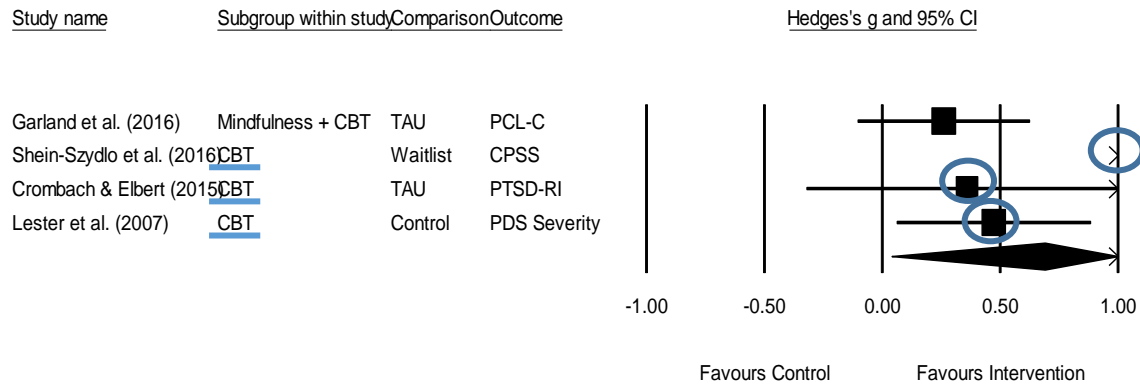
## Alcohol use



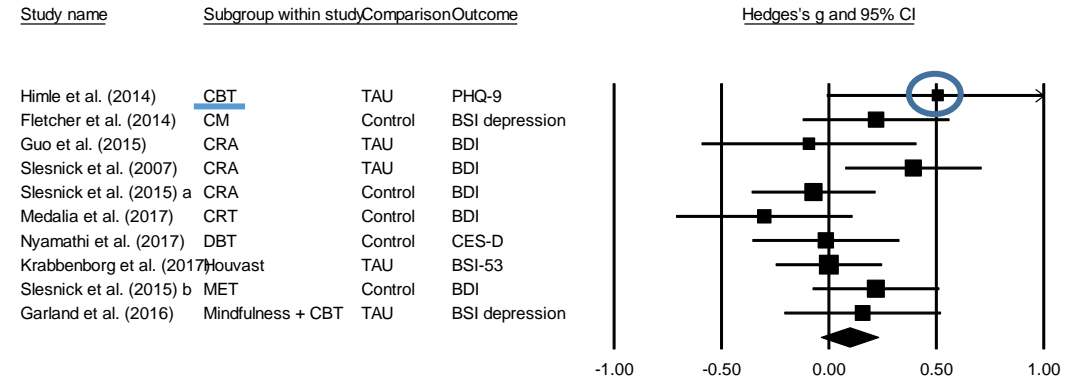
## Hard drug use\*



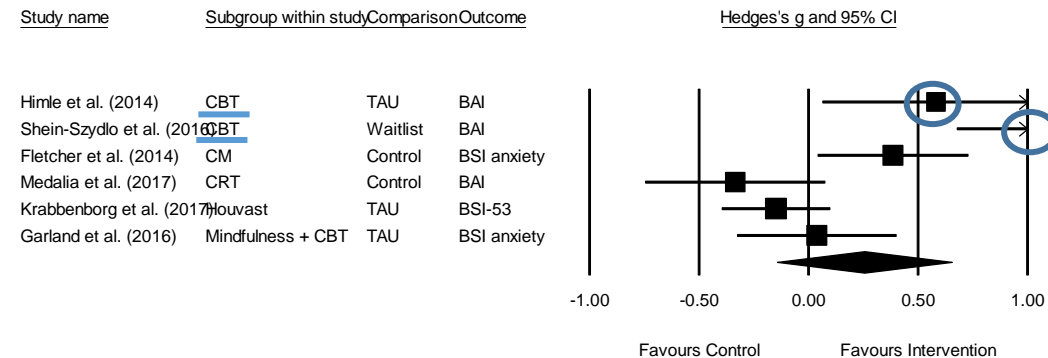
## PTSD\*



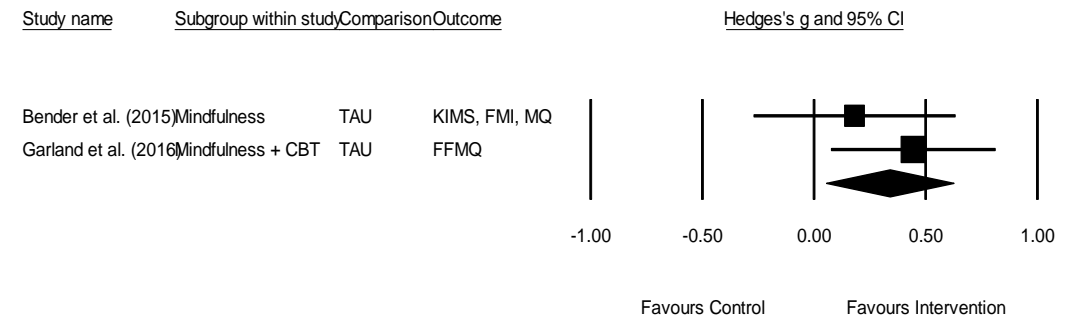
## Depression



## Anxiety



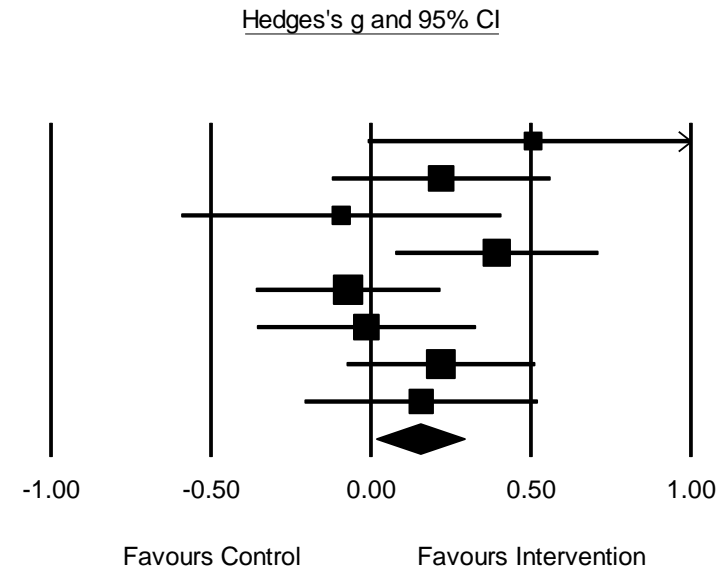
## Mindfulness\*



## Depression subgroup

Study name	Subgroup within study	Comparison	Outcome
Himle et al. (2014)	CBT	TAU	PHQ-9
Fletcher et al. (2014)	CM	Control	BSI depression
Guo et al. (2015)	CRA	TAU	BDI
Slesnick et al. (2007)	CRA	TAU	BDI
Slesnick et al. (2015)	CRA	Control	BDI
Nyamathi et al. (2017)	DBT	Control	CES-D
Slesnick et al. (2015)	MET	Control	BDI
Garland et al. (2016)	Mindfulness + CBT	TAU	BSI depression

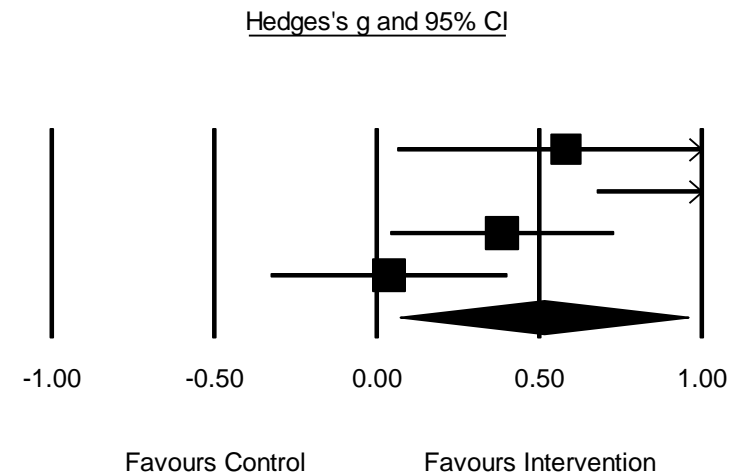
$p = .028, g = 0.15$



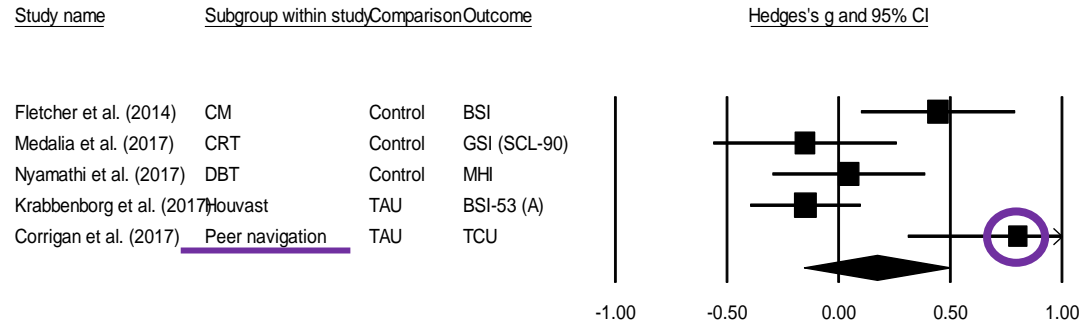
## Anxiety subgroup

Study name	Subgroup within study	Comparison	Outcome
Himle et al. (2014)	CBT	TAU	BAI
Shein-Szydlo et al. (2016)	CBT	Waitlist	BAI
Fletcher et al. (2014)	CM	Control	BSI anxiety
Garland et al. (2016)	Mindfulness + CBT	TAU	BSI anxiety

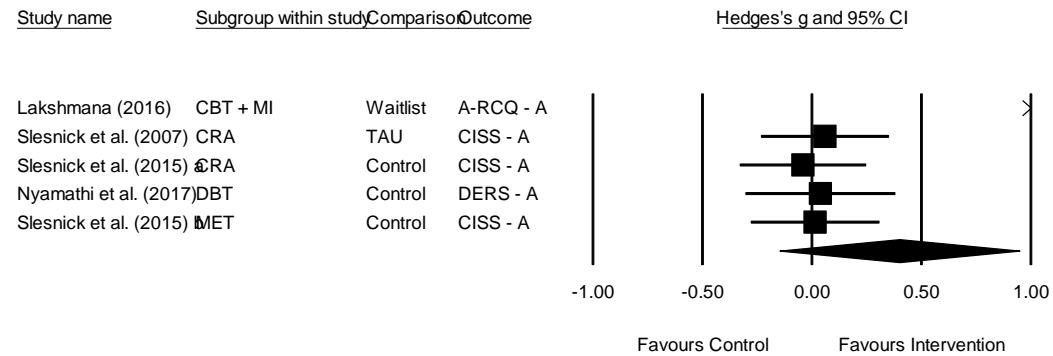
$p = .023, g = 0.51$



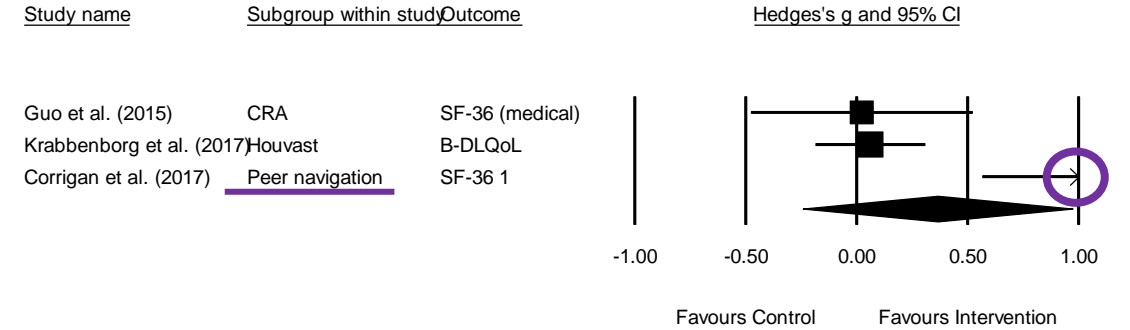
## Global psychological distress



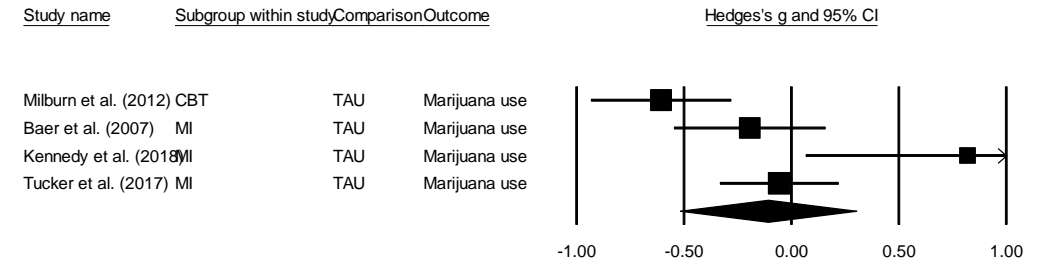
## Coping skills



## Quality of life



## Cannabis use



# Summary of Meta-Analyses

- Psychological interventions were effective in improving:
  - Drug use
  - PTSD
  - Mindfulness
  - Anxiety and depression
    - Once interventions with a weaker evidence base removed from analysis i.e. CRT and Houvast
    - Effectiveness for alcohol use approached significance
- CBT appears to be effective for a number of outcomes
- However...

# Limitations

- Some interventions missing from the literature
- RCTs for robustness, however exclusive
- High heterogeneity
- Mostly US studies
- Based on diagnoses
- Factors associated with homelessness, however, may not actually reduce homelessness

# Implications / Impact

- More research necessary
- New RCTs for other psychological therapies needed



# Any questions?

A link to the review protocol:



Thanks to Stephanie Barker and Samuele Cortese for their contribution to this work.