Reviewer's report

Title: Facilitators and barriers to healthy eating practices and physical activity among adolescent girls in rural South Africa

Version: 3 Date: 3 April 2014

Reviewer: Rachel Tyrrell

Reviewer's report:

I would like to thank the authors for the opportunity to review this manuscript. This is a very interesting paper with particular interest to the South African research community. I have tried to help with the English and I suggest a thorough edit in order to make manuscript easier to read and interpret. The analysis feels descriptive in nature and in its current form the paper appears to present findings under headings based on the questions asked in the interviews not by the themes emerging from the data; this is an important distinction. The major suggestion is that the data be presented in way that brings across the thematic content analysis used. I have made extensive suggestions and asked for clarification of issues where the manuscript is not clear. The science is good and the results are very interesting, particularly in contrast to what is seen in adolescent populations in the UK, USA and other developed countries. I hope that this manuscript will be revised for potential publication in this journal.

Major compulsory revisions

An important point that needs to be addressed is the use of thematic content analysis. Did the themes emerge from the data or from the questions asked via the interview guide? It needs to be made clear how the data were driven for the analysis. It would be nice to see the results structured under headings reflecting the factors and themes being presented as I’m not sure that ‘barriers and facilitators’ best describe the data presented within the subheadings. There appears to be a contradiction in the findings between the availability of healthy foods being a barrier and green leafy vegetables (healthy foods) being linked with poverty and therefore not desirable to the adolescents.

Minor essential revisions

In the current state, the paper needs editing for errors in English language, writing tense and grammar. There are a number of typos and inconsistencies in terms use which need some attention. Examples below:

• Some longer sentences would be easier to read if split into two.
• Lack of consistency in terms used e.g. school feeding programme/program/scheme – pick a term and use same one throughout.
• Duo interviews or duo-interviews
• Field workers or fieldworkers
• Church meetings or conferences
• Change word sickness/es to illness/es
• Over use of words ‘also’ and ‘majority’
• Dislike use of ‘clearly’ when making in points within paper – unnecessary.

I have made extensive comments and suggestions in order to try and address some of the language and clarity issues.

Title:
Unsure about use of terms ‘facilitators and barriers’ in title as the paper also looks at perceptions and attitudes… Suggest title change to something more general e.g.

Exploring healthy eating practices and physical activity amongst adolescent girls in rural South Africa

Abstract:
Background – start sentence Dietary behaviours… remove second ‘increasing’ from first sentence.
Methods – make it clear that the duo-interviews were with friends
Results – The results presented in the abstract do not appear to reflect the findings of the study.
First sentence, ‘fruits’ included as a facilitator but from reading the manuscript fruits were a luxury food. ‘…were great facilitators…’ or better described as a factor they were aware of?
L6 - limited availability to healthy food – I got the impression that locally grown vegetables (healthy foods) were available in the community, and so this seems to contradict what is in the paper.
Conclusion - L5 suggest ‘breakfast eating’ is changed to ‘breakfast provision’.

Introduction
Para 1 - Reference [1] Serrano, incomplete and could not locate. Websites? Are there peer reviewed papers that could be included?
Para 2 – description of grades 8-11 is not very useful for international audiences. Reporting the age range would be more helpful for non-South African readers. Also include number of young people who completed this survey n=?
Para 2 – Not sure these stats are the ‘combined prevalence’… Overweight =40.9% and obesity = 9.5% so combined – 50.4%? This needs to be made clearer.
Para 3 – a reference for the tracking of overweight/obesity from adolescence into adulthood might be useful. E.g.

Para 3 – Remove ‘clearly’ from beginning of final sentence.
Para 4 – The last sentence repeats the first, only need to state once.
Para 4, L2 - No association between friend overweight? This needs to be made clearer.
Para 4, L6 – It would be nice to have an explanation of ‘kota’
Para 4, L7 – change to ‘minimal physically active… ’
Para 5 – need to make clear that the study is following on from work in urban SA adolescents. Something along the line of the following:
Following on from work with urban South African adolescents in Soweto, the current study aimed to use a qualitative approach to explore the healthy eating and physical activity practices in adolescent girls in the Mpumalnaga provinces in rural South Africa.

Last para, L1 (aim) should maybe be included in the previous paragraph. Second sentence might be better placed in the discussion or conclusions.

Methods
Study setting
Overall – Suggest structure of this section follows the format: who, what, sampling, analysis
Para 1 – add ‘…province of South Africa.’
Para 1, L3 - capitalise Research
Para 1, L12 - sentence re: unemployment needs to be rephrased, not clear
Study design and data collection
Para 1, L1 - reference [10] – Are there any methods papers that could be referenced for this approach?
Para 1, L2 - change ‘applied in’ to ‘used’
Para 1, L3 - change ‘anecdotally’ to ‘population’ – overall sentence doesn’t make much sense so suggest making point more clearly.
Para 1, L5 – ‘Moreover, this method allows participants to build…’
Para 1, L6 - Suggest sentence reads: ‘ Eleven semi-structured qualitative duo-interviews were conducted with adolescent girls aged…’ Middle of sentence re: saturation of data better placed in the following paragraph.
Para 2, sentence 2, suggest: All participants gave informed written consent. In addition, written consent was obtained from caregivers for those participants aged under 18 years.
Para 3, L2 - insert ‘(the local vernacular)’ after Shangaan.
Para 3, L5 - consider adding reference re: validity testing of interview topic guides

Para 4, L1 - First three aspects for exploration could be reduced. Suggest following: ‘The interview guide was designed to explore the following: dietary and physical activity practices, attitudes towards healthy eating and physical activity including barriers and facilitators, understanding…

Para 4, L8 - remove ‘namely’

Para 4, L10 - remove ‘factors such as’. Change ‘situation’ to ‘environment’

Para 4 – would benefit from a brief further explanation of biological and personality factors.

Para 4, L15 – remove (the local vernacular) as state previously in methods

Para 4, L16 – change ‘attended as observer’ to ‘observed’

Para 4 – Debriefing – make clearer that this was for the researchers. Were the participants debriefed? However, the section from debriefing might would be better placed in the data handling and analysis section.

Data handing and analysis
L3 – Thematic content – did the themes emerge from the data or from the questions asked via the interview guide? MHS coded the transcripts – did anyone else read all or a sub-sample of the transcripts and cross-validate coding?

Results
General - Would be nice to have a summary paragraph at the end of each section to sum up findings.

Health eating practices
Para 1, L7 – change ‘the households’ to ‘their households’
Para 1, L4 – change to ‘perceptions of health foods’
Para 2, L3 – change ‘even though’ to ‘although’
Para 2, L4 – clarify which environment the limited choices and lack of food refers to – home, school, both?

Para 3 – The second quote doesn’t reflect a ‘consequence’. Perhaps this quote is better placed in previous section about choices.

Para 4, L1 – remover first ‘as if’ from sentence

Para 4, L3 – is this a self-protective measure? Possible coping mechanism?

Para 4, L5 – Sentence starting ‘One participant… ‘ could be structured more clearly.

Para 4, L7 – suggest change to: Very few (two participants) who reported eating breakfast had more than one option available to them.

Facilitators to healthy eating practices

General – can use SA names for foods previously defined in the transcript e.g.
green leafy vegetables = miroho, maize based staple = pap
It would be nice to see the results structured to the factors or themes being presented, e.g. personal factors, accessibility etc
Para 1, L2 – change to ‘the main factors’ and delete ‘mainly’ from L3
Para 1, L7 – …spinach, lettuce and miroho.
Para 1, L10 – is this contextual information from researcher knowledge or from interview data?
Para 1, L13 onward – quoted by adolescents? Were female caregivers interviewed or is this the perception of adolescents/researchers?
Para 2, L4 – change ‘these’ to ‘which’
Barriers to healthy eating practices
Again, it would be nice to see the results split into ‘themes’ such as economic/poverty barriers…
Para 1, L1 – informants = participants?
Para 1, L5 – suggest splitting sentence to read ‘…frozen chicken etc. Most of the girls referred…’
Para 1, L7 – delete word ‘most’
Para 1, L7 – Needs more detail re: affording to eat certain foods – is this a lack of funds for the foods all of the time or when the main groceries have run out?
Para 1, L11 – change ‘the basics’ to ‘staple foods’
Para 2 – last sentence might read better as two sentences.
Para 3, L3 – I’m a little confused – Is the school “healthy” lunch free?
Para 3 – I feel a need for it to be clearer that some of the points being made are from the interview data and therefore a reflection of the perception the girls have of the food sold at school and not an objective measure.
Quote following para 3 – Any data to suggest where are the fat cakes and niknaks are bought from? I get the impression that the girls would rather eat these foods than the “free” lunch provided at school. This is an interesting point that could be explored further.
Para 4 – last sentence might be better placed to open this results section. Delete ‘clearly’ from the beginning of sentence.
Perceptions and practices related to physical activity
Results presented cover perceptions of physical activity but not practices. Would suggest this is section is expanded to cover practices or change to section title.
Facilitators of physical activity
This section seems to cover the practices in addition to facilitators…
Barriers towards physical activity
Para 1, L5 – change ‘is’ to ‘to’
Discussion
Para 1, L2 – typo - of
Para 1, L3 – typo, the majority
Para 1, L9 – Suggest sentence reads – In the current study, the participants described healthy foods as food that have less fat and included traditional and locally grown foods.
Reference [18] – not sure why this reference to a US study is included when talking about the current study.
Para 1, L14 – delete repeat of ‘healthy eating’
I’ve not checked in detail but it looks like reference [19] is a US study about physical activity. Might not be the best reference to use for dietary intake section.
Para 2 – there needs to be a clearer view on the contradiction between availability of healthy foods being a barrier to healthy eating and green leafy vegetables being linked with poverty and therefore are available. These messages need to be portrayed more clearly.
Para 2, L6 – suggest ‘… study findings, students may benefit…’
Para 2, L10 – suggest removing ‘that the MMFA program resulted in’ from sentence
Para 3, L1 – remove ‘possibly’
Para 4, L1 – reference for school feeding programme? Suggest sentence reads: ‘The school feeding programme provides…’. Participants of the programme or study? If programme perhaps school students is a better term to use.
Para 5, L2 – ‘in this setting’ probably not needed.
Para 5, L5 – sentence needs to be restructured to be easier to read. Suggestion ‘… where overall adolescents believed…’
Para 5, L6 – need to make clear when talking about the current study. Suggest change in tense – ‘did articulate’ to ‘articulated’
Para 5, L10 – Use of ‘word ‘study’ to describe Shepherd et al eludes to it being a primary study although it is a systematic review. Please make it clear what type of paper is being presented.
Para 5, L12 – Last sentence doesn’t make any sense in the context. Suggest making the point more clear or removing sentence.
Para 6, L1 – remove ‘clearly’ from beginning of sentence
Para 6, L3 – remove second ‘urban’ – Were the girls skipping breakfast at home then consuming it elsewhere? Needs to be made clearer.
Para 6, L5 – delete ‘to be’
Para 6, L7 – check tense
Para 6, L9 – start sentence at ‘As’. Again, I got the impression that vegetables were cheaper than other foods for these families and therefore if the cost of living was increasing consumption of fast food would decrease as they are more
expensive?
Para 6, L11 – typo – a decline
Para 9 L2 – type – at least. Suggest changing ‘which also facilitated’ to ‘facilitating’
Para 10 – first sentence needs to be made clearer. Soweto girls are the urban girls so do you mean rural girls for the comparison?
Para 11, L5 – remove ‘where the broader impact of walking to school was investigated’ as the context is explained sufficiently without this.
Para 12, L2 – instead of using ‘grade 12’ an age range e.g. over 16(?) or more general term of ‘older adolescents’ could be used.
Para 2 – last sentence could be restructured for easier reading – remove middle section and add ‘in sports by black learners’ to the end.
Conclusions
Para 1, L4 – start sentence with ‘Female’ – are these caregivers and elderly in the community?
Para 1, L6 – food availability – is this in conjunction with food poverty? It’s stated that the girls know the benefits but do they feel able to eat breakfast?
Para 2, L1 – suggest the following: Physical activities that adolescents currently engage in such as…
Para 2, L6, delete ‘and household’ as the structures listed as all community based.
Para 2, L10 – available avenues – typo venues?
Para 2 L11 – remove ‘also’ and add ‘all activities’

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**
I declare that I have no competing interests.