PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (http://bmjopen.bmj.com/site/about/resources/checklist.pdf) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	Prevalence of overweight and obesity and some associated factors among adult residents in northeast China: a cross-sectional study
AUTHORS	Wang, Rui; Zhang, Peng; Gao, Chunshi; Li, Zhijun; Lv, Xin; Song, Yuanyuan; Yu, Yaqin; Li, Bo

VERSION 1 - REVIEW

REVIEWER	ANSELMO J. MC DONALD P Gorgas Memorial Institute of Health Studies.
	Panama.
REVIEW RETURNED	01-Jan-2016

	· · · · · · · · · · · · · · · · · · ·
GENERAL COMMENTS	Prevalence of obesity and overweight and associated factors among adult residents in northeast China: a cross-sectional study The authors developed a paper about overweight and obesity, which are topics very important in public health to global level. However, they have to improve the Methods and Discussion section (major compulsory suggestions) before approve this manuscript. I present my recommendations by section. I consider that authors have to make the effort and to correct the manuscript for then approve it for publication. Title: I suggest to the authors invert the order of the words in the title and present the nutritional status from de general to the particular. Posider that the authors studied "some" risk factors
	Besides, I consider that the authors studied "some" risk factors associated to this condition. I recommend as title: "Prevalence of overweight and obesity and some associated factors among" ABSTRACT Objective: Replace "to determine for to estimate". The prevalence's are estimations. Methods: Line 4: "Data were obtained from physical examination
	and face to face interview" Must be: "Data were obtained from face to face interview and physical examination". Always be specific in the description of the process. Results: Improve the redaction. For example, in the phrase: "The
	prevalence of overweight and obesity in Jilin province was 34.3% and 16.3% of men, 30.2% and 12.8% of women", the authors can improve it, so: "The prevalence of overweight and obesity in Jilin province was 34.3% and 16.3%, respectively (30.2% men; 12.8% women)".
	The concept "gender" is wide and involve aspects of the relationship of the person with the environment; I suggest to the authors change the word "gender" by "sex". Conclusions: In this section the authors don't have to repeat the
	results. The end of the line 2, line 3 and part of the line 4, are the same of the results section of the abstract. INTRODUCTION

The authors have to be consistent in all redaction of the manuscrip keeping spaces between the words. In the last paragraph of this section, line 5, which says:"we described the prevalence of overweight/obesity, I recommend to the authors replace the word "described" by estimated". The prevalence's are estimations. In this regards, the authors have to b consistent between this main objective and the objective that present in the abstract. The objective have to be the same!. Line 7 - 8 of the same paragraph: said:" aiming to provide useful information for policy makers in making informed decisions and reversing the increasing trends". My question is: Do you will achieve this goal with this paper, or this analysis will be use by Health authorities to develop programs to prevent overweight and obesity? Please explain and to correct in the manuscript. METHODS The authors have to be consistent in all redaction of the manuscrip keeping spaces between the words.	e
I consider that the authors include a paragraph of the "study area" with a figure (map), can help to readers to identify the study area ir the world. First paragraph, line 5: said: "for more than 6 months". How	I
much time was the period of data collection? The authors has consider the possible bias in the survey with a data collection period upper to 3 or 4 months? First paragraph, line 5: said: "we used the multistage stratified cluster sampling method to select the study sample". My question are:	d
 How was stratified the sample? Which was the criterion to estimate the sample? Which is the sample size? 	
Which was the criterion to select to the individuals that conformed the sample at the moment of the field work (survey application and others procedures)?	
First paragraph, line 10 – 11: Please, explain in this paper the deta of the process of data collection and data quality control (before, during and after of the field work). After, use a "link" word or phrase to joint this paragraph with the next (second paragraph).	
Second paragraph, line 1 - 3: • Who took anthropometric measurements? • Which was the criterion of standardization of the anthropometrists	?
Second paragraph, line 3 - 6: The classification of BMI for Chinese adults: I recommend to the authors include this in the definition of variables (new paragraph).	
After second paragraph, include a paragraph with the definition of variables used in this study.	
Third paragraph: please, include in the analysis plan all statistics indicators used in your data analysis, for example: data will be present in percentage, describe how prevalence will be expressed; the use of Odds Ratios for the risk analysis with its confidence intervals (95%), etc. If the authors going to use abbreviations in the results section (for statistical analysis), please write it in this section, with the meaning	
Table 4: Where are the results of the widowed in the "Marriage" variable?	-

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RESULTS
The authors have to be consistent in all redaction of the manuscript,
keeping spaces between the words.
All the variables including in this analysis have to be defined in the
paragraph of definition of variables suggested to the authors. Table 1
In the heading of the table, the author use abbreviations that not
have been explained in the methods section (e.g. PR).
The authors present the results for urban areas. Are not including
rural areas? Please, clarify this.
Again, I recommend to the authors the use of the concept "sex" and
not gender.
For the results of the chi square test, I recommend the use of two (2)
decimals and not three (3) in all the document.
For the results of "P value", I recommend to the authors to use a
space after of the sign "<" (e.g. < 0.0001) in all the document.
Second paragraph, line 4: The authors wrote the age group from 61
- 79 years. Is this correct? Or is 65 - 79 years?
Third paragraph: The results described are for overweight, obesity or
both? Please, specify in the text. Remember again the use of the
concept "sex" and not gender.
Table 3:
How was defined and measured the smoke? Which cut point was
used for the statistical analysis? Please explain in the paragraph of
definition of variables suggested to the authors.
How was defined and measured a "drink"? Which cut point was
used for the statistical analysis? Please explain in the paragraph of
definition of variables suggested to the authors.
• How was defined and measured the variable "diets"? Which cut
point was used for the statistical analysis? Please explain in the
paragraph of definition of variables suggested to the authors.
• How was defined and measured the variable "sleep"? Which cut
point was used for the statistical analysis? Please explain in the
paragraph of definition of variables suggested to the authors.
If this variables are defined in the methods section, the methods and
procedures used for measured it, will be more easy understand your
results. Fourth paragraph:
The authors have to be consistent in all redaction of the manuscript,
keeping spaces between the words.
Line 1: I suggests change the word "provides" by "shown".
Line 2: Remember again the use of the concept "sex" and not
gender.
DISCUSSION
First paragraph: Improve redaction.
said (line 5) of overweight among Chinese adults (age: 18-64)
was 23.8%, 26.6%, 30.6% (male: 23.0%, 27.4%, 32.1%; female:
24.7%, 25.7%, 29.1%), and the prevalence of obesity was 7.2%,
7.7%, 12.1% (male: 6.3%, 6.7%, 12.5%; female: 8.1%, 8.7%,
11.1%) in 2004, 2007, 2010.
I recommend to the authors: of overweight among Chinese adults
(age: 18-64) for 2004, 2007, and 2010 was 23.8%, 26.6% and
30.6%, respectively (male: 23.0%, 27.4%, and 32.1%; female:
24.7%, 25.7%, and 29.1%), and the prevalence of obesity was 7.2%,
7.7%, 12.1%, respectively (male: 6.3%, 6.7%, and 12.5%; female:
8.1%, 8.7%, and 11.1%).
Line 9:in Jilin Province "is" change by "was".
Third paragraph: Explain how smoking is a protective factor for
overweight and obesity in China. I consider that can make

and other cultural behavior.
Fourth paragraph: I consider that the authors can explain more how each risk factor (variable) is associated with overweight and obesity in China and contrast with others study of the world. The analysis of each risk factor can be by separate, by paragraph, for a better understood.
Fifth paragraph: The authors not mentioned some limitations, more than limitations existed in cross sectional studies. For example, the period of data collection (I consider that It can produce a bias); the authors must to consider other possible bias; the study not consider physical activity in this analysis, why?. Physical activity is a very important determinant of overweight and obesity. Additional comments:
The authors indicated in the objective of the paper (Introduction section) that the information of this manuscript will be useful to the policy makers. The authors don't address this topic in the Discussion section. I consider that is very important. The authors don't declare if the study was approved by a Ethics Committee and if the participants sign a Informed Consent.
Conclusion Second paragraph: How the authors will make this? Please explain. STROBE Statement
I don't identify the variables in the manuscript (Item 7); data sources measurement (Item 8); Study size (Item 10); Quantitative variables (Item 11) are not complete; Statistical methods is not described in the manuscript (Item 12); participants are not specify (Item 13);
Limitations (Item 19) are partial, as well as Interpretation (Item 20) and generalisability (Item 21)

REVIEWER	Yonghong Zhang Soochow University, China
REVIEW RETURNED	09-Jan-2016

GENERAL COMMENTS	In this paper, authors described the prevalence of
GENERAL CONIMIENTS	
	overweight/obesity and analyzed the potential influencing factors in
	adult populations in northeast China to provide useful information for
	policy makers. This study suggested the prevalence of overweight
	and obesity among adult residents in Jilin province were at a high
	level. Main influencing factors for overweight and obesity included
	gender, age, marriage, occupation, smoking, drinking, diets and
	hours of sleep. This is a cross sectional study of relatively large
	sample in regarding to prevalence of overweight and obesity in
	general population. It has a public implication in northeast China.
	However, several points need address.
	1. In abstract, the conclusion is too long, P value usually is not
	shown there. Author should delete it, and make the sentence more
	meaningful.
	2. Authors should describe in detail the methods of the multistage
	stratified cluster sampling.
	3. Authors should introduce in detail investigation methods including
	questionnaire and measurement of body weight and height.
	4. In the methods, authors should also give the more information of
	how to define smoking, drinking, eating more meat, et al.
	5. In method section, authors should state the status of informed
	consent for participants and ethics approval.
	6. In table 2, authors should add (%) after weight or obesity, and P
	values of trend test for prevalence of weight or obesity with age and

comparison in prevalence of weight or obesity between genders.
7. In method section, authors should state the status of informed
consent for participants and ethics approval.
8. In discussion, authors should state limitation of the paper
concretely.
9. English writing should be further improved.

REVIEWER	Bing Zhang National Institute for Nutrition and Health, ChinaCDC
	P.R.of China
REVIEW RETURNED	24-Jan-2016

	This paper is interacting in chausing litight situation of chasity
GENERAL COMMENTS	This paper is interesting in showing Jilin's situation of obesity
	epidemics recently.
	Two questions are
	1. In the methodology, the subjects were only from urban area? also included rural area?
	it was not so clear. also in Table 1 and 3, showed as city and country.
	2. In the discussion, page 14 line 18-35, you stated that Jilin's overweight and obesity presented downward trend. I think it is not
	fact since two surveys had different sampling method. there is increase trend of overweight and obesity in national survey and also
	other survey. so should be careful in your comparation.
	Finaly, you have to state ethics issure in the method part.

VERSION 1 – AUTHOR RESPONSE

1. The reviewer's comment:

ANSELMO J. MC DONALD P

Gorgas Memorial Institute of Health Studies.

Panama.

(1) Title

After discussion, we considered "some associated factors" is more exact and rational. Therefore we modified the title as dear reviewer suggested.

(2) Abstract

Thanks to reviewer's suggestion, the catachresis, logical order error and redundant repeat in this section have been corrected.

(3) Introduction

The reviewer's question is "Do you will achieve this goal with this paper, or this analysis will be use by Health authorities to develop programs to prevent overweight and obesity?"

The authors' answer: The result of this study will be considered as a reference for policy makers in making informed decisions to prevent overweight and obesity. The confused state has been corrected in the manuscript. In addition, the catachresis has also been corrected. (4) Method

I. Reviewer suggested us draw a map to achieve a better understand of our study. Thus we used MapInfo Professional 7.0 software to draw a map of China and mark the area of Jilin province to help readers identify the study area.

II. The reviewer's question is: How much time was the period of data collection? The authors have considered the possible bias in the survey with a data collection period upper to 3 or 4 months? The authors' answer: the formal survey was launched on July 5, 2012, which lasted 34 days. All the participants included were who had lived in Jilin province for more than 6 months. The confused state has been corrected.

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III. The reviewer's questions are:

- How was stratified the sample?
- · Which was the criterion to estimate the sample?
- Which is the sample size?

• Which was the criterion to select to the individuals that conformed the sample at the moment of the field work (survey application and others procedures)?

•Please, explain in this paper the details of the process of data collection and data quality control (before, during and after of the field work)

· Who took anthropometric measurements?

· Which was the criterion of standardization of the anthropometrics?

The authors' answer: in the original manuscript, the process of study design, data collection, data quality control, definition of major variables and statistical analyses were not detailed. Reviewer's questions and comments are very valuable and helpful. We have studied the comments carefully and made corrections accordingly. Revised parts are marked in red in this section. (5) Results

I. As reviewer suggested, all the definition of major variables was added to the method section.

II. Reviewer's question is "The authors present the results for urban areas. Are not including rural areas? Please, clarify this. "

The authors' answer: The results included both urban and rural areas. The region label in Table 1 was a clerical error due to our carelessness. And in Second paragraph, line 4, the age group was 65-79 which was also written as 61-79 by clerical error.

III. For the results of the chi square test and the relevant expression have been corrected.

IV. Reviewer's question is in the third paragraph: The results described are for overweight, obesity or both? Please, specify in the text.

The authors' answer: We divided all the participants into two groups: normal and overweight & obesity. The results described are for the group of overweight & obesity. We explained it at the beginning of paragraph 3.

(6)Discussion

I. Thanks to review's comments, the catachresis and redaction have been improved in this section. II. Reviewer's question is "the study not consider physical activity in this analysis, why? Physical activity is a very important determinant of overweight and obesity."

The authors' answer: We excluded the item "exercise" which always has been considered as an important factor for overweight and obesity. However, during the data collection, we found "exercise" was relevant with the item "occupation" which may have great impact on the results. As more than 30% of the participants were manual workers, they claimed that the heavy manual labor made them have no energy to take exercise, which resulting in the most of their answers to the item "exercise" were "rarely or never". But the real energy consumption of them should be at a high level. What's more, the same situation happened in full-time wives because of the housework especially in rural areas.

III. Reviewer's question is "Explain how smoking is a protective factor for overweight and obesity in China."

The authors' answer: As many studies have reported before, tobacco use has relationship with various chronic diseases and body disorders, which may affect the digestive and absorptive function of alimentary system. Additionally, some research has also suggest that smoking increase energy expenditure and might suppress appetite. We also made detailed explanations for other factors, according to review's suggestion.

IV. Limitations were specified at the end of this section. In addition, we discussed the objective of this paper by a separated paragraph.

V. We have added ethical approval in the method part.

This study was approved by the Ethics Committee of Jilin University School of Public Health (Reference Number: 2012-R-011), and written informed consents were obtained from all the subjects in the survey.

(7) Conclusion

I. Reviewer's question is: in second paragraph: How the authors will make this? Please explain. The authors' answer: The result of this study is significant part of Disease Spectrum in Jilin Province of China, which will be submit to the Health Department of Jilin Province and other relevant departments as a reference. These departments should pay enough attention to the high prevalence of overweight and obesity in Jilin province and provide effective guidelines that help control the development trend.

(8)STROBE Statement

We have rechecked the check list to attach the essential items.

2. The reviewer's comment:

Yonghong Zhang

Institution and Country

Soochow University, China

1. In abstract, the conclusion is too long, P value usually is not shown there. Author should delete it, and make the sentence more meaningful.

The authors' answer: the conclusion has been modified. The P value was deleted as dear review suggested.

2. Authors should describe in detail the methods of the multistage stratified cluster sampling.

The authors' answer: the methods of the multistage stratified cluster sampling were specified in method section.

3. Authors should introduce in detail investigation methods including questionnaire and measurement of body weight and height.

The authors' answer: the detailed investigation methods have been added to the method part.

4. In the methods, authors should also give the more information of how to define smoking, drinking, eating more meat, et al.

The authors' answer: we added the definition of major variables in this part by a separate paragraph. 5. In method section, authors should state the status of informed consent for participants and ethics approval.

The authors' answer: We have added ethical approval in the method part. This study was approved by the Ethics Committee of Jilin University School of Public Health (Reference Number: 2012-R-011), and written informed consents were obtained from all the subjects in the survey.

6. In table 2, authors should add (%) after weight or obesity, and P values of trend test for prevalence of weight or obesity with age and comparison in prevalence of weight or obesity between genders.

The authors' answer: the percentage and p value have been added to table 2.

7. In discussion, authors should state limitation of the paper concretely.

The authors' answer: Limitations were specified at the end of this section.

8. English writing should be further improved.

The authors' answer: the catachresis, logical order error and redundant repeat in this section have been corrected to achieve a better understand of our study.

3. The reviewer's comment:

Bing Zhang

National Institute for Nutrition and Health, ChinaCDC

P.R.of China

1. In the methodology, the subjects were only from urban area? also included rural area? it was not so clear. also in Table 1 and 3, showed as city and country.

The authors' answer: The results included both urban and rural areas. The region label in Table 1 was a clerical error due to our carelessness.

2. In the discussion, page 14 line 18-35, you stated that Jilin's overweight and obesity presented downward trend. I think it is not fact since two surveys had different sampling method. there is increase trend of overweight and obesity in national survey and also other survey. so should be careful in your comparison.

Finally, you have to state ethics issue in the method part

The authors' answer: review's comments are valuable for our study. We have modified the content according to reviewer's suggestion. In addition, the ethnic approval was added to the method section.

VERSION 2 – REVIEW

REVIEWER	ANSELMO J. MC DONALD P
	United Nations Development Programme
	Panama
REVIEW RETURNED	02-Mar-2016
	•
GENERAL COMMENTS	The authors developed a paper about overweight and obesity, which are topics very important in public health to global level. The authors have corrected the Major compulsory questions to the first revision; however there are minor revision that must be corrected before publish the paper.
	Title:
	I suggest to the authors invert the order of the words in the title and present the nutritional status from de general to the particular. First overweight and after obesity. ABSTRACT Objective: The authors consider that with this paper they going to
	reverse the increasing trends of obesity? I think that the answer is not. I suggest to the authors remove from the objective the phrase: To provide useful information for policy makers in making informed decisions and reversing the increasing trends.
	METHODS The authors included in this section, the recommendation given about define variables. I consider that they have to define all variables and not only the majors' variables.
	I suggest to the authors move the Ethical Aspects (This study was approved by the Ethics Committee of Jilin University School of Public Health (Reference Number: 2012-R-011), and written informed consents were obtained from all the subjects in the survey) at the end of the Methodology section.
	RESULTS Table 1 The authors present the results for areas: City and Country. In epidemiological studies based on population, the area includes the stratification in urban and rural areas. Please, clarify what the authors consider as "area" and include its meaning in the definition of variables (Methodology). Table 2 The authors use "p" in lowerpage while in table 1 the authors use
	The authors use "p" in lowercase while in table 1 the authors use capital letter. Third paragraph: The results described are for overweight, obesity or both? Please, specify in the text. Remember again the use of the concept "sex" and not gender. Table 3: The authors are not consistent using the variable "sex". They do not make the corrections in this table (the use of "sex" and not gender)
	Table 4:

The authors are not consistent using the variable "sex". They do not make the corrections in this table (the use of "sex" and not gender) DISCUSSION Fourth paragraph: I consider that the authors can explain more how each risk factor (variable) is associated with overweight and obesity in China and contrast with others study of the world. The analysis of each risk factor can be by separate, by paragraph, for a better
understood.
Fifth paragraph: The authors not mentioned some limitations, more
than limitations existed in cross sectional studies. For example, the
study not consider physical activity in this analysis, why?. Physical activity is a very important determinant of overweight and obesity.

REVIEWER	Yonghong Zhang Soochow University
REVIEW RETURNED	22-Mar-2016

GENERAL COMMENTS	The authors have revised the manuscript in detail according to
	reviewer's comments, and the paper has greatly been improved. I suggest that the manuscript be accepted for publication.

VERSION 2 – AUTHOR RESPONSE

1. The reviewer's comment:

ANSELMO J. MC DONALD P

Institution and Country

United Nations Development Programme

Panama.

(1) Title

Reviewer suggested us invert the order of the words in the title and present the nutritional status from de general to the particular. First overweight and after obesity.

The authors' answer: thanks to reviewer's suggestion, we correct the logical order in title.

(2) Abstract

Reviewer suggested us to remove the phrase from the objective: To provide useful information for policy makers in making informed decisions and reversing the increasing trends.

The authors' answer: We have removed the inappropriate phrase from the objective as reviewer's suggestion to make our manuscript more rigorous.

(4) Method

I. As dear reviewer suggested, we have added definitions of other variables to this part.

II. Reviewer suggested us move the Ethical Aspects (This study was approved by the Ethics Committee of Jilin University School of Public Health (Reference Number: 2012-R-011), and written informed consents were obtained from all the subjects in the survey) at the end of the Methodology section.

The authors' answer: We have moved the Ethical approval to the end of methodology section. (5) Results

I. Table 1: the definition of area and the corresponding reference was added to the part of method. II. Table2: The authors use "p" in lowercase while in table 1 the authors use capital letter. Third paragraph: The results described are for overweight, obesity or both? Please, specify in the text. The authors' answer: thanks to reviewer's conscientiousness, the matters of capitalization in table2 were unified, and the ambiguous express has been modified as well.

III. Table3 & Table4 : The use of "sex" and not gender

The authors' answer: As reviewer's helpful suggestion, we checked through the whole paper to make

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sure all the misuse of "gender" being corrected.

(6)Discussion

I. Fourth paragraph: reviewer suggested that we can explain more how each risk factor (variable) is associated with overweight and obesity in China and contrast with others study of the world. The analysis of each risk factor can be by separate, by paragraph, for a better understood.

The authors' answer: Thanks to review's valuable comments, we have studied more research and added some further explanation to this part. The reason why we have combined some factors into one paragraph is that the journal recommends (but do not insist) the discussion section is no longer than five paragraphs.

II. We have added the limitation to the end of discussion as dear reviewer's suggestion.

VERSION 3 - REVIEW

REVIEWER	ANSELMO J. MC DONALD P United Nations Development Programme (UNDP) - Panama
REVIEW RETURNED	07-Apr-2016

GENERAL COMMENTS	I consider that written English is acceptable for the publication of this manuscript, however, I consider that the editor have to consider if
	the written English is according to the style of the journal.