PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (see an example) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below. Some articles will have been accepted based in part or entirely on reviews undertaken for other BMJ Group journals. These will be reproduced where possible.

ARTICLE DETAILS

TITLE (PROVISIONAL)	'It's on your conscience all the time': a systematic review of qualitative studies examining views on obesity amongst young people aged 12-18 in the UK.
AUTHORS	Rees, Rebecca; Caird, Jenny; Dickson, Kelly; Vigurs, Carol; Thomas, James

VERSION 1 - REVIEW

REVIEWER	Christopher Carroll
	University of Sheffield, UK
REVIEW RETURNED	16-Dec-2013

GENERAL COMMENTS	A generally excellent, thorough and fascinating synthesis, based on an outstanding search, and with a higher degree of transparency in the process than one normally finds in qualitative evidence synthesis. The value of involving a relevant group of young people to comment on the findings and their communication was also very apparent and reflects the care and attention to detail taken in the research (though ethics might need reporting - see below).
	I have only one principal query with regard to the transparency and reproducibility of the study. It is not clear how the appraisal process led to the judgments on reliability and usefulness, or how these findings were used in the synthesis. Firstly, studies w4, 12, and w28 are described as having "highly
	reliable findings" and being "highly useful", both in the text (p.16),
	and in Web file 4 Table A. However, in Web File 4 Table B, study w28, for instance, appears to satisfy only the following criteria on reliability: steps taken to increase rigour in sampling (Answer: not taken/not at all); in data collection (not taken/not at all); in data analysis (not taken/not at all); were findings grounded in/supported by data (minimal steps taken); and for usefulness, breadth and depth of findings (limited breadth and depth); and to what extent did it privilege the perspectives and experiences of young people (not at all). In relative terms, it looks like one of the weakest studies. If I have misunderstood something, I apologise, but as it stands it does not make sense (have studies been typed into the wrong cells?)
	Secondly, in Table 3, only 2 illustrative quotations appear to come from studies of young people who might not be overweight (w9 and w18); indeed, 11 of the remaining 19 illustrative quotations come from a single study (w12). I appreciate the need to identify appropriate and acceptable quotations, but it looks rather limited. I was wondering if the appraisal led to a weighting of certain evidence, especially the studies w4, w12 and w28, in the overall synthesis? This might in part explain the frequency with which these

studies appear. Did the purpose of appraisal extend beyond excluding studies judged to be of low reliability and usefulness, and if so, how was it used?
Other revisions: p.9 The views of young people can be about size in adults, as well as other young people? p.9 why exactly was the post-hoc decision taken not to include studies from young people with an eating disorder? (I can surmise why, but this should be clarified) p.10 Analysis. The authors need to justify their chosen method of synthesis (thematic synthesis) p.12: Ethics – I do not know if you need to report any consent issues with seeking the input from the PEAR group?

REVIEWER	Allison Tong The University of Sydney, Australia
REVIEW RETURNED	23-Dec-2013

GENERAL COMMENTS	The authors may wish to consider ENTREQ as a reporting tool for synthesis of qualitative research.
	Rees et al conducted a systematic review of qualitative studies on young people's perspectives on obesity. This review addresses an important and topic public health problem. The authors are to be commended on engaging young people in the review process.
	My comments are provided in the following:
	Abstract The title could indicate that qualitative studies were synthesised. Consider revising the objective to "describing" the perspectives of young people as "to synthesise" refers to methodology. Delete repetition (1997) It is unclear what is meant by "reporting methods for data collection or analysis" – this would be the expected standard for research articles? Report number of participants More specific policy implications could be suggested.
	Background The background highlights the problem of obesity in the UK context and provides a solid rationale for the review. How do the rates of obesity in the adolescent population in the UK compare with other countries?
	Methods The authors conducted a very comprehensive literature search which extended beyond electronic databases to include websites, reference lists, and key informants. The databases could be specified in the text. Studies were excluded if they did not report methods of data collection of analysis. Can the authors comment on the rationale for this? The inclusion criteria were piloted by four authors – what is meant by
	this, and what is the purpose? Was this done to clarify or come to a consensus about what studies should be included? Direct quotations were used as theme headings. As this is not the

"standard" approach in presenting themes, can the authors explain why this was done? If this was to preserve the voice of young people, or to convey a message with more impact to policy makers this could be stated and referenced if possible. Appraising the quality of qualitative studies is a highly contentious area but the authors have made explicit their decisions and approach to appraisal. A group of young people recruited through the National Children's Bureau participated in the review process. This is a very important and novel aspect to the study. Perhaps more details about how they were recruited/selected, and the participant characteristics could be
reported. Results The description of the themes read well. A key strength of qualitative synthesis lies in its opportunity to compare across groups (e.g. by regions, weight/BMI, gender, age etc) or healthcare contexts – and some of these differences have been described by the authors. Were there any differences by ethnicity, socio-economic status, region?
Discussion The findings appear to resonate with results from the international literature. What, if any, are the UK-specific issues? Strengths of the review are clear but could also include a comment on engaging young people in the process. The discussion of the weaknesses was focussed on the limitations of the current literature – what about limitations with regards to the methodology/approaches taken? More specific implications for practice and policy are needed. These could be listed in a separate table to make clear to clinicians and policy makers these data can inform practice and policy changes to address obesity in young people living in the UK.

VERSION 1 – AUTHOR RESPONSE

Christopher Carroll [CC]

CC: A generally excellent, thorough and fascinating synthesis, based on an outstanding search, and with a higher degree of transparency in the process than one normally finds in qualitative evidence synthesis. The value of involving a relevant group of young people to comment on the findings and their communication was also very apparent and reflects the care and attention to detail taken in the research (though ethics might need reporting - see below).

Response: Thank you

CC: I have only one principal query with regard to the transparency and reproducibility of the study. It is not clear how the appraisal process led to the judgments on reliability and usefulness, or how these findings were used in the synthesis.... If I have misunderstood something, I apologise, but as it stands it does not make sense (have studies been typed into the wrong cells?)

• Firstly, studies w4, 12, and w28 are described as having "highly reliable findings" and being "highly useful", both in the text (p.16), and in Web file 4 Table A. However, in Web File 4 Table B, study w28, for instance, appears to satisfy only the following criteria on reliability: steps taken to increase rigour in sampling (Answer: not taken/not at all); ... in data collection (not taken/not at all); ... in data analysis (not taken/not at all); were findings grounded in/ supported by data (minimal steps taken); and for usefulness, breadth and depth of findings (limited breadth and depth); and to what extent did it privilege the perspectives and experiences of young people (not at all). In relative terms, it looks like one of the weakest studies.

• Secondly, in Table 3, only 2 illustrative quotations appear to come from studies of young people who might not be overweight (w9 and w18); indeed, 11 of the remaining 19 illustrative quotations come from a single study (w12). I appreciate the need to identify appropriate and acceptable quotations, but it looks rather limited. I was wondering if the appraisal led to a weighting of certain evidence, especially the studies w4, w12 and w28, in the overall synthesis? This might in part explain the frequency with which these studies appear. Did the purpose of appraisal extend beyond excluding studies judged to be of low reliability and usefulness, and if so, how was it used?

Response: 1) You have indeed identified a mistake in the numbering of studies used to produce Table B in Web file 4. Table B contains not only the final 30 studies that were synthesised, but also the six that were excluded on quality grounds before the synthesis. We had overlooked the need to adjust the numbering system in Table B when translating our full report into a journal format that uses numerical citations in the text. The coding for Table A and B in Web file 4 has now been amended so that the six excluded studies are identified by the numbers ex1-ex6. We used automated searches to find and replace the study codes in Table B so that they are now in their correct places. The higher quality studies that you sought into Table B (w4, w12 and w28) are now all situated towards the right hand side of the Table where they should be. Thanks for helping identify this mistake.

Response: 2) You are right in part here, but we have not added any further illustrative quotes or explanation to the paper in response to this comment for the following reasons:

• The appraisal tool used in this review can indeed act to give greater weight to a study if reviewers consider that study to have findings that are relatively rich (see the quality criterion that uses the concept of 'breadth and depth'). The findings from the study that you identify as being very well represented in the quotations in Table 3 (w12) were judged to be particularly rich.

• There is a greater range of studies illustrated by quotes than your account suggests. In addition to the quotes presented in the table, quotes are presented in the text from studies w11, w15, w18, w23 and w29, all of which involve young people who might not be overweight.

• A fuller narrative account of the review's synthesis, which contains illustrative quotes from a wider range of studies, can be found in the full technical report.

CC: Other revisions:

p.9 The views of young people can be about size in adults, as well as other young people? Response: We can't see what this comment relates to, sorry.

CC: p.9 why exactly was the post-hoc decision taken not to include studies from young people with an eating disorder? (I can surmise why, but this should be clarified)

Response: The text now reads, 'We excluded studies solely of young people with an eating disorder diagnosis, on the basis that this group may be considered exceptional in terms of their requirements for achieving or maintaining a healthy weight.'

CC: p.10 Analysis. The authors need to justify their chosen method of synthesis (thematic synthesis) Response: The text now reads, 'We used thematic synthesis to examine each line of each study's findings and create codes that described meaning and content. This approach to synthesis is particularly suitable for systematic reviews, because the discipline of line-by-line coding requires that reviewers consider carefully each aspect of every study; and whether or not a finding from one study really does 'translate' into another [36] It also enables findings and new conceptualisations to emerge inductively from the included studies, and so is a good fit with one of the principles of our review which aimed to highlight young people's own perspectives.'

CC: p.12: Ethics – I do not know if you need to report any consent issues with seeking the input from the PEAR group?

Response: The text now reads, 'The processes for consulting members of the PEAR group were approved by a Faculty Research Ethics Committee at the Institute of Education.'

Allison Tong [AT]

AT: Rees et al conducted a systematic review of qualitative studies on young people's perspectives on obesity. This review addresses an important and topic public health problem. The authors are to be commended on engaging young people in the review process. Response: Thank you

AT: The authors may wish to consider ENTREQ as a reporting tool for synthesis of qualitative research.

Response: We are aware of this tool, have used it as a prompt when writing up technical reports, and are looking forward to seeing further empirical work and consultations on its use.

AT: Abstract The title could indicate that qualitative studies were synthesised. Response: We agree - See above

AT: Consider revising the objective to "describing" the perspectives of young people as "to synthesise" refers to methodology. Now reads, 'To explore the perspectives...'

AT: Delete repetition (1997)

Response: These two dates refer to different things. The database searches were run using database indexing that aims to, but does not always manage accurately to, describe an item's publication date. Study inclusion criteria were applied to documents manually by reviewers to documents identified through a range of sources that included, but were not restricted to bibliographic databases.

AT: It is unclear what is meant by "reporting methods for data collection or analysis" – this would be the expected standard for research articles? Response: See response below

AT: Report number of participants

Response: The text now reads, 'Searches identified 30 studies involving over 1400 young people from a range of contexts' (Table 2 presents the study authors' descriptions of the number of participants in each study)

AT: More specific policy implications could be suggested. Response: We don't think that this is possible for the abstract with its very limited word count.

AT: Methods

The authors conducted a very comprehensive literature search which extended beyond electronic databases to include websites, reference lists, and key informants. The databases could be specified in the text.

Response: This level of detail would add considerably to the word count. The text already describes the sectors that database sources aimed to cover and readers can refer to the full search strategy as this is being made available as Web only file 1.

AT: Studies were excluded if they did not report methods of data collection of analysis. Can the

authors comment on the rationale for this? [the text reads, 'studies needed....as a minimum, to have described one of two key aspects of a study's methods (data collection or analysis)'] Response: The comprehensive search for studies meant that we encountered many different types of research study, from both peer reviewed journals and from the more 'grey' areas of literature, such as more technical reports, and book chapters. Not all of these publication forms are equally clear about what researchers have done. In this review, as in previous ones, we anticipated that we would encounter reports that contained what appeared to be relevant findings from research but would present almost no information about research methods. Such studies will be judged very harshly by most quality appraisal tools and this review's authors do not consider it appropriate to synthesise them alongside other studies that do present details of the research methods they have used. The presentation of any information about data collection or data analysis therefore acted as an initial methodological quality filter within our inclusion criteria (study sampling appears to be more widely reported, so was not used for this purpose).

The following text could be added, 'This approach is one way of excluding studies in a transparent manner in cases where research methods reporting is so limited that judgements about methodological rigour cannot even start.' However, its inclusion in the methods section, along with the other two rationales asked for above, would further break up what is mainly descriptive, rather than argumentative text and add further to the paper's word count, so we would prefer to leave this unexplained.

AT: The inclusion criteria were piloted by four authors – what is meant by this, and what is the purpose? Was this done to clarify or come to a consensus about what studies should be included? Response: The methods now read, 'These inclusion criteria were piloted by the first four authors of this study so as to develop shared understandings of the criteria.'

AT: Direct quotations were used as theme headings. As this is not the "standard" approach in presenting themes, can the authors explain why this was done? If this was to preserve the voice of young people, or to convey a message with more impact to policy makers this could be stated and referenced if possible.

Response: Text now reads, 'The lead author then wrote a narrative to describe the themes, with direct quotes from the included studies used both within the narrative and as theme headings so as to illustrate young people's own representations of their views.'

We also checked again that all theme headings can be traced back to the original quotes from studies. All but three of the theme labels can be linked to actual quotations presented in Table 3 or within the paper's text. Three labels in Table 3 come from quotes that are not presented in full in this paper so we have added links to these citations (& page nos.) to the table.

AT: Appraising the quality of qualitative studies is a highly contentious area but the authors have made explicit their decisions and approach to appraisal. Response: Thank you

AT: A group of young people recruited through the National Children's Bureau participated in the review process. This is a very important and novel aspect to the study. Perhaps more details about how they were recruited/selected, and the participant characteristics could be reported. Response: Text now reads, 'Further detail on this group is available in the technical report (see Data sharing statement).'

AT: Results

The description of the themes read well. A key strength of qualitative synthesis lies in its opportunity to compare across groups (e.g. by regions, weight/BMI, gender, age etc) or healthcare contexts – and

some of these differences have been described by the authors. Were there any differences by ethnicity, socio-economic status, region?

Response: Thank you. There were no additional differences that it was possible to determine.

AT: Discussion

The findings appear to resonate with results from the international literature. What, if any, are the UK-specific issues?

Response: There are no results from the UK literature on views in young people that were not included in our review.

AT: Strengths of the review are clear but could also include a comment on engaging young people in the process.

Response: Have added, 'The consultation with young people about the review's findings adds confidence that the main themes are ones that would be recognised by young people.'

AT: The discussion of the weaknesses was focussed on the limitations of the current literature – what about limitations with regards to the methodology/approaches taken?

Response: See above re addition of discussion of the potential for limitations due to the 2010 date of searching

AT: More specific implications for practice and policy are needed. These could be listed in a separate table to make clear to clinicians and policy makers these data can inform practice and policy changes to address obesity in young people living in the UK.

Response: We have not made any changes in this respect. The implications we can see from the study's findings are not easy to present in any simpler form.