

A systematic review of intervention studies using Health Action Process Approach (HAPA) model components: effects on weight loss

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Introduction

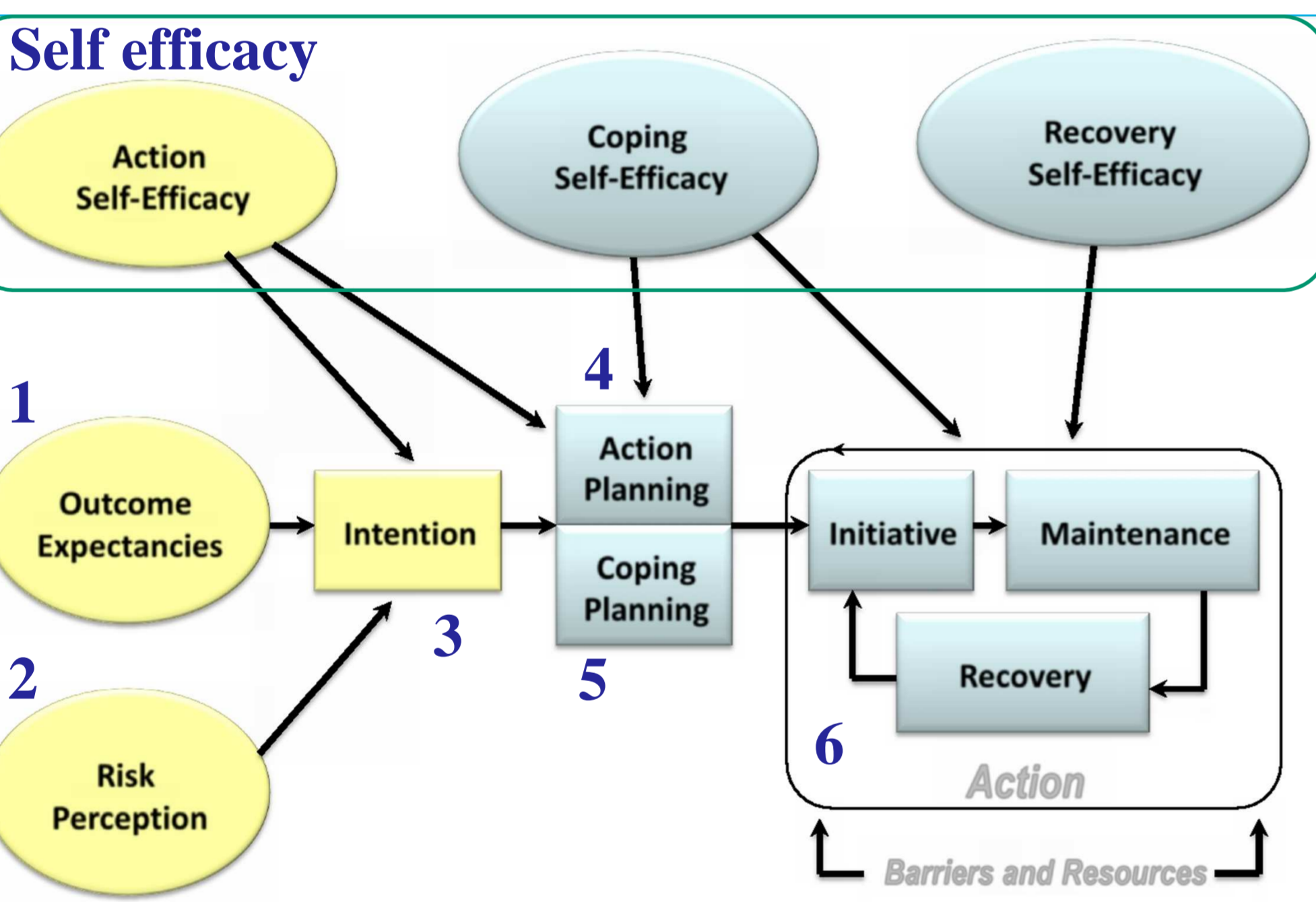
The HAPA model¹ (Fig 1) and HAPA-like approaches including multiple motivational and volitional components to support behaviour change are increasingly applied in intervention studies.

Review questions

This review:

1. Describes how HAPA-based approaches have been used to design and evaluate interventions to change behaviours for preventing or managing chronic disease;
2. Examines their effectiveness, with analyses here focussing on **weight-related outcomes**.

Fig 1 Health Action Process Approach Model¹



Inclusion criteria

Type: Full publication in English >1992

Population: Adults (16+)

Intervention:

- Development / design or evaluation is:
 - HAPA-based:** mentions/ref. HAPA as basis OR
 - HAPA-like:** as per Fig 1 includes **self-efficacy** plus 4 of 6 other defined HAPA components, at least 1 motivational (1-3) and 1 volitional (4-6).
- Targets on-going (not once off) behaviour.

And for this **analysis focussing on weight loss:**

Intervention: Targets physical activity AND diet to promote weight loss.

Comparator: Usual care/minimal intervention

Outcome: Comparative data on weight.

Study design: Controlled trial.

Methods

Relevant studies identified through bibliographic database and citation searching, author contacts and reference lists were selected, categorised and synthesised as per our protocol:

http://www.crd.york.ac.uk/PROSPERO/display_record.asp?ID=CRD42013003596

Fig 2 Studies selected for inclusion and analysis

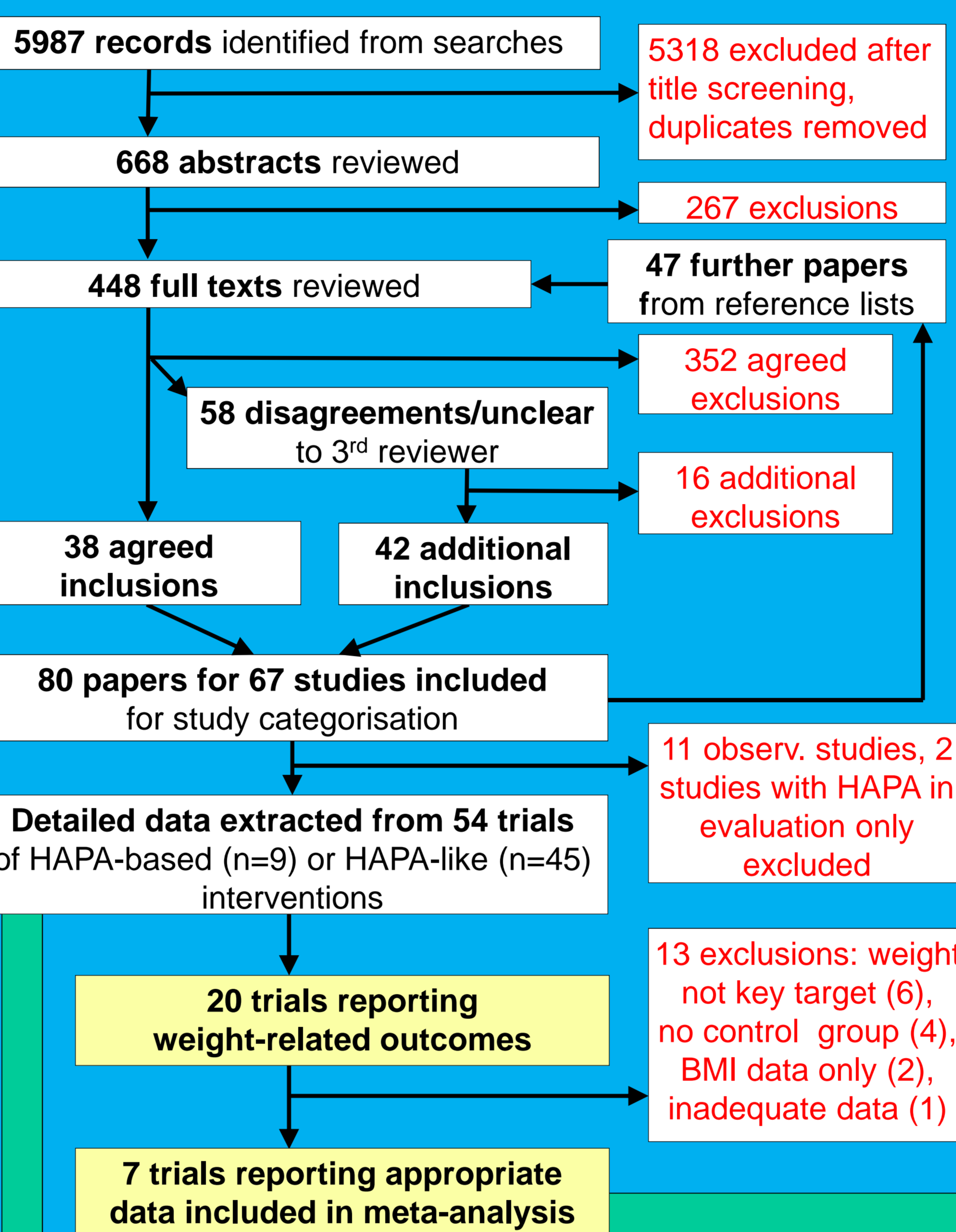


Fig 3 Countries in which trials conducted (n=54)

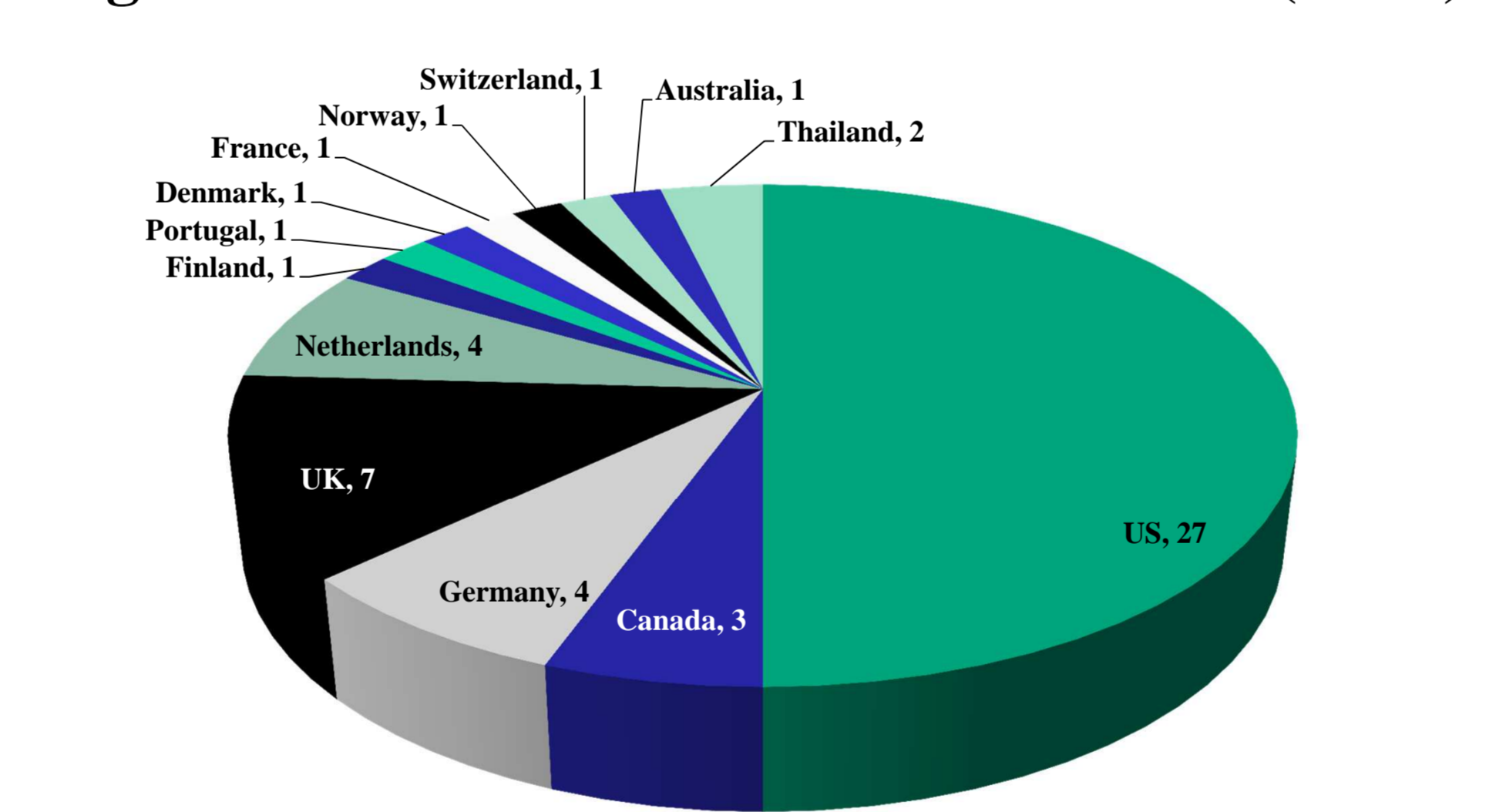


Fig 4 Behaviour targets & outcomes in trials (n=54)

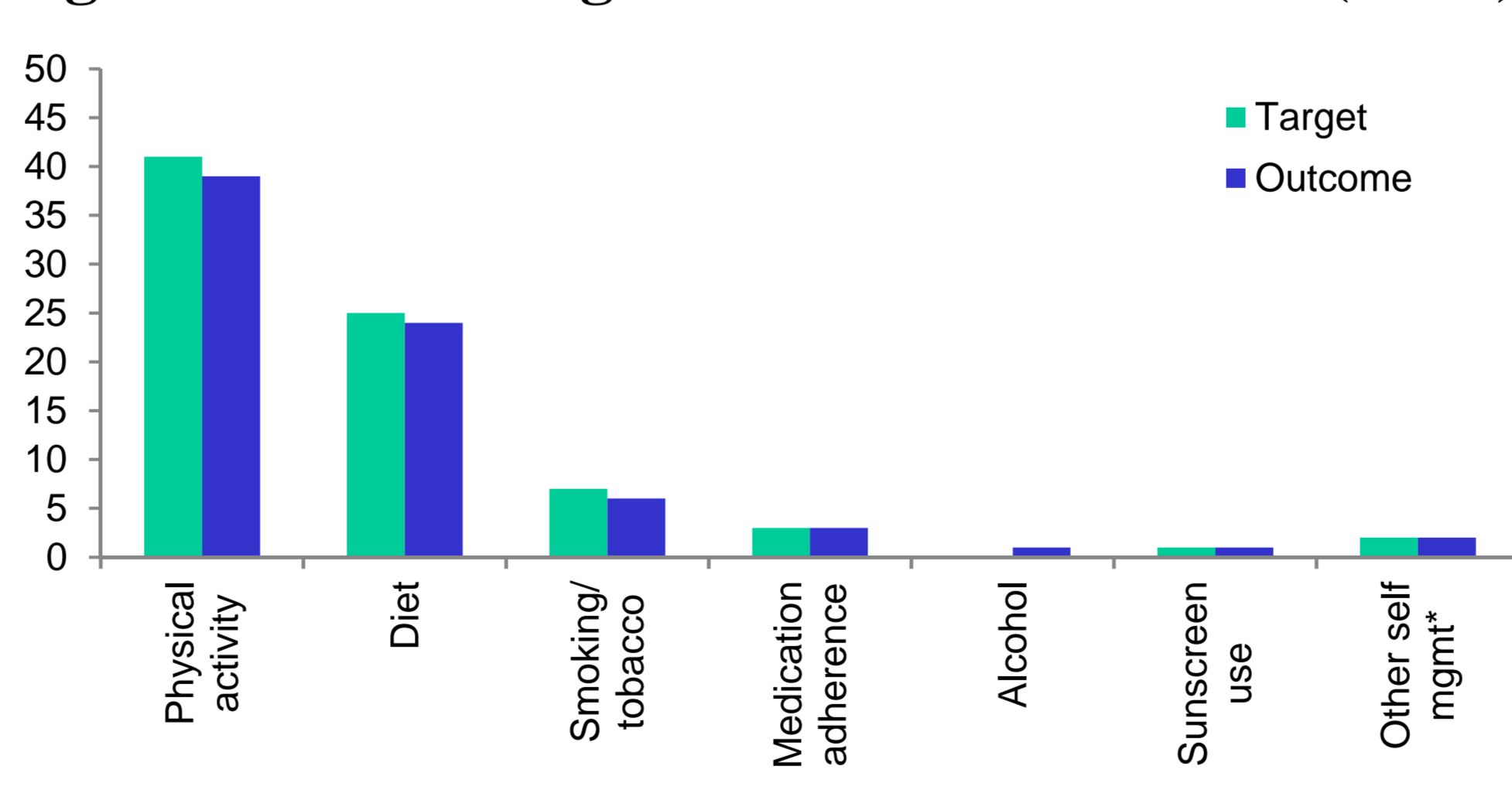
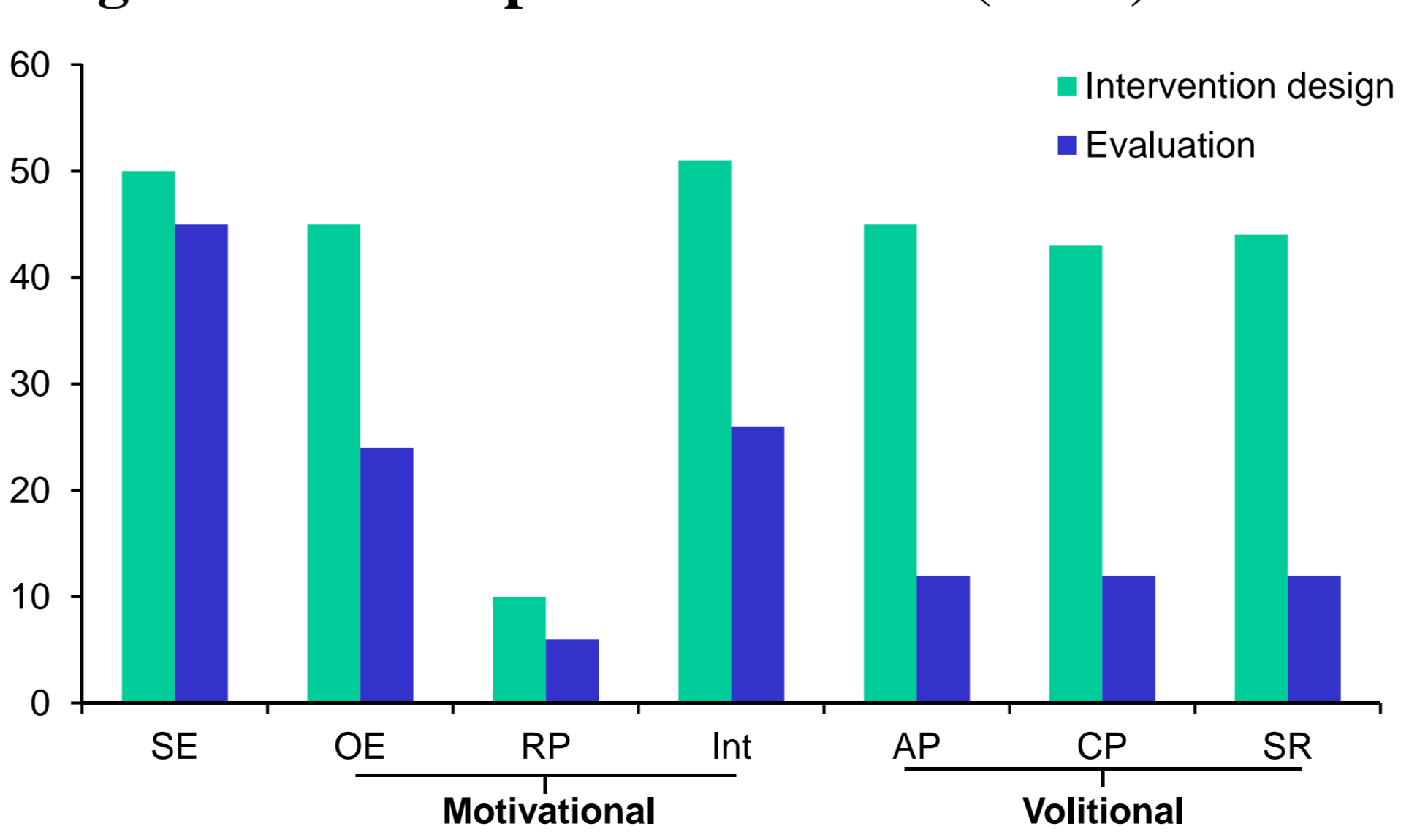


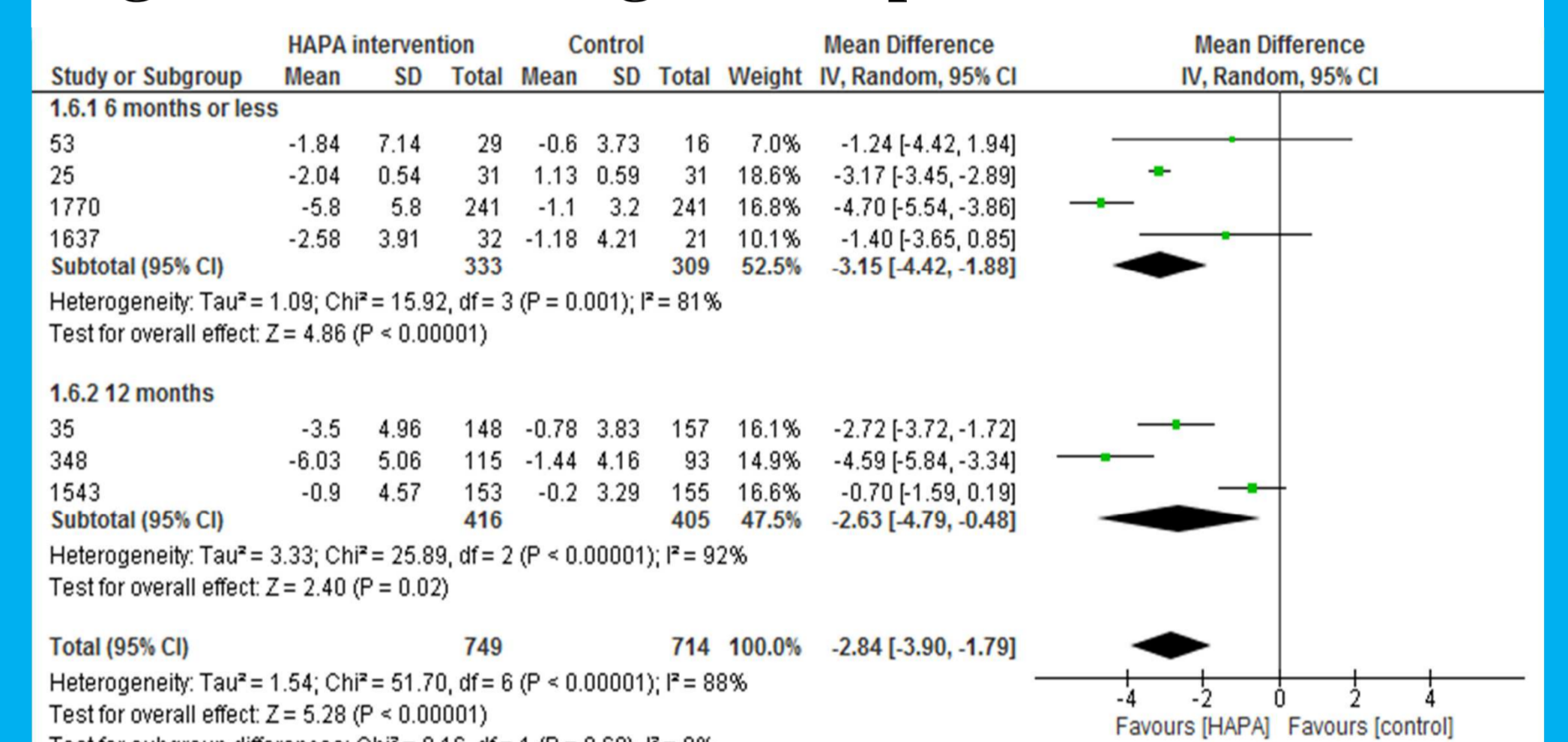
Fig 5 HAPA components in trials (n=54)



Characteristics of weight loss trials (n=7)

- Though interventions were HAPA-like none directly referenced the HAPA model.
- None included all 6 HAPA components but all but 1 included 5 components.
- As well as self-efficacy, all included outcome expectancies, intention formation (e.g. goal setting), action planning and other self-regulation strategies (e.g. self-monitoring), and all but one included coping planning. None addressed risk perceptions.
- 2 focussed on chronic disease management (1 diabetes, 1 various), others prevention in at-risk.
- 4 studies involved group sessions, 3 individual contacts and 3 web-based delivery (3 mixed), most with initial weekly contacts, then follow up contacts for between up to 2 and 18 months.
- Follow up ranged from 6m to 36m.
- Risk of bias was highest in relation to allocation concealment and incomplete outcome data, with no suggestions of selective outcome reporting.

Fig 6 Effects on weight loss up to 6m & 12m (n=7)



Conclusions

- Of the growing number of trials of HAPA-based and HAPA-like interventions identified, most targeted physical activity, diet and weight loss.
- HAPA-like interventions resulted in statistically and clinically significant weight loss of 3.15kg up to 6m ($p < 0.001$) and 2.63kg at 12m ($p = 0.02$).
- Despite including many previously identified effective techniques and targets for weight loss interventions² this is comparable to typical weight loss reported in a previous review of reviews³, and resulting from commercial programmes⁴.
- Significant heterogeneity across studies is being further explored and analyses of other outcomes (e.g. physical activity) in this review is ongoing.

References

1. Schwarzer R. *The Health Action Process Approach (HAPA)*. URL: <http://www.hapa-model.de/>. (Accessed 28/11/14).
2. Dombrowski et al. *Health Psychol Rev* 2012;6(1):7-32.
3. Greaves et al. *BMC Public Health* 2011; 11:119.
4. Jolly K et al. *BMJ* 2011;343:d6500.

Acknowledgments

Thanks to Prof Ralf Schwarzer for his invaluable advice and Kelly Blockley for her early work on the review.