

# Effects of Mindfulness-Based Stress Reduction (MBSR) on Burnout: a Systematic Review

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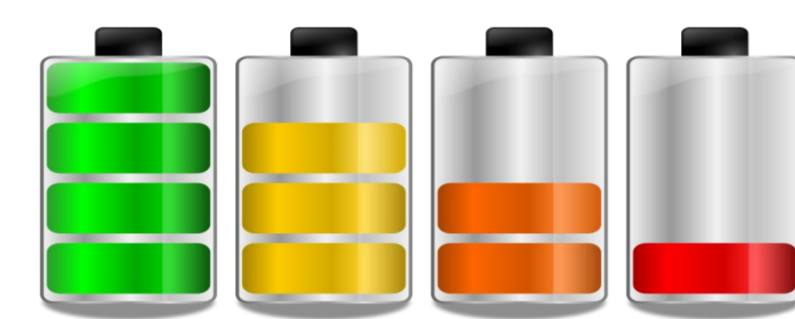
Mindfulness in the workplace – more organisations are offering courses

MBSR is effective in reducing stress and improving health in working adults.

Can MBSR help with the growing problem of **burnout** at work?

Burnout is a state of ill-health and a process over time (Maslach, Jackson & Leiter 1996)

- + Emotional Exhaustion
- + Depersonalisation - Engagement
- Personal Accomplishment



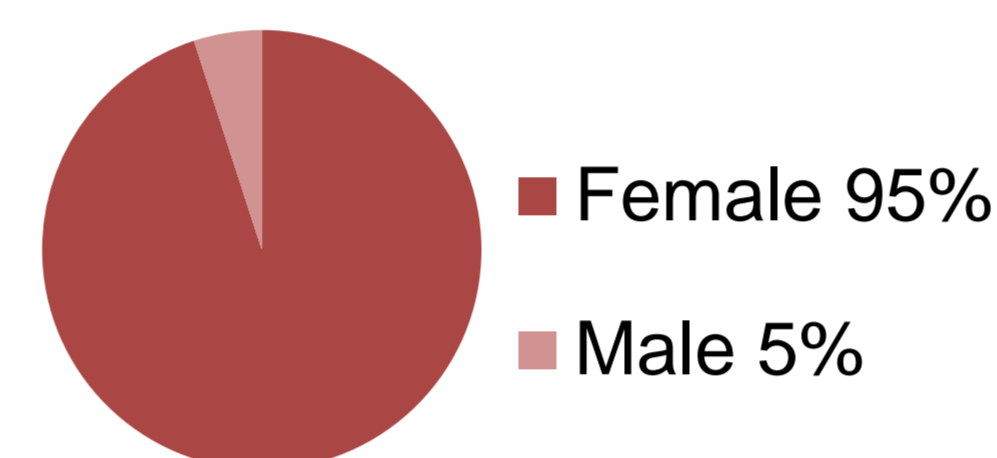
**Burnout**

## Results: the who and what of the studies

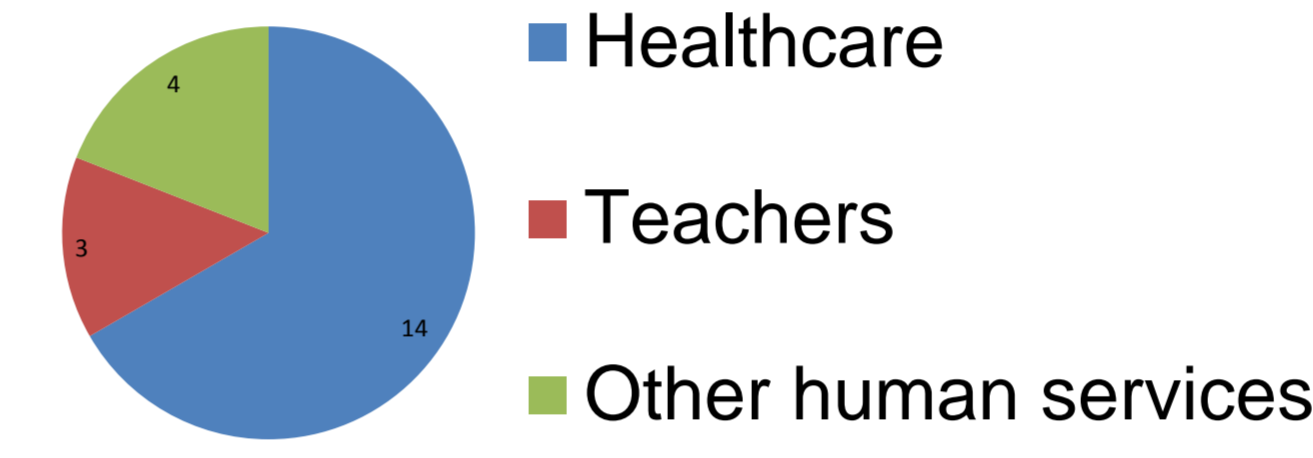
21 Studies = 11 Controlled (9 RCTs) + 10 Uncontrolled studies

Sample sizes 7-103 with a mean of 38

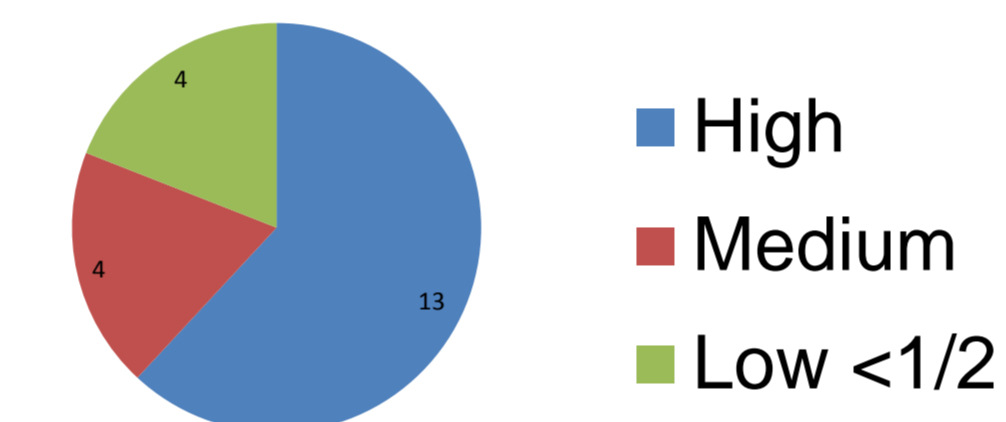
Gender



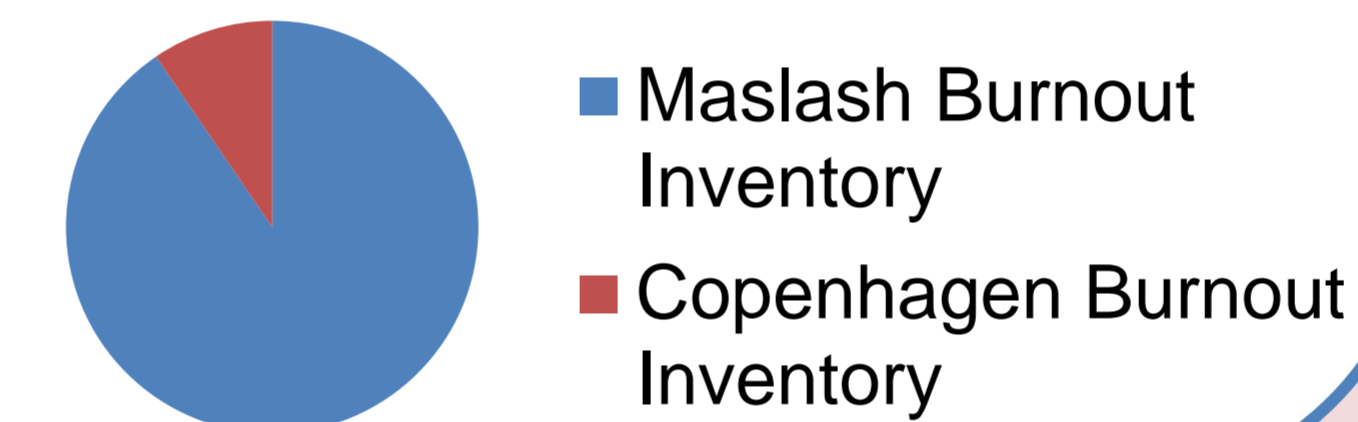
Profession



Fidelity with standard MBSR



Burnout measure



## Meta-analysis

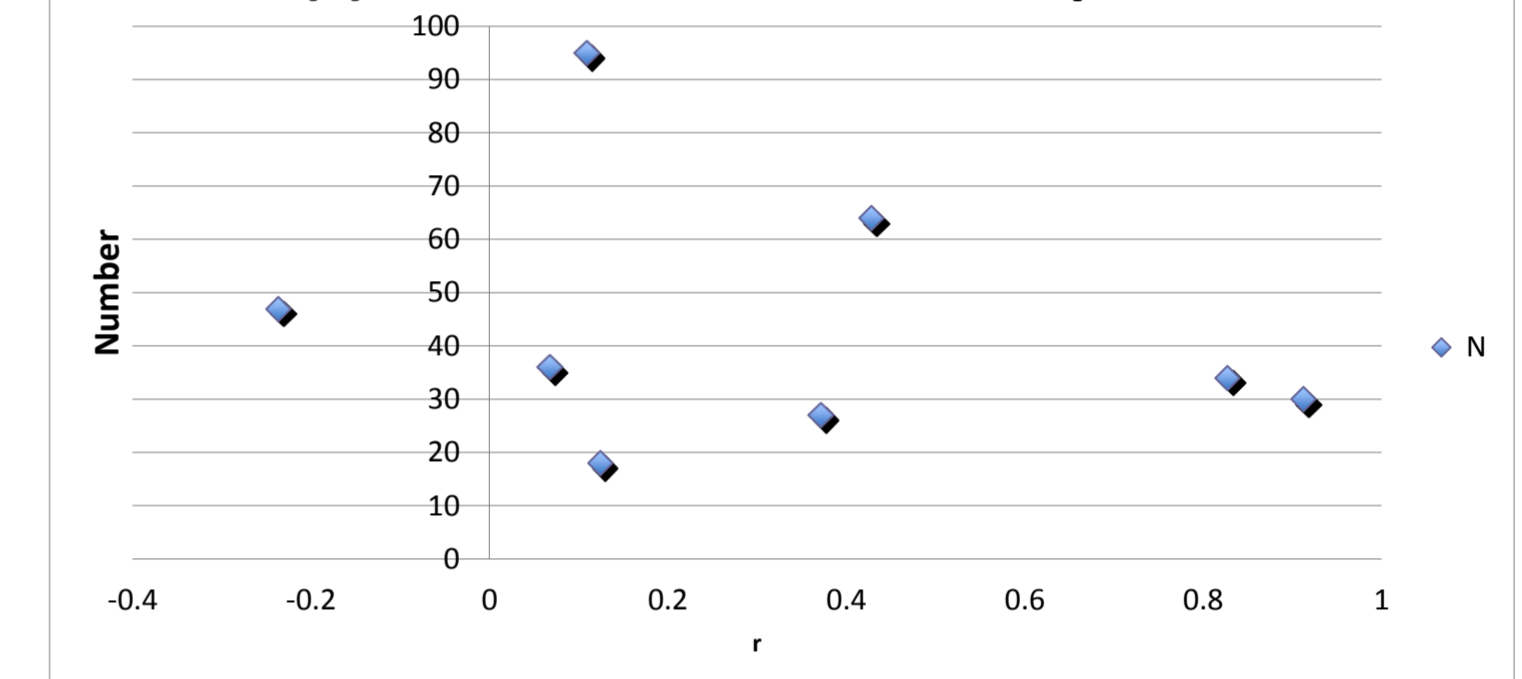
How much MBSR changed total and the emotional exhaustion dimension of **burnout**

8 controlled studies included in the meta-analysis n = ~350

Effect size (sample size weighted)  $d = 0.45$  for total burnout and  $0.92$  for emotional exhaustion.

$\leq 0.20$  is a small effect size,  $0.50$  is a moderate effect size and  $\geq 0.80$  is a large effect size (Cohen, 1992). The mean effect size for occupational stress management interventions  $d = 0.52$  (Richardson, & Rothstein, 2008).

Relationship between EE Effect size (r) and Number of Participants



Sample weighted mean  $r = 0.276$

## Narrative synthesis

- ✓ More positive results on the Emotional Exhaustion subscale
- ✓ Stronger evidence for higher fidelity MBSR interventions
- ✓ Follow up findings suggest that overall improvements in burnout, especially in work engagement and satisfaction may take longer than an 8 week MBSR course to develop

## Finding and evaluating the evidence

### Study selection process

- Inclusion criteria =
- Working adults
  - MBSR course or similar
  - Measured burnout
  - English Language

117 identified through data base searches

73 abstracts or whole texts assessed after duplicates removed

- 55 studies excluded
- Not interventions (18)
  - Non MBSR interventions (7)
  - No burnout measure (20)
  - Not working adults (5)
  - Not in English (5)

18 studies met inclusion criteria  
3 studies found through citations and hand search of 'Mindfulness' 21 studies included in review

Quality of studies = x16 were high quality and 4 were lower quality due mainly to lack of randomisation or small sample size.

Review conducted according to PRISMA guidelines

Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *Annals of internal medicine*, 151(4), 264-269.

## Results: on measures of Burnout

High/medium quality study

Lower quality study

Significant Change

Towards significant change

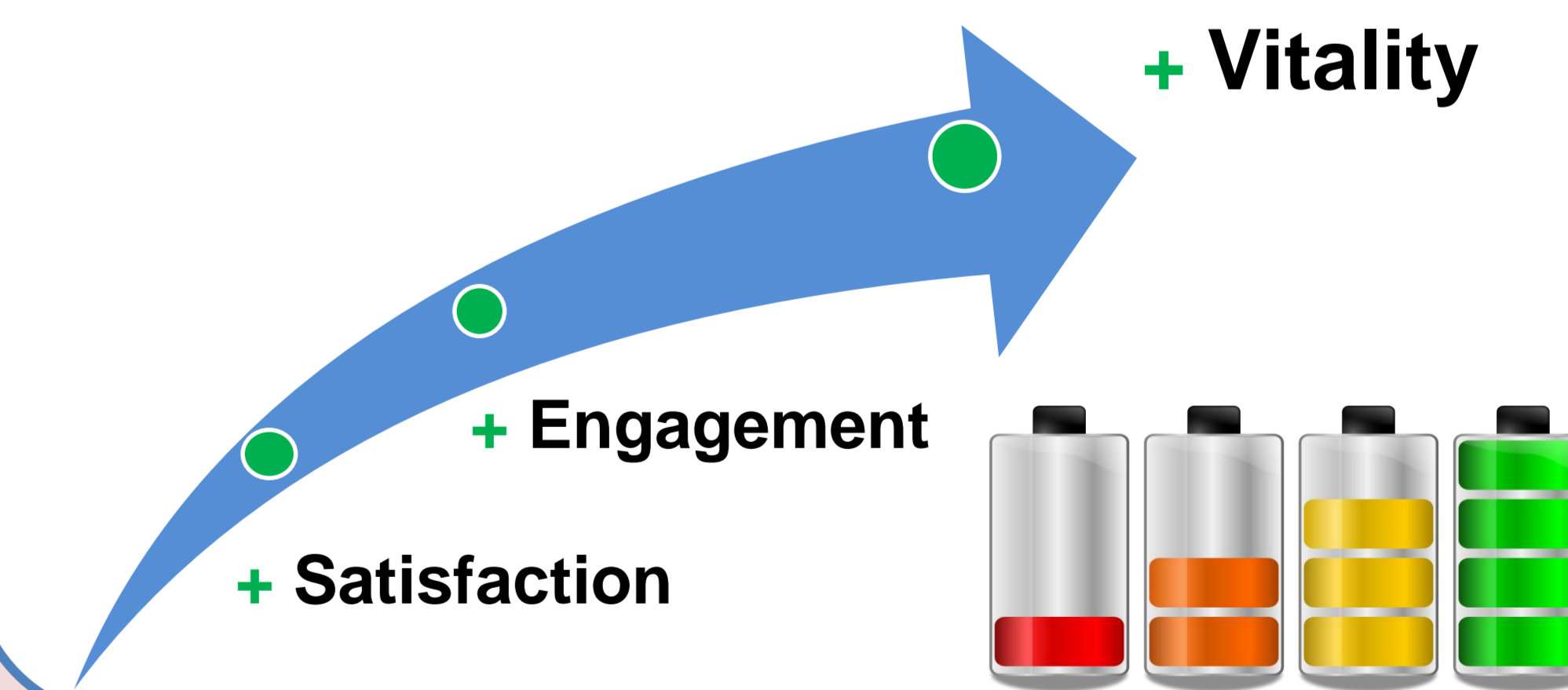
No significant change

Results on burnout measures in uncontrolled studies

Study	Fidelity	Measure	Pre-Intervention	Post-Intervention
<b>Results on burnout measures in controlled studies</b>				
Mean (SD)				
1.	High	EE	22.8	18.24
		D	4.9	3.83
		PA	35.58	36.37
2.	High	Comb'd	75.90	72.94
		EE	26.38 (10.42)	16.15 (8.76)
		D	4.75 (4.49)	3.42 (5.12)
		PA	37.38 (5.86)	33.42 (5.12)
3.	Low	EE	26.37 (10.39)	20.67 (10.39)
		D	4.80 (4.43)	5.00 (5.89)
		PA	41.60 (3.25)	33.33 (6.77)
4.	Low	EE	27.20	26.20
		D	19.60	18.20
		PA	16.00	15.40
5.	Medium	EE	36.30 (13.0)	44.10 (12.7)
		D	18.70 (8.9)	21.50 (11.3)
		PA	59.70 (7.8)	57.10 (8.0)
6.	High	EE	25.90 (9.01)	20.38 (8.98)
		D	5.40 (4.25)	5.38 (4.98)
		PA	39.60 (6.50)	39.50 (6.50)
7.	Low	EE	23.97 (7.62)	25.78 (11.06)
		D	6.65 (5.37)	6.72 (3.89)
		PA	37.38 (6.14)	40.33 (3.71)
8.	Low	EE	26.4 (10.4)	20.70 (10.04)
		D	4.8 (4.5)	4.8 (4.3)
		PA	38.2 (5.9)	41.6 (3.2)
9.	High	EE	23.97 (7.62)	19.87 (9.07)
		D	6.65 (5.37)	7.53 (10.36)
		PA	37.38 (6.14)	38.87 (8.89)
10.	High	EE	25.1 (11.6)	26.0 (12.5)
		D	9.8 (6.3)	9.0 (5.7)
		PA	38.8 (6.8)	39.3 (6.0)
11.	Medium	EE	23.12 (10.1)	No change
		D	7.78 (5.53)	No change
		PA	36.5 (7.449)	No change
12.	High	EE	22.8	18.24
		D	4.9	3.83
		PA	35.58	36.37
13.	High	EE	27.8 (25.1-30.05)	23.7 (21-26.5)
		D	8.6 (7.3-9.9)	7.6 (6.3-8.9)
		PA	41.2 (39.8-42.6)	42 (40.06-44.1)
14.	High	EE	20.4 (10.1)	19.2 (10.2)
		D	5.5 (2.5)	4.6 (2.9)
		PA	39.4 (4.7)	41 (4.9)
15.	High	EE	20.86	19.29
		D	5.71	7.00
		PA	42.00	40.86
16.	High	EE	Physicians 28.1 (9.8)	Physicians 21.3 (8.8)
		D	Others 21.7 (10.2)	Others 18.8 (9.4)
		PA	Physicians 9.2 (6)	Physicians 6.7 (5.3)
		Others	5 (3.8)	4 (3.6)
17.	Low	EE	Physicians 37.7 (5.8)	Physicians 41 (5.1)
		D	Others 38.4 (6.1)	Others 41 (5.7)
		PA	24.13 (15.31)	16.88 (13.15)
18.	High	EE	4.38 (7.59)	2.94 (4.06)
		D	40.13 (5.81)	41.63 (4.21)
		PA	28.9 (25.3-35.4)	26.4 (22.6-30.01)
19.	High	EE	11.2 (9-13.5)	10.3 (8-12.7)
		D	41 (39.2-42.8)	41.06 (39.7-43.5)
		PA	19.31 (11.06)	16.94 (10.52)
20.	High	EE	4.59 (4.04)	3.59 (4.48)
		D	40.31 (5.17)	42.33 (4.61)
21.	High	EE	20.83 (18.75)	12.50 (25)
		D	39.58 (31.58)	39.58 (28.12)
		PA	32.14 (14.29)	35.71 (32.14)
		Client	19.47 (18.05)	14.22 (16.12)
		Personal	44.56 (19.74)	26.27 (17.48)
		Work	49.50 (19.43)	37.55 (15.83)

Maslach Burnout Inventory: Emotional Exhaustion (EE) Depersonalisation (D) Personal Accomplishment (PA) (Maslach, Jackson & Leiter 1996)

## Significant changes in burnout



MBSR based interventions should include follow-up support and be integrated with organisational level interventions to reduce work stress, provide respite and support role-based applications.

Further research is needed in other workplaces, the processes of change over time and in organisational implementation and support in the workplace for maintaining mindfulness at work and preventing further burnout.

This study is part of a larger doctoral study on Mindful Emotional Regulation at Work Contact Sally Rose for further information [s.rose@leeds.ac.uk](mailto:s.rose@leeds.ac.uk)