

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Perception and self-management of hypertension in Chinese cardiologists (CCHS): a multicenter, large-scale cross-sectional study
AUTHORS	Ge, Junbo; Hou, Lei; Jin, Xuejuan; Ma, Jianying; Qian, Juying; Huo, Yong

VERSION 1 – REVIEW

REVIEWER	Professor Željko Reiner MD, PhD, FRCP(Lond), FESC, FACC Department of Internal Medicine, University Hospital Center Zagreb, School of Medicine, University of Zagreb, Croatia
REVIEW RETURNED	16-Feb-2019

GENERAL COMMENTS	<p>This could be an interesting article, particularly considering the number of cardiologists analyzed. However, the main problem is that the authors did not clearly define their design and outcomes. The title is "Survey of cardiovascular health...." and the whole abstract, results and the major part of the contents of the article is only about hypertension. Therefore, more appropriate title would be "Survey of arterial hypertension "</p> <p>In the Introduction, line 30 I would suggest to add a sentence like this: Their knowledge about CVD risk factors and their perception of how they treat their patients with CVD risk reflects also on their perception of their own risk factors (ref. could be: Reiner Z, Sonicki Z, Tedeschi-Reiner E. Physicians' perception, knowledge and awareness of cardiovascular risk factors and adherence to prevention guidelines: The PERCRO-DOC survey. <i>Atherosclerosis</i>. 2010;213:598-603.)</p> <p>In subchapter Identification of CVD risk factors the authors mention only blood pressure and BMI although in Data collection they mention also lipoproteins, smoking family history etc.</p> <p>In discussion again different CVD risk factors are discussed although in the Results only hypertension results are presented.</p> <p>In Discussion serious limitations of this study have to be mentioned, among them that data were collected using a self-filled survey, which could introduce bias compared to a formal epidemiological study, that data are presented of only those cardiologists who were willing to answer and therefore more aware of their CVD risk etc.</p> <p>Anyhow, the authors have to decide whether they wish to present all the risk factors and their self-recognition in Chinese cardiologists (in that case the Results section has to be thoroughly rewritten as well as the Abstract) or they wish to present only the data on hypertension (in that case the title has to be changed and the Discussion thoroughly rewritten).</p>
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REVIEWER	Tomasz Tomasiak Department of Family Medicine, Chair of Internal Medicine and Gerontology, Jagiellonian University Medical College I reports personal fees from Biofarm, Boehringer and Novartis.
REVIEW RETURNED	25-Mar-2019

GENERAL COMMENTS	<p>SURVEY OF CARDIOVASCULAR HEALTH AND SELF-COGNITION IN CHINESE CARDIOLOGISTS (CCHS): A MULTICENTER, LARGE-SCALE CROSS-SECTIONAL STUDY</p> <p>The manuscript describes a study analyzing the self-perception of cardiovascular health among Chinese cardiologists. The objectives of the study was to determine the frequency of cardiovascular risk factors. An online survey was conducted all over China.</p> <p>All cardiologists working in 2441 hospitals across China were examined (n = 28,924). A self-fulfillment questionnaire was distributed. The authors of the manuscript presented the incidence of risk factors and cardiovascular diseases, as well as differences in gender, age and other parameters. Additionally, factors associated with hypertension, taking antihypertensive drugs and achieving target blood pressure were given.</p> <p>Although the manuscript seems interesting, I think it requires some major changes listed below.</p> <p>It is necessary to accurately indicate the number of cardiologists in China (potentially eligible for the study), those invited to participate (included in the study) and those who responded (respondents). Authors should inform whether each cardiologist asked has agreed to participate. What happened to doctors who did not want to participate in this study, were they excluded, and if so, what were their characteristics (eg age, degree). The current presentation suggests that the response rate was 100%. If this was the case, it should be clearly indicated in the part of the manuscript results, and in the method section, please specify how the participants were encouraged to respond to the questionnaire (methods of external motivation, number of reminders, etc.).</p> <p>In my opinion, the second major problem concerns the preparation, testing and validation of the questionnaire. What method was used to select and include questions in the questionnaire, was a pilot study carried out, and most importantly, were validity and reliability assessed? In my opinion, this information is important because the information obtained through the questionnaire may differ significantly from the real situation.</p> <p>I would also like to make the following minor comments. In the Discussion and Conclusion it was stated that Chinese cardiologists work pressure/burden was high. As I understand it, this was not measured in the study. The Introduction contains information on cardiologists' stress in Italy and Texas-USA (reference numbers 4 and 5). The authors should present results from research in China, which prove that the workload and stress level of cardiologists were high.</p> <p>In the abstract part presenting the study results, information on other risk factors (not just hypertension) should be provided.</p>
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	<p>It seems to me that the number or date of approval by the Ethics Committee should be provided.</p> <p>I do not have any other specific comments.</p>
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VERSION 1 – AUTHOR RESPONSE

Reviewer #1

In the Introduction, line 30 I would suggest to add a sentence like this: Their knowledge about CVD risk factors and their perception of how they treat their patients with CVD risk reflects also on their perception of their own risk factors (ref. could be: Reiner Z, Sonicki Z, Tedeschi-Reiner E. Physicians' perception, knowledge and awareness of cardiovascular risk factors and adherence to prevention guidelines: The PERCRO-DOC survey. *Atherosclerosis*. 2010;213:598-603.)

Response: We thank the Reviewer for the suggestion. The statement was added.

In subchapter Identification of CVD risk factors the authors mention only blood pressure and BMI although in Data collection they mention also lipoproteins, smoking family history etc.

Response: We are sorry for the confusion. We moved the definitions of smoking history and family history from Data collection (which is Questionnaire now) to Identification of cardiovascular risk factors (which is Data collection now).

In discussion again different CVD risk factors are discussed although in the Results only hypertension results are presented.

Response: We thank the Reviewer for the comment. We refocused this manuscript on hypertension and removed the other CVDs (including heart failure, diabetes, etc.). However, the risk factors (including age, gender, etc.) were included in the multivariable analyses and were identified as being involved in hypertension and taking anti-hypertensive drugs. Therefore, we feel that there is a need to discuss them.

In Discussion serious limitations of this study have to be mentioned, among them that data were collected using a self-filled survey, which could introduce bias compared to a formal epidemiological study, that data are presented of only those cardiologists who were willing to answer and therefore more aware of their CVD risk etc.

Response: We agree with the Reviewer. We added those limitations.

Anyhow, the authors have to decide whether they wish to present all the risk factors and their self-recognition in Chinese cardiologists (in that case the Results section has to be thoroughly rewritten as well as the Abstract) or they wish to present only the data on hypertension (in that case the title has to be changed and the Discussion thoroughly rewritten).

Response: We thank the Reviewer for the comment. We refocused this manuscript on hypertension and removed the other CVDs (including heart failure, diabetes, etc.). However, the risk factors (including age, gender, etc.) were included in the multivariable analyses and were identified as being involved in hypertension and taking anti-hypertensive drugs. Therefore, we feel that there is a need to discuss them.

Reviewer #2

It is necessary to accurately indicate the number of cardiologists in China (potentially eligible for the study), those invited to participate (included in the study) and those who responded (respondents). Authors should inform whether each cardiologist asked has agreed to participate. What happened to doctors who did not want to participate in this study, were they excluded, and if so, what were their characteristics (eg age, degree). The current presentation suggests that the response rate was 100%. If this was the case, it should be clearly indicated in the part of the manuscript results, and in the method section, please specify how the participants were encouraged to respond to the questionnaire (methods of external motivation, number of reminders, etc.).

Response: We agree with the Reviewer. A total of 30,000 cardiologists were invited to participate in this survey, and 28,924 filled the questionnaire, for a response rate of 96.4%. The cardiologists who did not respond due to unwillingness to do so, or to any unknown reasons, were excluded. Unfortunately, we did not collect the characteristics of those cardiologists. It was added as a limitation.

In my opinion, the second major problem concerns the preparation, testing and validation of the questionnaire. What method was used to select and include questions in the questionnaire, was a pilot study carried out, and most importantly, were validity and reliability assessed? In my opinion, this information is important because the information obtained through the questionnaire may differ significantly from the real situation.

Response: We thank the Reviewer for the comment. The questionnaire was designed by the group of the China Cardiologist Heart Study (CCHS). We admit that this was not a well-designed epidemiological questionnaire. Nevertheless, it would be a shame if we just abandoned this large amount of data. The data regarding the risk factors of hypertension were comprehensive enough to perform multivariable analyses. Indeed, the questionnaire collected professional information, demographic data, blood pressure, heart rate, fasting blood glucose, blood lipids, current diseases, medication status, smoking history, and family history of CVDs, as in conventional cross-sectional studies. The questionnaire was only used for data collection, rather than assessment with scales. Therefore, we consider that it might not be necessary to verify the validity and reliability. This is now stated in the Limitations.

I would also like to make the following minor comments. In the Discussion and Conclusion it was stated that Chinese cardiologists work pressure/burden was high. As I understand it, this was not measured in the study. The Introduction contains information on cardiologists' stress in Italy and Texas-USA (reference numbers 4 and 5). The authors should present results from research in China, which prove that the workload and stress level of cardiologists were high.

Response: We agree with the Reviewer. We did not directly measure stress and workload, but two previous studies reported that workload is higher in China than in the USA, with 1.9 vs. 8.1 cardiologists per 100,000 people [1 2], which could be considered as an indirect measurement of workload. Nevertheless, we revised the conclusion. The introduction and discussion was also revised.

In the abstract part presenting the study results, information on other risk factors (not just hypertension) should be provided.

Response: We thank the Reviewer for the comment. As per the comments of Reviewer #1, we refocused this manuscript on hypertension and removed the other CVDs.

It seems to me that the number or date of approval by the Ethics Committee should be provided.

Response: We agree with the Reviewer. They are now provided in the Methods section.

References

1. Gong YJ, Huo Y. A Survey of National Cardiology Workforce in China. *Eur Heart J* 2016;18(Suppl):A1-A5

2. Narang A, Sinha SS, Rajagopalan B, et al. The Supply and Demand of the Cardiovascular Workforce: Striking the Right Balance. *Journal of the American College of Cardiology* 2016;68(15):1680-89 doi: 10.1016/j.jacc.2016.06.070[published Online First: Epub Date]].

VERSION 2 – REVIEW

REVIEWER	Željko Reiner University Hospital Center Zagreb, School of Medicine, University of Zagreb, Croatia
REVIEW RETURNED	13-Jul-2019

GENERAL COMMENTS	The authors have made most of the changes required by the reviewers. However, particularly the newly inserted sentences (but some other parts of the text as well) would need to be corrected concerning the language.
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REVIEWER	Tomasz Tomasik Department of Family Medicine, Jagiellonian University Medical College. I report personal fees from Biofarm, Boehringer and Novartis.
REVIEW RETURNED	18-Jul-2019

GENERAL COMMENTS	Important changes have been made. Information on study participants is more precise. An explanation regarding validation of the questionnaire is provided. The focus is on hypertension. In my opinion, the article can be accepted for publication.
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VERSION 2 – AUTHOR RESPONSE

Reviewer #1

The authors have made most of the changes required by the reviewers. However, particularly the newly inserted sentences (but some other parts of the text as well) would need to be corrected concerning the language.

Response: We thank the Reviewer for the comments. The manuscript was proofread.

Reviewer #2

Important changes have been made. Information on study participants is more precise. An explanation regarding validation of the questionnaire is provided. The focus is on hypertension. In my opinion, the article can be accepted for publication.

Response: We thank the Reviewer for the comments and for taking time to review our manuscript.