

## 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.

This paper was submitted to a another journal from BMJ but declined for publication following peer review. The authors addressed the reviewers' comments and submitted the revised paper to BMJ Open. The paper was subsequently accepted for publication at BMJ Open.

(This paper received three reviews from its previous journal but only two reviewers agreed to published their review.)

### ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	Development of a Global Health Bachelor Curriculum in China: A Delphi Study
<b>AUTHORS</b>	Guan, Li; Gao, Pan; Liu, SuYang; Liu, YiSi; Li, XiangYu; Liu, FeiFei; Mao, Zongfu; Lu, YuanAn; Xiang, Hao

### VERSION 1 – REVIEW

<b>REVIEWER</b>	Timothy Brewer, MD, MPH Vice Provost and Professor of Medicine and Epidemiology University of California, Los Angeles United States
<b>REVIEW RETURNED</b>	10-May-2018

<b>GENERAL COMMENTS</b>	<p>This manuscript describes using a literature review and Delphi process to develop a global health undergraduate curriculum. The authors do a nice job of describing the methods used and how they came to consensus. The acceptance criteria for topics areas was determined a priori, which was a good step. In summary, the approach and analysis used seem both appropriate and reasonable. As best can be determined, this study seems to have been conducted 5 years ago without an obvious explanation for the delay in submission for publication.</p> <p>Where the manuscript might be strengthened is in interpretation of the authors' findings (discussion section). From their literature review the authors highlight choices selected US and UK universities made in their undergraduate global degree programs between required (or "core") and elective courses. However, the reader does not have a clear sense of which courses the authors intend to prioritize in their program. For example, an argument could be made that "Cultural Anthropology" should be a required course for undergraduate global health majors while "Preventive Medicine", a higher rated course with more consensus, should be elective. Providing some sense of how the chosen courses relate to each other and the overall educational goal, as well as identifying those elements which are fundamental to the global health degree and which are elective would help the reader move from having a list of courses to understanding how the curriculum was built.</p> <p>It also might be worth briefly mentioning differences in undergraduate degree requirements across countries. For example a typical US university might require about 15 courses to</p>
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	satisfy a major (History, Global Health, etc.) and about 30 to 35 courses to graduate. If undergraduate students at Chinese universities only take courses in their major, that would be worth noting for readers unfamiliar with the Chinese educational system. If the Chinese system was similar to the US system, undergraduate students would only take about half of the listed courses to have enough global health course credits to satisfy the major. The remaining courses are usually taken in unrelated fields.
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<b>REVIEWER</b>	Corrado Cancedda Center for Global Health, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, United States
<b>REVIEW RETURNED</b>	08-Jul-2018

<b>GENERAL COMMENTS</b>	<p>The article describes both the process pursued by a working group comprised of Chinese and American global health academics and other global health practitioners to develop a global health curriculum and the outcome of such process. The article is well written, the objectives of the study are clearly stated, the methodology section seems sound, and the discussion goes systematically over the results outlined in the results section</p> <p>My main comments are two: (a) the article is a little too dry and technical, especially in the introduction and discussion sections it would be important to explain in greater detail why there is a growing interest in global health among Chinese academics and students and how global health is relevant not only to address health inequalities abroad, but also domestically; (b) the lack of academics and global health practitioners from low-income countries within the working group seems like a major limitation of the study and it would be important to explain in greater detail why that is and what the plan is (I strongly recommend to develop a plan if there is no such plan yet) to seek their feedback and input in the near future before the curriculum is implemented</p>
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<b>REVIEWER</b>	Michelle McLean Faculty of Health Sciences and Medicine Bond University Gold Coast Australia
<b>REVIEW RETURNED</b>	11-Jul-2018

<b>GENERAL COMMENTS</b>	<p>My main concern is the time line for this study. The work was done in 2013 and the first degree was offered in 2015 and so was completed in 2017. Since then, Planetary Health has emerged as new discipline and one could say that it has superceded GH. Planetary Health now looks at the environmental factors (e.g. climate change) and uses the 2015 Sustainable Development Goals to underpin health. I fear therefore that much of this work might be outdated.</p> <p>Also, the authors have used 'undergraduate GH'. They should in fact be talking about a bachelor degree.</p> <p>Since 2015, in line with the Global Burden of Diseases studies and the SDGs, countries are no longer referred to as 'developing' or 'developed'. The SDI is a newish metric that now looks at countries differently. China was once referred to as a developing country but now supplies manufactured goods to most countries and has a health economy with improvements in many areas. For many, it is now 'developed'.</p>
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	<p>I have attached a scanned copy with my hand-written comments. A bit messy as I did this while on a conference so I apologise.</p> <p>The reviewer provided a marked copy with additional comments. Please contact the publisher for full details.</p>
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## VERSION 1 – AUTHOR RESPONSE

### To reviewer #1

Comment #1) as best can be determined, this study seems to have been conducted 5 years ago without an obvious explanation for the delay in submission for publication.

*Response: We thank the reviewer for this comment. This study was conducted in February 2013. We didn't submit the study for publication at that time because we were not sure that the curriculum could be used in practice. We then decided to implement the curriculum in September 2013. And in 2017, the first group of students successfully completed the GH bachelor program. Tested in both teaching and learning practices, the curriculum was proven to be practical. We would like to summarize the previous research work during the development of the curriculum to provide some information for future improvement of the curriculum and also provide some guidelines and references for other educational institutions to set up their GH programs or curricula. We have now explained it more clearly under the Discussion section (Page 17, lines: 16-20, page 18, lines: 11-12).*

Comment #2) where the manuscript might be strengthened is in interpretation of the authors' findings (discussion section). From their literature review the authors highlight choices selected US and UK universities made in their undergraduate global degree programs between required (or "core") and elective courses. However, the reader does not have a clear sense of which courses the authors intend to prioritize in their program. For example, an argument could be made that "Cultural Anthropology" should be a required course for undergraduate global health majors while "Preventive Medicine", a higher rated course with more consensus, should be elective.

Providing some sense of how the chosen courses relate to each other and the overall educational goal, as well as identifying those elements which are fundamental to the global health degree and which are elective would help the reader move from having a list of courses to understanding how the curriculum was built.

*Response: We thank the reviewer for these suggestions. Our study was to identify the required GH major courses for a GH bachelor degree. All of the 31 courses listed in our curriculum are required GH major courses without elective courses. The elective courses in our GH bachelor program only comprise general education elective courses and interdisciplinary elective courses. The 31 courses are categorized into five modules, which are to train students to gain essential knowledge and various skills to serve and practice in GH field. The educational goal of our GH bachelor program is to provide students with a strong background in understanding and addressing GH issues and prepare students to become health professionals with international competencies. We have now added these information under the Discussion section. (Page 17, lines: 10-13; page 15, lines: 4-7)*

Comment #3) it also might be worth briefly mentioning differences in undergraduate degree requirements across countries. For example a typical US university might require about 15 courses to satisfy a major (History, Global Health, etc.) and about 30 to 35 courses to graduate. If undergraduate students at Chinese universities only take courses in their major, that would be worth noting for readers unfamiliar with the Chinese educational system. If the Chinese system was similar to the US system, undergraduate students would only take about half of the listed courses to have enough global health course credits to satisfy the major. The remaining courses are usually taken in unrelated fields.

*Response: We thank the reviewer for this excellent comment. The Chinese educational system is different from the system in the US. Our GH bachelor degree require students to take at least 150 credits, which consist of 75 credits for the GH major courses and the graduation thesis, 65.5 credits for the general education courses and 9.5 credits for the interdisciplinary elective courses. The 31*

*courses listed in our curriculum are all required GH major courses, which are much more than the major courses required in the American universities for a GH bachelor degree. We have now added it under the discussion section to help readers understand. (Page 17, lines: 11-13)*

## **To reviewer #2**

Comment #1) the article is a little too dry and technical, especially in the introduction and discussion sections it would be important to explain in greater detail why there is a growing interest in global health among Chinese academics and students and how global health is relevant not only to address health inequalities abroad, but also domestically.

*Response: We thank the reviewer for the suggestions. As China has moved from a health aid receiving country to a health aid providing country, there is an increasing demand for Chinese health professionals with knowledge and competency in GH. What's more, the cultivation of a competent GH workforce will help promote China's involvement in GH activities worldwide. Therefore, GH education has attracted attention among Chinese academics and students. We have now added the explanation under the Introduction section. (Page 5, lines: 2-4, 6) With the rapid development of the global economy, more and more Chinese go abroad to study, work and travel, in the meanwhile, more and more foreigners are visiting China for the same reasons. Health issues and health inequality have quickly become the challenges not only for China but other countries. GH can not only provide Chinese health professionals to go abroad to help the developing world, but also educate international students to help their own countries to address issues and health inequalities. In addition, GH can help China establish a better health care system and provide evidence for future health policy making to address health issues and health inequalities domestically. We have now added these information under the Introduction section. (Page 4, lines: 2-4; page 5, lines: 7-11)*

Comment #2) the lack of academics and global health practitioners from low-income countries within the working group seems like a major limitation of the study and it would be important to explain in greater detail why that is and what the plan is (I strongly recommend to develop a plan if there is no such plan yet) to seek their feedback and input in the near future before the curriculum is implemented

*Response: We thank the reviewer for the suggestions. In the preparation phase, due to our limited professional network and financial support to recruit Delphi participants, we were not able to seek opinions from any academics and GH practitioners from low-income countries. Five years later, we will continue to try to get feedback from those GH colleagues from low-income countries to share their experience on cultivation of GH undergraduates and discuss the proposed GH bachelor curriculum to identify areas of strength and weakness for further improvement. This can become a topic of future studies. We have now added the explanation under the Discussion section (Page 17, lines: 23-25; page 18, lines: 1-5)*

## **To reviewer #3**

Comment #1) my main concern is the time line for this study. The work was done in 2013 and the first degree was offered in 2015 and so was completed in 2017. Since then, Planetary Health has emerged as new discipline and one could say that it has superseded GH. Planetary Health now looks at the environmental factors (e.g. climate change) and uses the 2015 Sustainable Development Goals to underpin health. I fear therefore that much of this work might be outdated.

*Response: We thank the reviewer for this comment. As we know, GH education in universities is now a new focus and has attracted widespread attention throughout the world. In China, GH education is at the initial stage. Our work was trying to establish the first GH bachelor curriculum in China. The paper summarized the previous research work during the development of the curriculum. We believe that it serves the purpose to provide some preliminary information for the future research to improve and revise the curriculum. What's more, we think it will also provide some guidelines and references for other educational institutions to set up their GH programs or curricula in the future. (Page 17, lines: 18-20; page 18, lines: 10-12).*

Comment #2) also, the authors have used 'undergraduate GH'. They should in fact be talking about a bachelor degree.

*Response: We thank the reviewer for this comment. We have now used 'bachelor' instead of 'undergraduate' in the revised manuscript to state it more clearly.*

Comment #3) since 2015, in line with the Global Burden of Diseases studies and the SDGs, countries are no longer referred to as 'developing' or 'developed'. The SDI is a newish metric that now looks at countries differently. China was once referred to as a developing country but now supplies manufactured goods to most countries and has a health economy with improvements in many areas. For many, it is now 'developed'.

*Response: We thank the reviewer for this comment. We used the 'developing' and 'developed' countries to reflect the social development. Now we have used 'middle-income' and 'high-income' to replace 'developing' and 'developed' in the revised manuscript.*

### VERSION 2 – REVIEW

<b>REVIEWER</b>	Timothy Brewer, Vice Provost and Professor of Medicine and Epidemiology University of California, Los Angeles
<b>REVIEW RETURNED</b>	10-Sep-2018

<b>GENERAL COMMENTS</b>	The authors have nicely addressed the issues raised in the previous review.
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<b>REVIEWER</b>	Corrado Cancedda University of Pennsylvania, United States
<b>REVIEW RETURNED</b>	20-Sep-2018

<b>GENERAL COMMENTS</b>	The authors have done a good job of addressing the suggestions of the reviewers and the revised version of the manuscript is much improved. I would however, recommended to emphasize more in the discussion the importance of seeking advice from global health educators, researchers, and practitioners working in low-income countries. They know better than anyone the kinds of knowledge and skills needed to be effective in the field and also the ways in which international workers deployed in country at times can fall short of such competencies
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### VERSION 2 – AUTHOR RESPONSE

#### To reviewer #1

Comment #1) The authors have nicely addressed the issues raised in the previous review.

*Response: We thank the reviewer for the acknowledgement.*

#### To reviewer #2

Comment #1) The authors have done a good job of addressing the suggestions of the reviewers and the revised version of the manuscript is much improved. I would however, recommended to emphasize more in the discussion the importance of seeking advice from global health educators, researchers, and practitioners working in low-income countries. They know better than anyone the kinds of knowledge and skills needed to be effective in the field and also the ways in which international workers deployed in country at times can fall short of such competencies

*Response: We thank the reviewer for the nicely comment. We have now emphasized that it's important to seek advice from those global health educators, researchers, and practitioners working in low-income countries under the Discussion section. (page 18, lines: 1-7).*