**Table 1: CONSORT 2010 checklist of information to include when reporting a cluster randomised trial**

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| Section/Topic | Item No | Standard Checklist item | Extension for cluster designs | Page No \* |
| Title and abstract | | | |  |
|  | 1a | Identification as a randomised trial in the title | Identification as a cluster randomised trial in the title | Title  ‘cluster randomised controlled trial ‘ |
| 1b | Structured summary of trial design, methods, results, and conclusions (for specific guidance see CONSORT for abstracts)[[1]](#endnote-1),[[2]](#endnote-2) | See table 2 | Abstract |
| Introduction | | | |  |
| Background and objectives | 2a | Scientific background and explanation of rationale | Rationale for using a cluster design | Methods  Paragraph 1  Clustering by town eliminated potential contamination which may have occurred between participants |
| 2b | Specific objectives or hypotheses | Whether objectives pertain to the cluster level, the individual participant level or both | Methods  paragraph 1 Randomisation occurred at the town (cluster) level and analysis at the individual level |
| Methods | | | |  |
| Trial design | 3a | Description of trial design (such as parallel, factorial) including allocation ratio | Definition of cluster and description of how the design features apply to the clusters | Methods  paragraph 1  All rural towns |
| 3b | Important changes to methods after trial commencement (such as eligibility criteria), with reasons |  | **N/A** |
| Participants | 4a | Eligibility criteria for participants | Eligibility criteria for clusters | Methods  paragraph 1  All rural towns with pop of between 2000-10,000 located within a radius of 100 and 400 kilometres from the state capital were eligible for randomisation |
| 4b | Settings and locations where the data were collected |  | Methods  paragraph 4 |
| Interventions | 5 | The interventions for each group with sufficient details to allow replication, including how and when they were actually administered | Whether interventions pertain to the cluster level, the individual participant level or both | Methods  paragraph 2  Participants were recruited as clusters according to the town of residence |
| Outcomes | 6a | Completely defined pre-specified primary and secondary outcome measures, including how and when they were assessed | Whether outcome measures pertain to the cluster level, the individual participant level or both | Statistical analysis paragraph 1 and 2  Randomisation occurred at the town (cluster) level and analysis at the individual level |
| 6b | Any changes to trial outcomes after the trial commenced, with reasons |  | **N/A** |
| Sample size | 7a | How sample size was determined | Method of calculation, number of clusters(s) (and whether equal or unequal cluster sizes are assumed), cluster size, a coefficient of intracluster correlation (ICC or *k*), and an indication of its uncertainty | Statistical analysis Paragraph 1  Adjusting for the cluster design with a variance inflation factor (VIF) =1.28, cluster size of 15, and allowing for 20% attrition over 1-year, 600 women in 40 clusters of 15 women were to be recruited. |
| 7b | When applicable, explanation of any interim analyses and stopping guidelines |  | **N/A** |
| Randomisation: | | | |  |
| Sequence generation | 8a | Method used to generate the random allocation sequence |  | Methods  Paragraph 1  study biostatistician using a computer generated randomisation list randomised 42 towns |
| 8b | Type of randomisation; details of any restriction (such as blocking and block size) | Details of stratification or matching if used | N/A |
| Allocation concealment mechanism | 9 | Mechanism used to implement the random allocation sequence (such as sequentially numbered containers), describing any steps taken to conceal the sequence until interventions were assigned | Specification that allocation was based on clusters rather than individuals and whether allocation concealment (if any) was at the cluster level, the individual participant level or both | Methods  Paragraph 3  Participants were not aware of group assignment |
| Implementation | 10 | Who generated the random allocation sequence, who enrolled participants, and who assigned participants to interventions | Replace by 10a, 10b and 10c |  |
|  | 10a |  | Who generated the random allocation sequence, who enrolled clusters, and who assigned clusters to interventions | Methods  paragraph 1 and 2  study biostatistician randomised 42 towns  Participants were recruited as clusters according to the town of residence  Participants were by an invitation letter and flyers |
|  | 10b |  | Mechanism by which individual participants were included in clusters for the purposes of the trial (such as complete enumeration, random sampling) | Methods  paragraph 1 and 2  Participants were recruited as clusters according to the town of residence |
|  | 10c |  | From whom consent was sought (representatives of the cluster, or individual cluster members, or both), and whether consent was sought before or after randomisation | Methods  paragraph 2  Eligible participants signed informed consent prior to commencement of first session |
|  |  |  |  |  |
| Blinding | 11a | If done, who was blinded after assignment to interventions (for example, participants, care providers, those assessing outcomes) and how |  | Methods  paragraph 3  Participants were not aware of group assignment, although they were aware that they were participating in a healthy lifestyle research program. At the 1year data collection point, both participant and field researchers were blinded to group allocation and previous anthropometric measures. |
| 11b | If relevant, description of the similarity of interventions |  | **N/A** |
| Statistical methods | 12a | Statistical methods used to compare groups for primary and secondary outcomes | How clustering was taken into account | Statistics  paragraph 1 and 2  variable of interest at 1-year as the outcome variable, adjusted for baseline values and obtained robust standard errors to adjust for the clustering effect of town in the regression models |
| 12b | Methods for additional analyses, such as subgroup analyses and adjusted analyses |  | Statistics  paragraph 2  Changes in dietary intake, leisure time physical activity, sitting time and self-management behaviours in relation to the intervention health messages were also examined using linear regression adjusted for clustering |
| Results | | | |  |
| Participant flow (a diagram is strongly recommended) | 13a | For each group, the numbers of participants who were randomly assigned, received intended treatment, and were analysed for the primary outcome | For each group, the numbers of clusters that were randomly assigned, received intended treatment, and were analysed for the primary outcome | Fig 1 Consort diagram |
| 13b | For each group, losses and exclusions after randomisation, together with reasons | For each group, losses and exclusions for both clusters and individual cluster members | Fig 1 consort diagram |
| Recruitment | 14a | Dates defining the periods of recruitment and follow-up |  | Methods  paragraph 2 intervention commencement (September 2012 and April 2013) and at 1-year (September 2013 to April 2014 |
| 14b | Why the trial ended or was stopped |  | **N/A** |
| Baseline data | 15 | A table showing baseline demographic and clinical characteristics for each group | Baseline characteristics for the individual and cluster levels as applicable for each group | table 1 |
| Numbers analysed | 16 | For each group, number of participants (denominator) included in each analysis and whether the analysis was by original assigned groups | For each group, number of clusters included in each analysis | table 3 |
| Outcomes and estimation | 17a | For each primary and secondary outcome, results for each group, and the estimated effect size and its precision (such as 95% confidence interval) | Results at the individual or cluster level as applicable and a coefficient of intracluster correlation (ICC or k) for each primary outcome | Table 3 |
| 17b | For binary outcomes, presentation of both absolute and relative effect sizes is recommended |  |  |
| Ancillary analyses | 18 | Results of any other analyses performed, including subgroup analyses and adjusted analyses, distinguishing pre-specified from exploratory |  | Table 4 |
| Harms | 19 | All important harms or unintended effects in each group (for specific guidance see CONSORT for harms[[3]](#endnote-3)) |  | Results  paragraph 1  No adverse events related to the trial were reported |
| Discussion | | | |  |
| Limitations | 20 | Trial limitations, addressing sources of potential bias, imprecision, and, if relevant, multiplicity of analyses |  | Discussion  paragraph 6  Therefore the physical activity and energy intake data should be interpreted with caution. The loss to follow-up was |
| Generalisability | 21 | Generalisability (external validity, applicability) of the trial findings | Generalisability to clusters and/or individual participants (as relevant) | Discussion  paragraph 6  Strengths of the trial include the robust pragmatic design with few exclusion criteria and high external validity |
| Interpretation | 22 | Interpretation consistent with results, balancing benefits and harms, and considering other relevant evidence |  | **Discussion**  **Paragraph 2 and 3** |
| Other information | | |  |  |
| Registration | 23 | Registration number and name of trial registry |  | **Acknowledgement** |
| Protocol | 24 | Where the full trial protocol can be accessed, if available |  | **See reference** |
| Funding | 25 | Sources of funding and other support (such as supply of drugs), role of funders |  | **Acknowledgement** |

*\* Note: page numbers optional depending on journal requirements*

**Table 2: Extension of CONSORT for abstracts**1**,**2**to reports of cluster randomised trials**

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| Item | Standard Checklist item | Extension for cluster trials |
| Title | Identification of study as randomised | Identification of study as cluster randomised |
| Trial design | Description of the trial design (e.g. parallel, cluster, non-inferiority) |  |
| Methods |  |  |
| Participants | Eligibility criteria for participants and the settings where the data were collected | Eligibility criteria for clusters |
| Interventions | Interventions intended for each group |  |
| Objective | Specific objective or hypothesis | Whether objective or hypothesis pertains to the cluster level, the individual participant level or both |
| Outcome | Clearly defined primary outcome for this report | Whether the primary outcome pertains to the cluster level, the individual participant level or both |
| Randomization | How participants were allocated to interventions | How clusters were allocated to interventions |
| Blinding (masking) | Whether or not participants, care givers, and those assessing the outcomes were blinded to group assignment |  |
| Results |  |  |
| Numbers randomized | Number of participants randomized to each group | Number of clusters randomized to each group |
| Recruitment | Trial status[[4]](#footnote-1) |  |
| Numbers analysed | Number of participants analysed in each group | Number of clusters analysed in each group |
| Outcome | For the primary outcome, a result for each group and the estimated effect size and its precision | Results at the cluster or individual participant level as applicable for each primary outcome |
| Harms | Important adverse events or side effects |  |
| Conclusions | General interpretation of the results |  |
| Trial registration | Registration number and name of trial register |  |
| Funding | Source of funding |  |
|  |  |  |

**REFERENCES**

1. Hopewell S, Clarke M, Moher D, Wager E, Middleton P, Altman DG, et al. CONSORT for reporting randomised trials in journal and conference abstracts. *Lancet* 2008, 371:281-283 [↑](#endnote-ref-1)
2. Hopewell S, Clarke M, Moher D, Wager E, Middleton P, Altman DG at al (2008) CONSORT for reporting randomized controlled trials in journal and conference abstracts: explanation and elaboration. *PLoS Med* 5(1): e20 [↑](#endnote-ref-2)
3. Ioannidis JP, Evans SJ, Gotzsche PC, O'Neill RT, Altman DG, Schulz K, Moher D. Better reporting of harms in randomized trials: an extension of the CONSORT statement. *Ann Intern Med* 2004; 141(10):781-788. [↑](#endnote-ref-3)
4. Relevant to Conference Abstracts [↑](#footnote-ref-1)