PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	General practitioners' perspectives on the prevention of cardiovascular disease: systematic review and thematic synthesis of qualitative studies
AUTHORS	Ju, Irene; Banks, Emily; Calabria, Bianca; Ju, Angela; Agostino, Jason; Korda, Rosemary; Usherwood, Tim; Manera, Karine; Hanson, Camilla; Craig, Jonathan; Tong, Allison

VERSION 1 – REVIEW

REVIEWER	Bollag Ueli Institute of General Practice, University of Bern (retired)
REVIEW RETURNED	26-Jan-2018

GENERAL COMMENTS	I am unable to scrutinize all the details of this complex study. At the same time I am overwhelmed by the enormous effort to elucidate the attitudes of GPs about prevention of cardiovascular disease. To me you might give physical activity/ exercise an even more prominent significance, e.g. in the first paragraph of the introduction where you mention obesity, smoking cessation etc, but not exercise. I am a bit astonished that most doctors did ot differentiate primary from secondary prevention of cardiovascular disease. This is a comprehensive report about general practitioners' perspectives on the prevention of cardiovascular disease.

REVIEWER	Emerit. Prof. Dr.Heinz-Harald Abholz Department General Practoice, University Duesseldorf, Medical Faculty
REVIEW RETURNED	03-Feb-2018

GENERAL COMMENTS	P6. line 14ff: Do I understand right? Only one of the 12 authors decided about the concept behind the citytions in the analyzed publication texts? - This would be very unusual for a qualitative Analysis - possibly resulting in wrong - at least not controlled - text interpretetations p6,line 16ff: I do not understand what is meant by this sentence: What Kind of procedures were performed to come to "new concepts"??? AND: Who is "We"? and what defines " when necessary"? p6,line 40: Under what keywords have you done the reseach when finding nearly 7000 articles - not a very specific searching strategy, wen only 32 were selecten - by what criteria selected? NOW coming to the General prblems I have:

	1. The Approach to use citations from other qualitive studies, where in these the citation is put into a certan context (and is interpreted), has very important Problems: First of all it is an Interpretation of an Interpretation - in which the seccond Interpretation always has to be the weaker. I think that you only con give a Review on what qualitative studies all over the world have shown - and herewith using onlxy what the analysing authors have said! 2. An international Review - on studies with this topic - only makes sense when at the end the "common" and the "different" views or approaches found in the national studies are summarised. - This you do not do under "results", but only and unsystematiccaly in "discussion", see below: 3)). 3. In the discussion we actually read some more "results" of your analysis - which under "results" are not presented. Usually one should not do this. 4.I see a problem in bringig together results from quantitative studies - usually very much orientated on "representivness" - with results of Qualitive studies which are done only - and here important - to find new topics, views and feelings in a field not well researched by quantive research.

REVIEWER	Noa Vilchinsky Bar Ilan University
REVIEW RETURNED	01-Mar-2018

GENERAL COMMENTS	Dear Editor, Thank you for the opportunity to review the manuscript titled, “General practitioners’ perspectives on the prevention of cardiovascular disease: systematic review and thematic synthesis of qualitative studies." Manuscript ID bmjopen-2017-021137 This paper – a very important and interesting one – consists of a qualitative synthesis of 32 papers focusing on GPs' understanding of their role in primary and secondary prevention of CVD. The subject of prevention is crucial in the context of CVD, and we are seeing more clearly how much patient-practitioner relationship contributes significantly to patient self-management. This study therefore makes a substantial contribution to the literature. I have only a few comments and thoughts which I will present here, with the aim of improving the MS. My detailed comments are as follows and go in order of the text: 1. I would suggest including in the Abstract a sentence referring to the importance of the subject of prevention. 2. I would suggest mentioning in the Abstract that the paper consists of a qualitative synthesis of the literature. 3. I would recommend adding more data on the prevalence of each theme. For example, it would be interesting to know how prevalent the subthemes of "providing holistic care" or "integrating into patient context" were. This information might provide an important understanding of the way GPs tend to think and practice in this context. The way each theme is currently presented makes it impossible to distinguish the salient ones from the less salient ones. 4. I was surprised by the absence of two themes. First of all, there was no mention of involving a family member as a facilitator of change. The importance of social and familial support in the

	context of CVD is well known, and has been widely discussed in the literature; I therefore found myself wondering why GPs would refrain from harnessing family members into the process of prevention. The second missing issue, to my mind, was gender. The GPs didn't raise any gender bias or concerns? In light of the importance of relating to gender in the context of cardiovascular illness, this absence sticks out. I would suggest discussing these issues, and what it means that they did not come up in the study. Editorial 1. All tables and figures mentioned in the text need to be capitalized. 2. The authors should explain the meaning of the numbers in parentheses throughout the Results section.

REVIEWER	Zhivko Zhelev University of Exeter, UK
REVIEW RETURNED	30-Mar-2018

GENERAL COMMENTS	This is a well-conducted and presented sudy, The last sentence on p.6 before Results, need some editing. I have no further comments and recommend the publication of the paper as it is.

VERSION 1 – AUTHOR RESPONSE

Reviewer 1 Bollag Ueli:
3. "To me you might give physical activity/ exercise an even more prominent significance, e.g. in the first paragraph of the introduction where you mention obesity, smoking cessation etc, but not exercise. I am a bit astonished that most doctors did not differentiate primary from secondary prevention of cardiovascular disease."
As suggested, we have added a statement about physical activity and exercise in the introduction: "…such as smoking cessation, weight reduction, physical activity and exercise, and blood pressure and lipid lowering therapies." (Page 4, paragraph 1 – marked copy)
We confirm that we were unable to differentiate data between primary and secondary prevention of cardiovascular disease.
Reviewer #2 Prof Heinz-Harald Abholz:
4. " P6. line 14ff: Do I understand right? Only one of the 12 authors decided about the concept behind the citytions in the analyzed publication texts? - This would be very unusual for a qualitative Analysis - possibly resulting in wrong - at least not controlled - text interpretetations"
We confirm that one author (IJ) conducted the initial coding. We have now clarified that the "preliminary themes were discussed with the research team (AJ, AT) who also read the included studies. This form of investigator triangulation ensures that the full range and depth of the data reported in the original studies are captured in the analysis." (Page 6, paragraph 2 – marked copy)
5. "p6,line 40: Under what keywords have you done the reseach when finding nearly 7000 articles - not a very specific searching strategy, wen only 32 were selecten - by what criteria selected?"
The detailed search strategy was provided in the Supplementary File 1. We have now clarified that we used a "sensitive search strategy" to ensure that we identified all relevant studies. (Page 5, paragraph 3 – marked copy) The selection criteria (including definitions) are detailed in page 5, paragraph 2.
6. "p6,line 16ff: I do not understand what is meant by this sentence: What Kind of procedures were performed to come to "new concepts"??? AND: Who is "We"? and what defines " when necessary"?"
As suggested, we have added more details as per the following: Author IJ translated concepts within and across studies by interpreting the data from the primary studies and coded text to existing concepts (that had been identified in previous studies), or by creating a new concept (that was not

identified in previous studies) when necessary." (Page 6, paragraph 2 – marked copy)
7. "The Approach to use citations from other qualitive studies, where in these the citation is put into a certan context (and is interpreted), has very important Problems: First of all it is an Interpretation of an Interpretation - in which the seccond Interpretation always has to be the weaker. I think that you only con give a Review on what qualitative studies all over the world have shown - and herewith using onlxy what the analysing authors have said!"
As stated in Page 6, paragraph 2, this study follows the standard and rigorous methodology of "thematic synthesis," in which the quotations of the participants from the included studies and the authors' interpretations are both analysed. The quotations embedded in the results are to demonstrate the confirmability of the findings i.e. that our results reflect the data from the included studies. Our explicit aim was to describe the range and depth GPs' perspectives as reported in all of the available qualitative studies.
8. "International Review - on studies with this topic - only makes sense when at the end the "common" and the "different" views or approaches found in the national studies are summarised. This you do not do under "results", but only and unsystematiccaly in "discussion", see below: 3))."
In Table 3, the studies (with countries indicated in Table 1) that contributed to each theme are shown in the third column. Where possible, we have indicated when the themes/concept was country specific, for example:
• "Some GPs in studies conducted in the UK and New Zealand were careful not to exceed their budget for drug prescriptions, and they were conscious of the limitations of funding available for their practice, which contended with external pressures (from pharmaceutical companies, health advertising) to offer drug treatment." (Page 13, paragraph 2 – marked copy)
We have also revised the results to ensure that we mention country-specific results.
• "Some GPs especially in low socio-economic regions like Guatemala were mindful of the economic burden of long-term medication on patients" (page 13, paragraph 1 – marked copy)
9. In the discussion we actually read some more "results" of your analysis - which under "results" are not presented. Usually one should not do this.
We have revised the results to ensure that the comments made in the discussion are described in more detail in the results section:
• "Some GPs believed that patients who had established long-term lifestyle patterns in life (particularly patients who were obese and elderly) were unlikely to alter their habits" (Page 11, paragraph 2 – marked copy)
• "Some GPs emphasised their desire to take on a generalist role by providing comprehensive care and being "carers for the total patient," which included taking responsibility for lifestyle, nutrition education, and prescribing medicine." (Page 8, paragraph 4 – marked copy)
10. I see a problem in bringig together results from quantitative studies - usually very much orientated on "representivness" - with results of Qualitive studies which are done only - and here important - to find new topics, views and feelings in a field not well researched by quantive research.
To clarify, we have not included quantitative studies. We have synthesized findings from qualitative studies to describe the perspectives of GPs on CVD prevention across different healthcare settings. We agree that this provides more comprehensive insight and understanding about this topic.
Reviewer #3 Noa Vilchinsky:
11. "I would suggest including in the Abstract a sentence referring to the importance of the subject of prevention."
As suggested, we have now added that "CVD is a leading cause of morbidity and mortality globally, and prevention of CVD is a public health priority." (Abstract – marked copy)
12. "I would suggest mentioning in the Abstract that the paper consists of a qualitative synthesis of the literature."
The abstract states: "used thematic synthesis" to analyse the data. Thematic analysis is a type of qualitative synthesis so we would prefer not to repeat the term.
13. "I would recommend adding more data on the prevalence of each theme. For example, it would be interesting to know how prevalent the subthemes of "providing holistic care" or "integrating into patient

context" were. This information might provide an important understanding of the way GPs tend to think and practice in this context. The way each theme is currently presented makes it impossible to distinguish the salient ones from the less salient ones."
We can only report the number of studies that contributed to each theme and this is provided in Table 3. The characteristics of the studies are provided in Table 1.
14. "I was surprised by the absence of two themes. First of all, there was no mention of involving a family member as a facilitator of change. The importance of social and familial support in the context of CVD is well known, and has been widely discussed in the literature; I therefore found myself wondering why GPs would refrain from harnessing family members into the process of prevention. The second missing issue, to my mind, was gender. The GPs didn't raise any gender bias or concerns? In light of the importance of relating to gender in the context of cardiovascular illness, this absence sticks out. I would suggest discussing these issues, and what it means that they did not come up in the study."
We confirm that there were no data reported about involving family members as a facilitator of change, and perspective regarding gender in the context of CVD prevention. As suggested, we have now added these as a suggestion for future research: "Further studies could also address the role of social or family support in CVD prevention, and also their perspectives on gender-specific concerns or challenges." (Page 17, paragraph 2 – marked copy)
15. "All tables and figures mentioned in the text need to be capitalized."
As advised, we have capitalized Table/Figures throughout the text.
16. "The authors should explain the meaning of the numbers in parentheses throughout the Results section."
These are references to the direct quotations. After type-setting as a BMJ Open article, these will appear as references (superscript after the quotation).
Reviewer #4 Zhivko Zhelev:
17. "This is a well-conducted and presented study. The last sentence on p.6 before Results, need some editing. I have no further comments and recommend the publication of the paper as it is."
As noted, we have edited the sentence to: "We cross-tabulated the themes with primary and secondary prevention strategies for CVD (e.g. medications, lifestyle or behaviour change, risk assessment tools, and service delivery models)." (Page 6, paragraph 2 – marked copy)
Again, we appreciate the editorial and reviewer comments that have helped to improve and strengthen the manuscript. Thank you in advance for reviewing our revised manuscript and we look forward to hearing from you.

Kindest regards
Irene Ju on behalf of all authors
References
1. Tanner RM, Safford MM, Monda KL, et al. Primary care phyisician perspectives on barriers to statin treatment. Cardivasc Drugs Ther. 2017;31:303-9.
2. Tong A, M
3. Volker N, Williams LT, Davey RC et al. Implementation of cardiovascular disease prevention in primary health care: enhancing understanding using normalisation process theory. BMC Fam Pract. 2017;18(28).

VERSION 2 – REVIEW

REVIEWER	Noa Vilchinsky Bar-Ilan University, Israel
REVIEW RETURNED	18-Jun-2018

GENERAL COMMENTS	Dear Editor,

	I have read the revised MS and the authors' comments. Overall the authors improved the MS yet I don't feel my two major comments were fully addressed: I understand that the authors could not add more data on the prevalence of each theme. Yet in my opinion that is a limitation that should have been addressed in the limitation section. I have suggested to discuss the absence of GP's reflections on the issues of family and gender. In my opinion the lack of these issues in GP'S minds is extremely disturbing. Thus, I was looking for a more thorough discussion of this absence and not merely the mentioning of the issues of support and gender.

VERSION 2 – AUTHOR RESPONSE

Reviewer #3 Noa Vilchinsky:

5. "I understand that the authors could not add more data on the prevalence of each theme. Yet in my opinion that is a limitation that should have been addressed in the limitation section."

As previously noted, we have provided the references of studies that contributed to each theme for transparency (Table 3). We cannot report prevalence without a meaningful denominator (e.g. studies may be different in scope, the questions asked of participants may vary). As suggested, we have now added: "We were unable to assess the prevalence of each theme. Systematic reviews of qualitative studies are designed to describe the range and depth of perspectives, and cannot quantify the prevalence of themes. However, Table 3 includes references of the studies that contributed to each theme." (Page 16, paragraph 2– marked copy)

6. "I have suggested to discuss the absence of GP's reflections on the issues of family and gender. In my opinion the lack of these issues in GP'S minds is extremely disturbing. Thus, I was looking for a more thorough discussion of this absence and not merely the mentioning of the issues of support and gender."

As suggested, we have expanded the discussion and added references on "the issues of gender and family support" (Page 17, paragraph 2- marked copy) to strengthen the justification for further studies on these issues: "There was also a lack of data on GP's reflections on the role of family support. Family members can facilitate and support behaviour change, by encouraging preventative lifestyle choices and reminding patients to take medications (1, 2). On the other hand, family members may dissuade patients from following a healthy lifestyle (2, 3). There was also limited data on gender. CVD has been considered a 'man's disease', as the prevalence of CVD is higher in men compared with women until the age 75 years old (4, 5). This has given rise to concerns about underestimating the risk of CVD in women, and it has been shown that weight loss programs, for example, are recommended more frequently to men than women (4, 6). Women may not always present with typical chest pain in myocardial infarctions and coronary events, more commonly presenting with dyspnea and fatigue. This makes early recognition and prevention of CVD more difficult in women (5, 6). Women can also present later than men and with more comorbidities, leading to misdiagnosis and poorer health outcomes (6). Women are more likely to delay seeking treatment, attribute symptoms to non-cardiac causes and perceive pain levels differently to men. A combination of these factors can lead to delayed treatment and implementation of preventive measures (6)." (Page 18, paragraph 1- marked copy)

Again, we appreciate the editorial and reviewer comments that have helped to improve and strengthen the manuscript. Thank you in advance for reviewing our revised manuscript and we look forward to hearing from you.

Kindest regards

Irene Ju on behalf of all authors

References

1. Cole JA, Smith SM, Hart N, et al. Do Practitioners and friends support patients with a coronary heart disease in lifestyle change? A qualitative study. BMC Fam Pract. 2013;14:126
2. Falba TA, Sindelar JL. Spousal concordance in health behaviour change. Health Serv Res. 2008;43(1 Pt 1):96-116
3. Rosland A, Heisler M, Piette JD. The impact of family behaviours and communication patterns on chronic illness outcomes: A sysetematic review. J Behav Med. 2012;35(2):221-239.
4. Mosca L, Barrett-Connor E, Wenger NK. Sex/gender differences in cardiovascular disease prevention what a difference a decade makes. Circulation. 2011;124(19):2145-2154.
5. Chesler RM, Ho DW, Ramkissoon K. Women and cardiovascular disease: gender-based issues regarding detection and primary prevention. SciRes. 2014;6:2790-2801
6. Finks SW, Spencer A, Hume A. Cardiovascular disease in women. Pharm Self Assessment Program. 2010;1:179-199.

VERSION 3 – REVIEW

REVIEWER	Noa Vilchinsky Bar Ilan University, Israel
REVIEW RETURNED	29-Sep-2018

GENERAL COMMENTS	I have no additional comments.