Reviewer’s report

Title: Factors Associated with Timing of Antenatal Clinic Attendance Among First-Time Mothers in Rural Southern Ghana.

Version: 1 Date: 18 Oct 2019

Reviewer: Kate Cheney

Reviewer's report:

Thank you for the re-submission - I think I mistakenly recommended essential revisions rather than MAJOR revisions last time, apologies for my error.

The topic is of interest, especially to countries in your area and for readers like me outside your area. However I have quite a few comments and suggestions. These are only suggestions and for your consideration.

Abstract

* Gestation in weeks rather than months is usual
* SD 1.7…what days, weeks, months? Is this SD necessary?
* Results still need to be easier to read in the abstract

Background:

I tried to make a list of my comments but it was too difficult. Therefore I moved sections around and changed some things. The detail may not be correct and I only offered suggestions. Your version jumps around too much and doesn't tell the story. The references are mixed up now and you need to add a couple to support what you assert.

"Pregnancy is an important time to encourage, allay anxieties and equip mothers with information which promotes healthy behaviors and parenting skills (1). Appropriate care during pregnancy and childbirth is critical for the health of both the mother and the baby (2). WHO recommends Antenatal Care (ANC) and suggests at least eight ANC visits in total, with the first visit during the first trimester of gestation (5, 6)."
ANC is special care for pregnant women and it is important in the life of a pregnant woman and her family. It is a public health service (not everywhere) with the goal of preventing health risks, early detection of abnormalities, institution of corrective measures if possible and preparation of both the woman and fetus and to ensure good start of life for each newborn child (7-9). Suitable ANC introduces the pregnant woman to the health system. This enhances the probability of the woman birthing with a skilled birth attendant and contributes to the good health of both the mother and baby (you need to reference this). Insufficient ANC during this period (what period?) does not support the model of continuum of care, which might affect both mothers and babies (1).

While preparing for a safe childbirth is an essential part of ANC, the timely initiation of the first ANC visit is an important element (8, 10). According to WHO, every pregnant woman in developing countries should seek ANC within the first trimester of gestation (11,12). WHO guidance focuses on; preventing and treatment of anaemia by encouraging the pregnant woman to take iron and folate supplements, prophylactic treatment of malaria, immunization against tetanus, tuberculosis (TB). Health education on nutrition, monitoring and treatment of sexually transmitted infections (STIs) including human immune virus/acquired immune deficiency syndrome (HIV/AIDS) as well as early detection and management of other chronic diseases and warning signs of complications is also achieved during this period (11, 12). Studies have shown that, early ANC attendance (during the first trimester of pregnancy) plays a major role in early detection and treatment of maternal health problems in pregnancy and serves as a good basis for proper management during and after childbirth (8, 10). Hence, failure to initiate ANC early is a potential risk for complications during pregnancy, childbirth, and puerperium (8, 10). Late initiation of ANC may lead to late diagnosis of complications which might have the potential to detrimentally affect maternal and fetus health. Thus, contributes to maternal mortality, premature labour, preterm babies and intra-uterine deaths. (Ref needed)

In Ghana ANC forms the basis of all maternal health care provision, and encompasses the evaluation of the general health of pregnant women with the goal of detecting and preventing adverse maternal and neonatal outcomes. ANC in Ghana, is provided by qualified health-care professionals (who are they - Midwives and Obstetricians?). ANC conventionally takes the form of a one-on-one consultation between a pregnant woman and her health-care provider. The antenatal visit in Ghana integrates the usual individual pregnancy health assessment with tailored group educational activities and peer support, with the aim of motivating behaviour change among pregnant women, improving pregnancy outcomes, and increasing women's satisfaction.
The 2014 Ghana Demographic and Health Survey (GDHS) showed that 97% of females who gave birth in the five years preceding the survey received ANC at least once for their last childbirth and approximately nine in ten women had four or more ANC visits (14). Studies (elsewhere do you mean) have identified several factors such as media exposure, maternal education, health service availability, husband's education, cost, household income, history of obstetric complications and women's employment that impact on use of ANC, in developing countries (15-18). These studies are supported by other research finding late ANC attendance is associated with young maternal age, lack of partner or family support, high parity, premarital status, lack of formal education, unwanted pregnancies and low socioeconomic status (17-19).

In Ghana, there is a lack of research as to the factors affecting timing of initiation of ANC attendance and if parity could affect the timing of ANC initiation. This study examines timing of initiation of ANC attendance and associated factors among first-time mothers in rural Southern Ghana.

Methods

I can see you are trying to describe Ghana, thank you but what the reader wants to know is about the population. Here is further suggestions should you want them

"A total of 1,076 women who met the inclusion criteria were included in the study" - this goes in results.

What proportion is 1076 of the area you describe, it doesn't sound many.

Did you do a sample size calculation?

I am confused; did you use data only or approach women to recruit?

Study area

The republic of Ghana is located on the West African Coast and the study was conducted in two rural districts of it. The Shai-Osudoku and Ningo-Prampram districts of the Greater Accra Region of Ghana have a total population of 115,7754 and a detailed description of the Dodowa Health and Demographic Surveillance System(DHDS) . The DHDS and its operations can be found elsewhere (24-26).The study used secondary data from DHDSS.
Study population

The study population was selected from electronic (was it?) data records which forms the DHDSS, between month 2011 and month 2013. The Shai-Osudoku and Ningo-Prampram districts currently experiences approximately X percent of births in Ghana (or in the broader district) and x % of women attended ANC and birth in a local public hospital.

Participants were the primiparous women who gave birth at the hospital during the study period. Women who were not first-time mothers, who were not captured in the DHDSS and who gave birth before 2011 or after 2013 were excluded from the study.

Variables

The dependent variable for this study is timing of ANC visit which is recorded as: 1 "Within first trimester", 0 "After first trimester". From the available DHDSS data (how many were excluded?), we extracted 7 independent variables which were based on literature and the likelihood to influence the outcome of interest. These independent variables include: maternal age, education, marital status, household size, household head's education, district and socioeconomic status. Determination of socioeconomic status as a proxy measure of a household's long term standard of living using calculated weights based on principal component analysis (PCA) (27) has been reported elsewhere (24, 28).

* How did you calculate gestation?

Results

* Those excluded due to missing data =?

* I would take out the SD as it is meaningless when reading demographics in this way

* Could you think about reporting 72% rather than 72.2%; 38% rather than 37.7% for example?

* Keep it short and direct to the demographics table?

* I still have an issue with using months rather than weeks when describing gestation.
You have two groups: women who have consulted before 3 months and another over 3 months. Did you compare the groups?

Maybe just write the significant finding briefly and refer to a table? Results need to be simply presented and easily readable.

Just show a table with adjusted OR?

The result section needs to be reconsidered.

Tables

Need reconsidering. It is not useful to have percentages expressed as: 5.00, 10.00 as per Figure 1

Tale 2 maybe just present adjusted OR

I suggest you look at it again with a statistician

Discussion

…do not comply…perhaps say do not do so. Comply sounds like they are doing it on purpose.

57.34% - maybe better to say 58%

Conclusion and recommendations

Try not to introduce new concepts here. You summarize your main points of evidence for the reader. You can usually do this in one paragraph.

See example below for consideration (it is only an example)
'In this study, we have shown that less than half of the study participants initiated ANC visit in
the first trimester of pregnancy which is outside the gestation recommended by the WHO. I).
Investment in communicating strategies to target women and families prior to pregnancy about
timely ANC visiting expectations as a health priority will likely be of greatest benefit. This is
recommended by the new WHO model for women in rural settings (5).'

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

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additional statistical review?
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assessment in your comments to the editors.

I recommend additional statistical review

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