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)	Cohort profile: An early life observational cohort in China: Bone And MicroBiOme Onset (BAMBOO) study
AUTHORS	Wang, Dantong; Wang, Jing; Jiang, Chang; Wang, Shuo; Feng, Lingyan; Zhang, Yu; Guo, Yuanyuan; Liu, Gongshu; Li, Xi; Zhang, Guohong; Zhu, Xiaowei; Ren, Fangyi; Guan, Lingyao; Chen, Jiayu; Gao, Ya; Chen, Mo; Darwish, Noura; Mottaz, Sara Colombo; Horcajada, Marie Noelle; Bonnet, Nicolas; Dogra, Shaillay Kumar

VERSION 1 – REVIEW

REVIEWER	Locantore, Pietro Università Cattolica del Sacro Cuore-Fondazione Policlinico "Gemelli" IRCCS
REVIEW RETURNED	25-Sep-2023

GENERAL COMMENTS	This cohort profile by Wang and colleagues interestingly presents the cohort profile of a challenging prospective study on microbiome and bone health in infants. This study is in line with the Journal's submission guidelines and addresses an interesting topic in this field of research. I would like to ask the authors to elaborate on the choice of an "accelerated cohort" design; in particular, a more detailed explanation on why the authors have specifically chosen these two age groups (0-12 months and 6-36 months) and not other ranges. Some minor English spelling checks may be useful. Overall, the study design appears to be solid and this article comprehensively presents it with clarity and detail.

REVIEWER	Langsetmo, Lisa University of Minnesota Twin Cities
REVIEW RETURNED	19-Dec-2023

GENERAL COMMENTS	The study provides both the protocol and a baseline assessment of the Bamboo study. Is this just meant to be the published protocol of the study? If the study is just the published protocol, then the title should clear state that this is the aim of the study. If the study is meant to be a primary research paper then some further descriptive analysis would be useful. The dietary data was presented with very little analysis. There is no overall picture of the dietary variety of these infants. Some

| | basic finding would relate to breast milk vs. formula vs. processed food vs. whole foods.

There were preliminary findings regarding the infant microbiome. While this was done only on a small sample it is notable that there were several cases where the entirety of the gut microbiome consisted of "other". Certainly including more taxa in this descriptive analysis would be useful.

The authors claim in the abstract that "A cross validation of breast milk vitamin D and HMOs measurement was also conducted. The early data assessment showed a high reliability of the data generated from this study." Results appearing in the abstract should be clearly presented in the main manuscript.

Finally, the list of references was very modest and could be expanded. |
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VERSION 1 – AUTHOR RESPONSE

Reviewer: 1
Dr. Pietro Locantore, Università Cattolica del Sacro Cuore-Fondazione Policlinico "Gemelli" IRCCS
Comments to the Author:
This cohort profile by Wang and colleagues interestingly presents the cohort profile of a challenging prospective study on microbiome and bone health in infants.

This study is in line with the Journal's submission guidelines and addresses an interesting topic in this field of research.

I would like to ask the authors to elaborate on the choice of an "accelerated cohort" design; in particular, a more detailed explanation on why the authors have specifically chosen these two age groups (0-12 months and 6-36 months) and not other ranges.
Some minor English spelling checks may be useful.

Overall, the study design appears to be solid and this article comprehensively presents it with clarity and detail.

Response: Thanks for the comment. We applied accelerated cohort design with an overlap between 6-12 month of age in this study for the following reasons. The aim of our study was to cover the first three years of life. Designing as two groups of 0-12 months and 6-36 months was the attempt to shorten the entire project duration. We designed an overlap between 6-12 months since it is an important time window for a child to transit from milk dominate feeding to the initiation of various complementary food intakes. The transition would lead to changes in nutrition, bone health and microbiome composition. Due to the variety of complementary foods and complex consumption patterns, as well as the rapid growth and development in this period, more subjects are needed to conduct data analyses.

Reviewer: 2
Dr. Lisa Langsetmo, University of Minnesota Twin Cities
Comments to the Author:
The study provides both the protocol and a baseline assessment of the Bamboo study. Is this just meant to be the published protocol of the study? If the study is just the published protocol, then the

title should clear state that this is the aim of the study. If the study is meant to be a primary research paper then some further descriptive analysis would be useful.

Response: Thanks for the comment, we have added a sentence in the Introduction section to clarify the aim of this report, i.e., "The focus of this article is to report the study protocol used in this longitudinal cohort study".

The dietary data was presented with very little analysis. There is no overall picture of the dietary variety of these infants. Some basic finding would relate to breast milk vs. formula vs. processed food vs. whole foods.

Response: Thanks for the comment. The purpose of "Findings to date" section is to provide a very initial assessment of data quality, not to report any intermediate findings. Since it is a complex and long-term cohort study, we assessed data quality using data from a few early available samples and compared it to the result from literature. In this way, we could detect and correct potential issues that occurred during data and sample collection, sample measurement, data management and analysis. From the initial assessment we found that the results were in line with previous findings that gave us confidence in the outcomes of the study.

There were preliminary findings regarding the infant microbiome. While this was done only on a small sample it is notable that there were several cases where the entirety of the gut microbiome consisted of "other". Certainly including more taxa in this descriptive analysis would be useful.

Response: Thanks for the comment. The prevalence of the microbiota categorized as "other" within the examined fecal specimen was notably infrequent. To show all the microbial abundances, we added a data file as a supplemental material named "Bamboo_Supplemental_material_microbial_abundance".

The authors claim in the abstract that "A cross validation of breast milk vitamin D and HMOs measurement was also conducted. The early data assessment showed a high reliability of the data generated from this study." Results appearing in the abstract should be clearly presented in the main manuscript.

Response: Thanks for the comment. We have revised the text in the Abstract and added 2 tables in supplemental material (Tables S3 and S4) to provide standards used in the experiment.

Finally, the list of references was very modest and could be expanded.

Response: Thanks for the comment. Since the purpose of this article is to report the research protocol, there is no study results presented and discussed, thus the number of references is modest. When the study results are ready to be presented, we will certainly provide more references in the research manuscripts to report the findings from this cohort study.

VERSION 2 – REVIEW

REVIEWER	Langsetmo, Lisa University of Minnesota Twin Cities
REVIEW RETURNED	06-Mar-2024

GENERAL COMMENTS	No further comments