

## PEER REVIEW HISTORY

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## ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	Prevalence of overweight and obesity and associated risk factors among adult residents of northwest China: A cross-sectional study
<b>AUTHORS</b>	Song, Ning; Fen, Liu; Han, Min; Zhao, Qiang; Zhao, Qian; Zhai, Hui; Li, Xiangmei; Du, Guoli; Li, Xiao-Mei; Yang, Yi-Ning

## VERSION 1 - REVIEW

<b>REVIEWER</b>	James Bentham University of Kent, UK
<b>REVIEW RETURNED</b>	31-Dec-2018

<b>GENERAL COMMENTS</b>	<p>This is an interesting study of overweight and obesity in a large cohort in a region of China with a mix of ethnicities. The data collection methods are thorough.</p> <p>I have a number of major and minor comments.</p> <p>Major comments:</p> <ol style="list-style-type: none"><li>1. I think overweight and obesity prevalences using standard WHO definitions (<math>&gt;25</math> and <math>&gt;30</math> kg/m<sup>2</sup>) should be reported as well as the existing results. This would allow comparison with other countries, and with WHO data for China as a whole (it would be interesting to see a comparison with the most recent WHO results in the Global Health Observatory, for example). Equally, does it make sense to use the same cutoffs for Han, Uygur and Kazakhs? Is there any literature on this?</li><li>2. Research into overweight and obesity is highly active at present, and so there are lots of recent references. Some of the references in the paper are quite old, and should be replaced with more up-to-date papers.</li><li>3. The authors do not mention underweight. It would be interesting for these prevalences to be reported in each group.</li><li>4. There is no description of the fitting of the regression model. More description is necessary, such as an explanation of the criteria used to choose which terms to include (e.g. AIC, BIC).</li></ol>
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	<p>5. When quoting p-values, the test used (e.g. chi-squared) should be stated explicitly. Equally, the captions for the tables should describe the tests used explicitly.</p> <p>6. Were the p-values in the paper corrected for multiple testing?</p> <p>7. The paper is well-written, but requires proof reading to correct some mistakes.</p> <p>Minor comments:</p> <ol style="list-style-type: none"> <li>1. The range for BMI should be stated using interval notation, i.e. [24-28) rather than 24-27.9.</li> <li>2. The formatting of the references should be checked.</li> <li>3. Prevalences and ages should be reported to 1 dp.</li> <li>4. Is the age range 35-80 or 35-101? This should be clarified.</li> <li>5. The numbers quoted for overweight and obesity on pp8-9 don't seem to match the rest of the text. This should be checked.</li> <li>6. References are required for all the statements in the discussion.</li> </ol>
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<b>REVIEWER</b>	Tingting Feng Norwegian University of Science and Technology
<b>REVIEW RETURNED</b>	24-Mar-2019

<b>GENERAL COMMENTS</b>	<p>This paper entitled 'Prevalence of overweight and obesity and associated risk factors among adult residents of northwest China: A cross-sectional study' by Yang et al is an epidemiological association study showing the prevalence of obesity and risk factors associated with obesity in Xinjiang, China. Considering Xinjiang is the largest Chinese administrative division and home to a number of ethnic groups, a population-based study in Xinjiang offers an unique opportunity to assess the prevalence of obesity in difference ethnic groups in northwest China and to evaluate factors associated with obesity among the population in Xinjiang. Further, this study has provided an important scientific contribution to the research in Obesity in China.</p> <p>However, I have some suggestions:</p> <ol style="list-style-type: none"> <li>1. This study is a cross-sectional study. A cross-sectional design is particularly suitable for estimating the prevalence of a disease in a population. However, since a cross-sectional approach provided a single snapshot in time of obesity and risk factor status, it is impossible to determine if exposure to a risk factor occurred before, during, or after the emergence of obesity. It would be nice to read the discussion regarding the limitations of the cross-sectional design.</li> <li>2. The use of odds ratio(OR). It has been confirmed that OR overestimates the magnitude of the associations between exposures and outcomes in a cross-sectional study (Estimation of prevalence rate ratios for cross sectional data: an example in occupational epidemiology. Lee J, Chia KS.Br J Ind Med. 1993 Sep; 50(9):861-2.), especially when the outcome is frequent (Alternatives for logistic regression in cross-sectional studies: an empirical comparison of models that</li> </ol>
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directly estimate the prevalence ratio. Barros AJ, Hirakata VN. BMC Med Res Methodol. 2003 Oct 20; 3():21.). So the outcome is frequent, the use of prevalence ratio would have been a better measure of association (Prevalence and risk factor analysis of lower extremity abnormal alignment characteristics among rice farmers. Karukunchit U, Puntumetakul R, Swangnetr M, Boucaut R. Patient Prefer Adherence. 2015; 9():785-95.). It would be nice if the authors could discuss or address this issue.

3. On Page 6, line 19, the authors specified 'multivariate logistic regression' was used. It seems that the authors have some misunderstandings in differences between 'multivariate' and 'multivariable'.

'Multivariable' analysis: Assesses the relationship between one dependent variable and several independent variables. So the current study that assessed the relationship between one dependent binary variable (normal weight; overweight and obese.) and several independent variables is supposed to be a Multivariable analysis.

'Multivariate' analysis, on the other hand, is used for the analysis with multiple outcomes/dependent variables.

I would be nice if the authors could use the right term to describe the statistical analyses.

4. On page 2, line 56, ' This is the first study to date that investigate the association of overweight and obesity and races in adults.' Do the authors mean that this is a first study investigating associations of obesity with races in China or in the world ? After a quick search on this topic, it is not shown that this study is the first one on this topic in the world. For example: Socioeconomic inequality of obesity in the United States: do gender, age, and ethnicity matter?. Social Science & Medicine. Volume 58, Issue 6, March 2004, Pages 1171-1180. [https://doi.org/10.1016/S0277-9536\(03\)00288-0](https://doi.org/10.1016/S0277-9536(03)00288-0)

5. On page 3, line 37 ' obesity suggests a BMI  $\geq 28$  kg/m<sup>2</sup> and overweight indicates a BMI of 24-27.9 kg/m<sup>2</sup> '. The sentence needs to be rephrased. For example: a BMI  $\geq 28$  kg/m<sup>2</sup> suggests obesity and a BMI of 24-27.9 kg/m<sup>2</sup> indicates overweight.

6. On page 4, line 4, 'In the present study, we estimate the prevalence of overweight and obesity'. 'estimate' should be changed to 'estimated'.

7. On page 4, line 35, 'including post-secondary vocational schooling, Master and doctor'. The description of master's degree and doctoral degree would be more appropriate by using 'master's degree and doctoral degree'.

8. Number of decimal places should be consistent. For example, the author reported age with two decimal places: '(mean age: 50.82 $\pm$ 12.62 years)'. And the percentages were reported with one decimal place.

9. On page 7, line 17 : 'Interestingly, the proportions of females who were obese were higher than those of males.' How did the authors get this conclusion based on Table 2? According to Table 1, the proportions of females (25.8%) who were obese were LOWER that proportions of males (27.2%). Please clarify.

10. On page 7, line 52: ' Kazak population (OR 1.66, 95% CI 1.49 to 1.84) and Uyгур population (OR 1.44, 95% CI 1.30 to 1.59) are the risky people to become overweight and obese comparing with Han population.' Is ' risky people' appropriate to use in this context? Or could change it to 'Kazak population (OR 1.66, 95% CI 1.49 to 1.84) and Uyгур population (OR 1.44, 95% CI 1.30 to 1.59) carried higher risk to become overweight and obese'.

	<p>11. On page 9, line 8, please rearrange this sentence: 'The national census showed that lives 47 ethnicities in Xinjiang'.</p> <p>12. On page 9, line 17, 'different genetic backgrounds may also an important factor underlying the different prevalence of obesity.' This sentence is lack of a linking verb.</p> <p>13. On page 7, line 31, 'Table 1 has showed that the following factors all had a significant effect'. 'has showed' should be 'has shown'.</p> <p>14. The text needs careful editing throughout to improve quality of language and correct many small grammars.</p>
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## VERSION 1 – AUTHOR RESPONSE

### Reviewer #1

This is an interesting study of overweight and obesity in a large cohort in a region of China with a mix of ethnicities. The data collection methods are thorough. I have a number of major and minor comments.

#### Major comments:

1. I think overweight and obesity prevalences using standard WHO definitions ( $>25$  and  $>30$  kg/m<sup>2</sup>) should be reported as well as the existing results. This would allow comparison with other countries, and with WHO data for China as a whole (it would be interesting to see a comparison with the most recent WHO results in the Global Health Observatory, for example). Equally, does it make sense to use the same cutoffs for Han, Uygur and Kazakhs? Is there any literature on this?

Reply: Thank you for this suggestion. In our study, overweight and obesity were measured by BMI based on Chinese standards: overweight ( $24$  kg/m<sup>2</sup>  $\leq$  BMI  $< 27.9$  kg/m<sup>2</sup>), and obesity (BMI  $\geq 28$  kg/m<sup>2</sup>). Because Chinese people have a higher percentage of body fat compared with Westerners at the same BMI, therefore Chinese classifications of BMI  $\geq 24$  kg/m<sup>2</sup> for overweight and  $\geq 28$  kg/m<sup>2</sup> for obesity have been recommended based on the data of the China Health and Nutrition Survey (CHNS) data. There are some literatures about overweight and obesity in adults based on Chinese standards. The related references were as follows:

1. Sun L, et al. Plos One, 2018, 13(1): e0188546.
2. Wen C, et al. BMJ Open, 2019 May 9;9(5): e025257.
3. Zhao Q, et al. BMJ Open. 2018 Oct 8;8(10): e022757.

In our research, we use the same cutoffs among Han, Uygur and Kazakhs, as well as other studies. For example, Dong Y et al report body weight and underweight among 26 Chinese ethnic minority according to a unified standard. There are some literatures about overweight and obesity in adults among different races too. The related references were as follows:

1. Dong Y, et al. BMC Public Health. 2018 Apr 27;18(1):562.
2. Ricalde A, et al. Atherosclerosis, 2018, 271:142-147.
3. Li XS, et al. Ethnicity & Health, 2015, 20(4):365-375.

2. Research into overweight and obesity is highly active at present, and so there are lots of recent references. Some of the references in the paper are quite old, and should be replaced with more up-to-date papers.

Reply: Thank you for this suggestion. As your suggestion, we reviewed the correlative literatures about adult overweight and obesity on PubMed and modify the references.

[2] Collaboration NCDRF. Lancet 2016;387(10026):1377-96.

[3] Pineda E, et al. Obesity facts 2018;11(5):360-71.

[5] Lee DH, et al. European journal of epidemiology 2018;33(11):1113-23.

[8] Lao XQ, et al. BMC public health 2014;14:983.

[10] Lek N, et al. Annals of human biology 2016;43(1):18-24.

[12] Awareness t, et al. Public health nutrition 2014;17(5):1078-86.

[15] Davies MJ, et al. Diabetes care 2018;41(12):2669-701.

[16] Alshamiri M, International journal of general medicine 2018;11:313-22.

[29] Collaborators GBDT. Lancet 2017;389(10082):1885-906.

3. The authors do not mention underweight. It would be interesting for these prevalences to be reported in each group.

Reply: Thank you for your valuable suggestions. According to the Chinese standards: underweight<18.5 kg/m<sup>2</sup>. Because of the special dietary habits (high sugar and high fat diet) and living habits in Xinjiang, the number of low-weight people is too small. The results are as follows:

Table 1 Prevalence of underweight

Characteristic	N	Underweight	P
		n (%)	
Sex			
Male	6819	71(1.04)	<0.001
Female	7799	219(2.81)	

If required, the results can be placed in additional materials.

4. There is no description of the fitting of the regression model. More description is necessary, such as an explanation of the criteria used to choose which terms to include (e.g. AIC, BIC).

Reply: Thank you for this suggestion. The regression model was fitted with empirical variables and univariate analysis positive variables into regression equation. The analytical variables we have included have the following factors: area, sex, age, ethnic, education, occupation, marriage, smoking, drinking, hypertension, Diabetes and dyslipidemia.

5. When quoting p-values, the test used (e.g. chi-squared) should be stated explicitly. Equally, the captions for the tables should describe the tests used explicitly.

Reply: Thanks for your comment. In our article, Table 1, Table 2 and Table 3 are about comparison of rates (Chi-square test). Table 4 are multivariable analysis.

The captions for the tables have been described the tests explicitly in the notes to the tables.

6. Were the p-values in the paper corrected for multiple testing?

Reply: Thank you for this suggestion. The p-values were not corrected among the chi-square test, but corrected during multivariable regression.

7. The paper is well-written, but requires proof reading to correct some mistakes.

Reply: Thank you for the comments. We have once again carried out the statistics of the article and the latest literature, and corrected some mistakes based on your comments fortunately.

Minor comments:

1. The range for BMI should be stated using interval notation, i.e. [24-28) rather than 24-27.9.

Reply: Thanks for your opinion. The range for BMI has been stated using interval notation in our text.

2. The formatting of the references should be checked.  
comments. The formatting of the references has been checked.

Reply: Thank you for the

3. Prevalences and ages should be reported to 1 dp.

We have made a consistent change in decimal points in this paper (with 1 dp).

Reply: Thanks for your opinion.

4. Is the age range 35-80 or 35-101? This should be clarified.

Reply: Thank you for this suggestion. We checked throughout the primary data and found that the oldest age is 101, which is not a mistake.

5. The numbers quoted for overweight and obesity on pp8-9 don't seem to match the rest of the text. This should be checked.

examination, no inconsistent data was found.

Reply: Thank you very much, but after carefully

6. References are required for all the statements in the discussion.

In the discussion, the references in the statements are marked and explained.

Reply: Thank you very

Reviewer #2:

Considering Xinjiang is the largest Chinese administrative division and home to a number of ethnic groups, a population-based study in Xinjiang offers an unique opportunity to assess the prevalence of obesity in difference ethic groups in northwest China and to evaluate factors associated with obesity among the population in Xinjiang. Further, this study has provided an important scientific contribution to the research in Obesity in China. However, I have some suggestions:

1.This study is a cross-sectional study. A cross-sectional design is particularly suitable for estimating the prevalence of a disease in a population. However, since a cross-sectional approach provided a single snapshot in time of obesity and risk factor status, it is impossible to determine if exposure to a risk factor occurred before, during, or after the emergence of obesity. It would be nice to read the discussion regarding the limitations of the cross-sectional design.

Reply: Thank you for this suggestion. Our study is a cross-sectional study, due to the limitations, we read and corrected the discussion again. (On page 10, line 26-29; On page 11, line 1-3)

2.The use of odds ratio (OR). It has been confirmed that OR overestimates the magnitude of the associations between exposures and outcomes in a cross-sectional study (Estimation of prevalence rate ratios for cross sectional data: an example in occupational epidemiology. Lee J, Chia KS.Br J Ind Med. 1993 Sep; 50(9):861-2.), especially when the outcome is frequent (Alternatives for logistic regression in cross-sectional studies: an empirical comparison of models that directly estimate the prevalence ratio.Barros AJ, Hirakata VN. BMC Med Res Methodol. 2003 Oct 20; 3():21.). So the outcome is frequent, the use of prevalence ratio would have been a better measure of association (Prevalence and risk factor analysis of lower extremity abnormal alignment characteristics among rice farmers. Karukunchit U, Puntumetakul R, Swangnetr M, Boucaut R.Patient Prefer Adherence. 2015; 9():785-95.). It would be nice if the authors could discuss or address this issue.

Reply: Thank you very much. It is right that OR overestimates the magnitude of the associations between exposures and outcomes in a cross-sectional study. As follows, we have calculated the prevalence of overweight and obesity under different exposures. It is obvious that the trends of the prevalence are same. So, OR estimates the associations between exposures and overweight and obesity in multivariable regression analysis.

Table 2 Prevalence ratio of overweight and obesity in residents of Xinjiang Province

Characteristic	PR (%)
Area	1.05(Urban) 0.95(Rural)
Sex	1.21(male) 0.85(female)
Ethnic	
Han	0.89
Uygur	0.99
Kazakh	1.20
Age(years)	
35-44	0.73
45-54	1.31
55-64	3.87
≥65	1.07
Education	
Primary school and below	0.94
Junior middle school	1.14
Senior middle school	0.69
Undergraduate and above	0.95

Occupation		
Manual	0.97	
White collar	0.97	
Other	1.19	
Marriage		
Unmarried	0.48	
Married	1.01	
Divorced	0.57	
widowed	1.07	
Smoking	1.19(Yes)	0.94(No)
Drinking	0.36(Yes)	1.58(No)
Hypertension	1.79(Yes)	0.72(No)
Diabetes	1.85(Yes)	0.97(No)
Dyslipidemia		
hypertriglyceridemia	2.12(Yes)	0.78(No)
hypercholesterolemia	1.53(Yes)	0.87(No)
Low HDL-C	1.13(Yes)	0.95(No)
High LDL-C	0.96(Yes)	1.02(No)
Constant		

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3. On Page 6, line 19, the authors specified 'multivariate logistic regression' was used. It seems that the authors have some misunderstandings in differences between 'multivariate' and 'multivariable'. 'Multivariable' analysis: Assesses the relationship between one dependent variable and several independent variables. So the current study that assessed the relationship between one dependent binary variable (normal weight; overweight and obese.) and several independent variables is supposed to be a Multivariable analysis. 'Multivariate' analysis, on the other hand, is used for the analysis with multiple outcomes/dependent variables. I would be nice if the authors could use the right term to describe the statistical analyses. Reply: Thank you for the comments. It is my error that misunderstand the differences between 'multivariate' and 'multivariable'. In our study, we used multivariable analysis to assess the relationship between one dependent binary variable (normal weight, overweight and obese) and several independent variables.

4. On page 2, line 56, ' This is the first study to date that investigate the association of overweight and obesity and races in adults.' Do the authors mean that this is a first study investigating associations of obesity with races in China or in the world ? After a quick search on this topic, it is not shown that this study is the first one on this topic in the world. For example: Socioeconomic inequality of obesity in the United States: do gender, age, and ethnicity matter?. Social Science & Medicine. Volume 58, Issue 6, March 2004, Pages 1171-1180. [https://doi.org/10.1016/S0277-9536\(03\)00288-0](https://doi.org/10.1016/S0277-9536(03)00288-0)

Reply: Thank you for the comments. I'm sorry the wording is not rigorous enough.

Our study investigated the association of overweight and obesity and races in adults in Xinjiang, the main strengths are its large sample size and different races, which describe a comprehensive prevalence character between overweight and obesity. (On page 2, line 28-29; On page 2, line 1-3)

5. On page 3, line 37 'obesity suggests a BMI $\geq$ 28 kg/m<sup>2</sup> and overweight indicates a BMI of 24-27.9 kg/m<sup>2</sup>'. The sentence needs to be rephrased. For example: a BMI  $\geq$ 28 kg/m<sup>2</sup> suggests obesity and a



BMI of 24-27.9 kg/m<sup>2</sup> indicates overweight. Reply: Thank you for the suggestions. The sentence has been rephrased according to your suggestion. (On page 3, line 16-17)

6. On page 4, line 4, 'In the present study, we estimate the prevalence of overweight and obesity'. 'estimate' should be changed to 'estimated'. Reply: Thank you for the suggestions. The word has been rephrased according to your suggestion. (On page 3, line 29)

7. On page 4, line 35, 'including post-secondary vocational schooling, Master and doctor'. The description of master's degree and doctoral degree would be more appropriate by using 'master's degree and doctoral degree'. Reply: Thank you for the suggestions. The words have been rephrased according to your suggestion. (On page 5, line 17)

8. Number of decimal places should be consistent. For example, the author reported age with two decimal places: '(mean age: 50.82±12.62 years)'. And the percentages were reported with one decimal place. Reply: Thank you for the suggestions. We have made a consistent change in decimal points in this paper (with one decimal places).

9. On page 7, line 17 : 'Interestingly, the proportions of females who were obese were higher than those of males.' How did the authors get this conclusion based on Table 2? According to Table 1, the proportions of females (25.8%) who were obese were LOWER than proportions of males (27.2%). Please clarify. Reply: Thank you for the comments. I'm sorry the wording is not rigorous enough.

According to Table 1, it is clearly that the proportions of male (27.22%) who were obese were higher than female (25.81%). But based on Table 2, we focus on the relationship between age and obesity, and found that the proportions of females who were obese were higher than those of males, except for 35-44 years (male 25.5%, female 17.4%).

10. On page 7, line 52: ' Kazak population (OR 1.66, 95% CI 1.49 to 1.84) and Uygur population (OR 1.44, 95% CI 1.30 to 1.59) are the risky people to become overweight and obese comparing with Han population.' Is ' risky people' appropriate to use in this context? Or could change it to 'Kazak population (OR 1.66, 95% CI 1.49 to 1.84) and Uygur population (OR 1.44, 95% CI 1.30 to 1.59) carried higher risk to become overweight and obese'.

Reply: Thank you for your suggestions. The sentence has been rephrased according to your suggestion. (On page 7, line 27-29)

11. On page 9, line 8, please rearrange this sentence: 'The national census showed that lives 47 ethnicities in Xinjiang'.

Reply: Thank you for the comments. The sentence has been rearranged, 'The national census showed that there are 47 ethnicities in Xinjiang'. (On page 9, line 14-15)

12. On page 9, line 17, 'different genetic backgrounds may also an important factor underlying the different prevalence of obesity.' This sentence is lack of a linking verb.

Reply: Thank you for the comments. The sentence has been changed, 'different genetic backgrounds may also be an important factor underlying the different prevalence of obesity.' (On page 9, line 20)

13. On page 7, line 31, 'Table 1 has showed that the following factors all had a significant effect'. ' has showed' should be 'has shown'.

Reply: Thank you for the comments. The words have been corrected. (On page 7, line 17)

14. The text needs careful editing throughout to improve quality of language and correct many small grammars.

Reply: Thank you for your suggestions. We have checked the text again, including grammars and sentences. Through careful and comprehensive modification, I am sure that the quality of the paper has been improved.

#### VERSION 2 – REVIEW

<b>REVIEWER</b>	Tingting Feng Norwegian University of Science and Technology, Norway
<b>REVIEW RETURNED</b>	09-Jul-2019

<b>GENERAL COMMENTS</b>	<p>This paper entitled "Prevalence of overweight and obesity and associated risk factors among adult residents of northwest China: A cross-sectional study" by Song et al has been resubmitted following initial review. The authors have acknowledged and made significant changes as requested.</p> <p>I only have some minor comments:</p> <p>* On page 3, line 19, " a BMI<math>\geq</math>28 kg/m<sup>2</sup> suggests obesity and a BMI of [24-28) kg/m<sup>2</sup> .....", the squared symbol in kg/m<sup>2</sup> should be written as superscript.</p> <p>* On page 11, line 5-6, "which may be the reason for the insignificant difference in the effect of obesity on reasons.". This sentence is not clear to me. Please explain what "the effect of obesity on reasons" means?</p>
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#### VERSION 2 – AUTHOR RESPONSE

Reviewer #2:

I only have some minor comments:

\* On page 3, line 19, "a BMI $\geq$ 28 kg/m<sup>2</sup> suggests obesity and a BMI of [24-28) kg/m<sup>2</sup> .....", the squared symbol in kg/m<sup>2</sup> should be written as superscript.

Reply: Thank you for the suggestion. We have revised the squared symbol. The modified content are as follows: a BMI $\geq$ 28 kg/m<sup>2</sup> suggests obesity and a BMI of [24-28) kg/m<sup>2</sup> indicates overweight. (On page 3, line 16)

\* On page 11, line 5-6, “which may be the reason for the insignificant difference in the effect of obesity on reasons.”. This sentence is not clear to me. Please explain what “the effect of obesity on reasons” means?

Reply: Thank you for the suggestion. In this sentence, what we want to explain is that there are significant differences in the causes of obesity, due to the limitations of cross-sectional studies. “The effect of obesity on reasons” means the influencing factors of obesity. In order to make it more clearly to understand, we have corrected the sentence as follows: which may be the reason for the insignificant difference in the causes of obesity. (On page 11, line 5-6)

### VERSION 3 - REVIEW

<b>REVIEWER</b>	Tingting Feng Norwegian University of Science and Technology,Norway
<b>REVIEW RETURNED</b>	15-Jul-2019

<b>GENERAL COMMENTS</b>	The authors has addressed my comments. However, on Page 9, line 1-4, there are grammatical errors : The prevalence of underweight (according to the Chinese standards: underweight<18.5 kg/m <sup>2</sup> ) was significant difference among each group (P<0.05) (Supplementary Table 1), however, due to the special dietary habits (high sugar and high fat diet) and living habits in Xinjiang, the number of low-weight people is too small. The grammatical errors need to be corrected before proceeding with publication.
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### VERSION 3 – AUTHOR RESPONSE

Reviewer #2:

However, on Page 9, line 1-4, there are grammatical errors: The prevalence of underweight (according to the Chinese standards: underweight<18.5 kg/m<sup>2</sup>) was significant difference among each group (P<0.05) (Supplementary Table 1), however, due to the special dietary habits (high sugar and high fat diet) and living habits in Xinjiang, the number of low-weight people is too small. The grammatical errors need to be corrected before proceeding with publication.

Reply: Thank you for the suggestion. The grammatical errors have been corrected as follows: The prevalence of underweight (according to Chinese standards, BMI<18.5 kg/m<sup>2</sup>) was significantly different between the two groups (P<0.05) (Supplementary Table 1). However, due to the special dietary habits (high-sugar and high-fat diet) and living habits in Xinjiang, the number of low-weight people was too small to reliably detect differences. (On page 9, line 3-6)

Meanwhile, we have edited our manuscript by American Journal Experts to improve the quality of language and correct some small grammars.