Author's response to reviews

Title: Determinants of neonatal mortality in Nigeria: Evidence from 2008 Demographic and Health Survey.

Authors:

Osita K Ezeh (ezehosita@yahoo.com)
Kingsley E Agho (k.agho@uws.edu.au)
Michael J Dibley (mdibley@health.usyd.edu.com)
John Hall (John.Hall@newcastle.edu.au)
Andrew N Page (a.page@uws.edu.au)

Version: 3
Date: 20 December 2013

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Determinants of neonatal mortality in Nigeria: Evidence from 2008 Demographic and Health Survey.

Ezeh, OK, Agho, KE, Dibley MJ, Hall, J and Page, AN

**Reviewer 1**

Abstract (Methods section)

1) Change “The risk of death was adjusting” to “The risk of death was adjusted”

**Response:** This has been changed to:

“The risk of death was adjusted”

**Table 1**

2) Change Maternal BMI (1= >18.5; 2= <=18.5) to (1>18.5: 2≤18.5)

**Response:** Changing maternal BMI to this “(1>18.5: 2≤18.5)” could be misinterpreted as “18.5 less than 1 & 18.5 greater or equal to 2”, but for clarity we changed to “(1= BMI >18.5; 2= BMI ≤18.5)”.

**Table 2:**

3) Change 31.3 (29.2, 33.4) to 31.3 (29.2 - 33.4)

**Response:** The comma (,) has been replaced with the hyphen (-) both in Table 2 & 3

31.3 (29.2 - 33.4)
Discussion section:

4) “Another possible reason for the low rate of neonatal deaths among girls, may also be due to the development of early fetal lung maturity in the first week of life,”

What is the reference for this statement?

Response: Reference now included (see reference number 26)


5) Risk of Neonatal mortality with C Section: Please clarify whether C Section were elective or emergency. If this stratification has not been done, please do so and revise accordingly.

Response: As indicated in the manuscript, our findings were based on publicly available data (DHS data) and in it, elective and emergency caesarean section were combined as C-section. However, for clarity we have included a footnote which indicates that C-section is a combination of both elective and emergency caesarean.

Second last paragraph:

6) Change “healthcare services such as delivery assistant by” to “healthcare services such as delivery assisted by”

Response: This has been changed to:

“healthcare services such as delivery assisted by”

7) Please change Conclusions at the end of discussion to Summary

Response: No change made to the manuscript because we followed BMC Public Health requirement/format for submission.
Reviewer 2

Comment 1
Gestational age is an important factor associated with neonatal mortality. The Discussion section should include material on this issue along with some information as to why such data are difficult to obtain through retrospective surveys.

Response: We agreed that past studies have demonstrated that gestational age is associated with neonatal mortality [1, 2], but these studies were hospital based studies. Gestational age in a population based study may be limited by the followings;

1) Recall bias in calculating gestational age. Studies have shown that mothers who are socioeconomically disadvantaged have had difficulty recalling their last menstrual period (LMP) used in estimating gestational age [3, 4, 5].

2) Access to prenatal ultrasound is limited especially to rural mothers because of inadequate availability of health care facilities and skilled health personnel. As a result of this, gathering information on gestational age may be difficult since majority of mothers delivered their babies at home (62%) and lived in rural areas [6].

Comment 2
Similarly, in the case of low birth weight. Given the importance of these two variables, the authors should discuss alternate data collection methods to obtain such data at the community level. For e.g. vital registration of births and neonatal deaths: pregnancy Cohort follow up studies.

Response: Unlike developed countries, vital registration of births and deaths are often not practical in many low income countries like Nigeria and this study is not practical because: 1) more babies were delivered at home; 2) limited access to registration point; 3) high level of illiteracy.

3. In addition to maternal characteristics and birth order status identified as important risk factors, there is a need to identify the more proximal risk factors or biological causes of death. For e.g. neonatal sepsis and hypothermia are important immediate causes of death in neonates, which are amenable to community based new born care interventions. Also, there have been successful efforts in identifying such causes of neonatal death using verbal autopsy methods. Hence the article should also advocate initiatives to collect data on causes of death in the community to enable the design and implementation of suitable interventions to reduce neonatal mortality rates in Nigeria.
Response: Verbal autopsy in Nigeria may not be achievable because majority of mothers still attribute death to: 1) cultural beliefs; 2) witchcraft beliefs, and 3) “abiku” belief. “Abiku” means children who have come from the spirit world and can die at will unless certain rituals are performed [7, 8].

References


6) National population commission, Federal Republic of Nigeria: Final report on Nigeria Demographic and Health Survey 2008. ORC Macro, Calverton, Maryland, USA.
