Author’s response to reviews

Title: Prevalence and clinical profile of metabolic syndrome in longevity: study from Guangxi Zhuang Autonomous Region, China.

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Author’s response to reviews:
Dear Editor Danan Gu,
Thank you very much for your comments and suggestions again.
We have studied the valuable comments from you, and tried our best to revise the manuscript.
The point to point responds to the reviewer’s comments are listed as follows.
I would like to re-submit this revised manuscript to your prestigious journal “BMC Geriatrics”, and hope it is acceptable for publication in the journal.

Looking forward to hearing from you soon.

With kindest regards,

Yours sincerely,
Caiyou Hu,
Ze Yang
Response to Reviewer 1: The authors have revised the manuscript carefully according to the reviewer's comments. The manuscript will be acceptable.
Response: Thank you for your suggestions and for your time.

Response to Reviewer 2:
Question 1. The authors have tried to address my previous comments. However, their response to the comment regarding "local healthy control" is unsatisfactory. Please reconsider the purpose of including a control. As described, if "all controls were excluded from taking any drugs or history of cardiovascular diseases", they would be a healthier sample than the population.
Response: Thank you for your constructive suggestion. We completely agree with your advice. Phrases "local healthy control" and “all controls were excluded from taking any drugs or history of cardiovascular diseases” have been deleted. The related sentences has been revised as follows:
A random sample of 793 individuals belonged to the Zhuang population from Bama (total population: 269,800) was recruited, including 307 long-lived individuals (256 nonagenarians and 51 centenarians) and 486 local and unrelated younger controls. Individuals with longevity as well as controls were excluded if they had chronic disease such as malnutrition, hepatic disease, kidney disease and cancer. All controls refer to local and unrelated younger participants in general population (See the revised version of page 6 and 7).

Question 2. Similarly, for the study population, who to exclude individuals if they had chronic disease?
Response: Thank you for your advice. We are sorry we did not make it clear. In fact, there were senior physicians and neurologists in our team. All participants were examined by a senior physician and underwent extensive neuropsychological test as well as taking instrumental examination such as electrocardiogram and ultrasound examination (See the revised version of page 7).

Question 3. If this was truly the case, it would be a significant limitation of the study because the samples studied were not representative of the population, and this should be clearly recognized.
Response: Thank you for your significant advice. Bama County is an autonomous county under the jurisdiction of Hechi City, Guangxi Zhuang Autonomous Region. It is located in the
northwest of Guangxi Zhuang Autonomous Region with a total area of 1966 square kilometers and a population of 269,800 in 2010 [2]. Of which, 881 individuals have lived more than 90 years old [3] (See the Introduction Section, the revised version of page 4 and 5.). We have included a random sample of 307 individuals after excluding participants who had chronic diseases, which taking up 34.8% of the total long-lived persons at the time. Thus, we thought the population in our study can be representative of the population.