Table S1- Theory Coding Scheme- Complete TCS Scoring

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| TCS NUMBER | DESCRIPTION | Huyser et al. | Vong et al. | Coppack et al. | Peterson et al.  | Friedrich et al.  | Harkapaa et al. | Reilly et al. | Linton et al. |
| 1 | Theory/model of behaviour mentioned  | No | No | Yes-Personal construct theory | Social Cognitive Theory and Transtheoretical model  | No | Health locus of control | No | No |
| 2 | Targeted constructmentioned as predictorof behaviour | No | No | Yes | No | No | Yes | No | No |
| 3 | Intervention based onsingle theory | No | No | Yes | No | No | yes | No | No |
| 4 | Theory/predictors used to select recipients for theintervention | No | No | No | No | No | No | No | No |
| 5 | Theory/predictors used toselect/developintervention techniques | No | No | Yes | No | No | Yes | No | No |
| 6 | Theory/predictors used to tailor intervention techniques to recipients  | No | No | Yes-goal tailoring  | No-theory was only applied to the behavioural group  | No | No-coping,locus of control, same for all groups  | No | No |
| 7 | All interventiontechniques are explicitlylinked to at least onetheory-relevant construct | No | No | No | No | No | No | No | No |
| 8 | At least one, but not all,of the interventiontechniques are explicitlylinked to at least one theory-relevant construct/predictor | No | No | Yes | Yes | No | Yes | No | No |
| 9 | Group of techniques arelinked to a group ofconstructs | No | No | Yes | No | No | No | No | No |
| 10 | All theory-relevantconstructs/predictors are explicitly linked to at least one intervention technique | No | No | No | No | No | No | No | No |
| 11 | At least one, but not all,of the theory relevantconstructs are explicitlylinked to at least oneintervention technique | No | No | Yes | No | No | Yes | No | No |
| 12 | Theory-relevantconstructs are measureda) At least one construct of theory mentioned inrelation to the intervention is measured POSTINTERVENTION.b) At least one construct of theory mentioned inrelation to the intervention is measured PRE ANDPOST-INTERVENTION | a. Nob. No | a. Nob. No | a. Nob. Yes | a. Nob. No | a. Nob. No | a. Yesb. Yes | a. Nob. No | a. Nob. No |
| 13 | Quality of Measuresa) All of the measures of theory relevant constructshad some evidence for their reliabilityb) At least one, but not all, of the measures of theoryrelevant constructs had some evidence for theirreliabilityc) All of the measures of theory relevant constructshave been previously validatedd) At least one, but not all, of the measures of theoryrelevant constructs have been previously validatede) The behaviour measure had some evidence for itsreliabilityf) The behaviour measure has been previouslyvalidated | NA | NA | A C D E F | B,D | NA | A C E F | NA | NA |
| 14 | Randomization ofparticipants to conditiona) Do the authors claim randomization? b) Is a method of random allocation to condition described (e.g., random number generator;coin toss)Was the success of randomization tested? d) Was the randomization successful (or baseline differences between intervention and controlgroup statistically controlled)? | YesNot describedYes | YesYesYes | YesYes Yes | YesYesYes  | Unclear | Unclear | Unclear | Unclear |
| 15 | Changes in measured theory-relevant constructsThe intervention leads to sig. change in at least one theory relevant construct (vs. control group) in favor of the intervention | No | No | No | Yes | No | Yes | No | No |
| 16 | Mediational analysis ofconstruct(s)a) Mediator predicts DV? (or change in mediator leads to change in DV) b) Mediator predicts DV (when controlling for IV)? c) Intervention does not predict DV (when controlling for mediator)?d) Mediated effect statistically significant? | No | No | No-goal setting did not affect adherence | No | No | A D | No | No |
| 17 | Results discussed inrelation to theoryResults are discussed in terms of the theoretical basis of the intervention | No | No | No | No | No | discussed HLC but not in relation to the theory  | No | No |
| 18 | Appropriate support fortheory | No | No | Unclear | No | No | yes, supports theory with higher LOC equating to higher exercise and speaks to fact scales should be illness specific  | No | No |
| 19 | Results used to refinetheory | No | No | No. does not mention theory in conclusion | No. theory not mentioned in the article, only in supp material about intervention | No | Somewhat. Scales for measurement should be changed, don’t really link it back to theory though.  | No | No |
| COMPOSITE SCORES (Prestwich 2014) |  |  |  |  |  |  |  |  |
|  | Huyser et al. | Vong et al. | Coppack et al. | Peterson et al.  | Friedrich et al.  | Harkapaa et al. | Reilly et al. | Linton et al. |
| BCTs linked with theory-relevant constructs (7-9) | 0 | 0 | 2 | 1 | 0 | 1 | 0 | 0 |
| constructs within the underlying theory were specificallytargeted by the BCTs (9-11) | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 |
| overall theory score (3-11).  | 0 | 0 | 7 | 1 | 0 | 3 | 0 | 0 |
|  |  |  |  |  |  |  |  |  |
| first 2 comp scores with presence of TCS 5 | 0 | 0 | 5 | 2 | 0 | 3 | 0 | 0 |