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)	Ectopic pregnancy – exploration of its global research architecture
	using density-equalizing mapping and socioeconomic benchmarks
AUTHORS	Brüggmann, Dörthe; Kollascheck, Jana; Quarcoo, David; Bendels, Michael; Klingelhoefer, Doris; Louwen, Frank; Jaque, Jenny;
	Groneberg, David

VERSION 1 – REVIEW

REVIEWER	Funlayo Odejinmi
	Whipps cross university hospital
	Barts Health NHS Trust
	London
	no competing interests
REVIEW RETURNED	15-Jul-2017

GENERAL COMMENTS	the paper is well written and is an important contribution to the area of ectopic pregnancy research. the authors have carried out similar research in other areas of gynaecology for example in endometriosis. it is a first in such publication in research of ectopic pregnancy i however would like to ask the following questions and make the following comments point 1 Page 5 line 42 a multitude of disciplinesinvolved in the management of ectopic pregnancy and hence related research attracts the interest of scientists worldwide addressing the issue from a clinical basic science and public health perspective
	I would agree that the diagnosis and management of ectopic pregnancy encompasses a wide spectrum of medical specialities and that research it attracts clinical basic science and public health perspectives however the authors present this as cause and effect. Both sentences are statements of fact but the authors have not in the introduction presented evidence that one leads to the other
	point 2 Page 6 line 3 therefore
	point 3In the results section looking at the citation of publications the us topped the list with more publications being sited at least 80 times. Though this puts the US clearly ahead of most countries they also have the most journals and a previous study reported on the

preference of US journals to publish native research (Chen et al., 2016)Chen, X.-l., Chen, Z.-r., Cao, Z.-l., Han, K., Tong, Y.-w., Xiang, X.-h. and Hu, C.-x. (2016) 'The 100 most cited articles in ectopic pregnancy: a bibliometric analysis', SpringerPlus, 5(1), pp. 1815. point 4

Subject categorisation

Is this section actually subject categorisation or speciality area where the publication was published

The authors also talk about impactful research in categories however these categories represent probably areas of publication in relation to speciality rather than subject matter

The authors however should make it clear how they identified the subject area

"Obstetrics and gynaecology" or "reproductive biology" these would not be regarded as a subject area per se as they encompass many aspects of obstetrics and gynaecology and could be used as major categories of issues pertaining to the diagnosis and management of ectopic pregnancy as real subject areas would include things like ultrasound, diagnosis, ultrasound, management e.g. surgical management and medical management

the fact that the USA published more in the area of emergency medicine does not necessarily mean that researchers from USA focused more on emergency medicine than other countries. Looking through popular literature there are indeed publications related to emergency ultrasound in the management of women with ectopic pregnancy as well as diagnosis of ectopic pregnancy in emergency departments. However most ectopic pregnancies are managed in A&E departments but are not published in emergency medicine iournals

point 5

the authors did not do a journal analysis as they did when they looked at endometriosis for instance if they have that information it would make a valuable addition to literature as anecdotally publications in ectopic pregnancy research is often in journals with low indices probably related to low methodology in ectopic pregnancy research due to non standardisation of definitions?

otherwise as stated about well written and thought out piece of work

REVIEWER	Yingpu Sun
	Reproductive Medical Center, First Affiliated Hospital of Zhengzhou
	University, Zhengzhou, China
REVIEW RETURNED	17-Jul-2017

GENERAL COMMENTS	Nice work

VERSION 1 – AUTHOR RESPONSE

Reviewer 1: Funlayo Odejinmi

Please leave your comments for the authors below:

the paper is well written and is an important contribution to the area of ectopic pregnancy research. the authors have carried out similar research in other areas of gynaecology for example in endometriosis.

it is a first in such publication in research of ectopic pregnancy i however would like to ask the following questions and make the following comments

Dear Dr. Odejinmi.

Thank you so much for your kind words and the time you took to thoroughly revise our manuscript.

point 1

Page 5 line 42... a multitude of disciplines.....involved in the management of ectopic pregnancy... and hence related research attracts the interest of scientists worldwide addressing the issue from a clinical basic science and public health perspective...

I would agree that the diagnosis and management of ectopic pregnancy encompasses a wide spectrum of medical specialities and that research it attracts clinical basic science and public health perspectives however the authors present this as cause and effect. Both sentences are statements of fact but the authors have not in the introduction presented evidence that one leads to the other

Response:

We thank the reviewer for pointing out the missing causality between the two statements. Yes, we agree that these sentences describe merely facts so they were linked together with "also".

Please refer to the following (page 5, line x):

"A multitude of disciplines such as OB/GYN, Family Medicine, Internal Medicine and Surgery are involved in the management of ectopic pregnancies. Also, related research attracts the interest of scientists worldwide addressing the issue from a clinical, basic science and Public Health perspective."

point 2

Page 6 line 3 therefore

Response:

We apologize for that error and corrected it accordingly.

point 3

In the results section looking at the citation of publications the us topped the list with more publications being sited at least 80 times. Though this puts the US clearly ahead of most countries they also have the most journals and a previous study reported on the preference of US journals to publish native research (Chen et al., 2016)

Chen, X.-I., Chen, Z.-r., Cao, Z.-I., Han, K., Tong, Y.-w., Xiang, X.-h. and Hu, C.-x. (2016) 'The 100 most cited articles in ectopic pregnancy: a bibliometric analysis', SpringerPlus, 5(1), pp. 1815.

Response:

We thank the reviewer for sharing this important reference with us. It has been included in the manuscript on page x , line y.

#This might be linked to a potential bias. Since US American Journals and their reviewers have a significant preference to accept papers written by local researchers point 4

Subject categorisation

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The authors however should make it clear how they identified the subject area "Obstetrics and gynaecology" or "reproductive biology" these would not be regarded as a subject area per se as they encompass many aspects of obstetrics and gynaecology and could be used as major categories of issues pertaining to the diagnosis and management of ectopic pregnancy as real subject areas would include things like ultrasound, diagnosis, ultrasound, management e.g. surgical management and medical management

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Response:

We performed subject area analysis for all ectopic pregnancy related literature by using the standard categories provided by the Web of Science. These categories are assigned to every publication by the Journal Citation Reports (provided by the Thompson Reuters/Institute of Scientific Information) during the publication process.

By performing a subject area/category analysis, our specific goal was to investigate chronologic shifts in ectopic pregnancy related research over the course of time. We agree with the reviewer that we cannot deduce the particular interest of scientists related to ectopic pregnancy research.

We now describe the process of subject area/category identification in the methods section and thank the referee for mentioning this issue.

Please refer to the following (page 6, line x):

"Subject area categories are assigned to every journal and its publications by the Journal Citation Reports (provided by the Institute of Scientific Information) during the publication process. These standard categories can be retrieved via WoS. For our analyses, these original WoS categories have been used."

point 5

the authors did not do a journal analysis as they did when they looked at endometriosis for instance if they have that information it would make a valuable addition to literature as anecdotally publications in ectopic pregnancy research is often in journals with low indices probably related to low methodology in ectopic pregnancy research due to non standardisation of definitions?

Response:

We are more than happy to perform a journal analysis in the area of ectopic pregnancy research. In

this regard, please refer to the following (page 14, line x):

Journal analysis

We carried out an analysis of the most publishing journals in the field of ectopic pregnancy research (Fig. 6). Here, "Fertility and Sterility" published the most articles on ectopic pregnancy (689 publications), followed by the "American Journal of Obstetrics and Gynecology" (653 publications), "Obstetrics and Gynecology" (466 publications), and "Human Reproduction" (396 publications). These four journals belong to the top ranked journals in Gynecology and Obstetrics with impact factors more than 4.5. Regarding the average citation rate among the 15 most publishing journals, "Obstetrics and Gynecology" received the highest rate with 20.5 citations per article (CR = 20.5). We found the "British Journal of Obstetrics and Gynecology" (CR = 17.3) in second position. It was ranked 14th regarding the total number of publications (95 publications). It existed until 2012 and was continued as "International Journal of Gynecology and Obstetrics" that ranked 8th regarding total publication numbers (166 publications) and reached an average citation rate of 5.93. Actually, the publication performance of both journals should be summed up, resulting in 261 publications and a CR = 10.05. Regarding the CR, "Human Reproduction" was positioned third (CR = 16.9) and was ranked before the "Lancet" (CR = 14.4 and 129 publications). Among the 15 most publishing was only one non-English journal - the German journal "Geburtshilfe und Frauenheilkunde" (ranked 9th with 156 publications on ectopic pregnancy and a CR = 3.1). It is the official publication platform of the German Society of Gynecology and Obstetrics. Among the 15 most publishing journals, 7 are published in the UK, 4 in the US, 2 in Germany and 1 in Australia and Scandinavia, respectively.

We also added Fig. 6:

Fig 6. Number of articles and average citation rate of the most publishing journals on ectopic pregnancy.

otherwise as stated about well written and thought out piece of work

Reviewer 2: Reviewer Name Yingpu Sun

Institution and Country

Reproductive Medical Center, First Affiliated Hospital of Zhengzhou University, Zhengzhou, China

Please state any competing interests or state 'None declared': None declared.

Please leave your comments for the authors below Nice work

Dear Dr. Sun,

Thank you very much for your appreciation and the time you took to assess our manuscript.