

Review report

BSMMUJ-17.4 – 75688

Hypertension and its risk factors among pregnant garment workers attending a health centre in Bangladesh
Khatun T *et al.* (dr.tayebakhatun@gmail.com)

REVIEW COMMENTS	AUTHOR RESPONSE
Date of submission: 25-Aug-24	
A. Technical review	
ROUND 1	
Reviewer's name: A: Sohel Reza Choudhury	
ORCID: 0000-0002-7498-4634	
Date assigned: 27-Aug-24	
Date submitted: 15-Sep-24	
Do you have any conflict of interest with the author/s? No	
Do you wish to be disclosed to the author? Yes	
Comments sent to author (Date: 21-Sep-24)	Date: 10-Nov-24
3. Does the abstract provide a complete and accurate description of the content of the article? = No 3a. Since the main outcome measure is prevalence of PIH, it should be reported with 95% interval.	We calculated the 95% CI of PIH and mentioned both in the abstract (line 36) and the result section (line 130). "The overall prevalence of PIH was found to be 7.3% (95% confidence interval 4.0% to 12.3%)."
6. Are the methods described in sufficient detail so that the study could be reproduced? = No 6a. Method section should follow the journal style. Avoid subsection headings such as Design, population, sample size determination etc except statistical analyses subheading. Author should review the sample size calculation. As the prevalence of PIH is lower than 10%, the precision should be set not at 5% but less than that usually 25% of the prevalence. Author may remove that sample size calculation part and may add power calculation based on the actual sample size in the discussion section. Please mention whether all consequent patients meeting inclusion and exclusion criteria were recruited or only volunteers for the study were samples. Please describe the BP, height and weight measurements in detail. How many times BP was measured, sitting or lying, which arm etc.	We have reduced the subheading as possible. We have revised the sample size calculation (lines 88-91). Now it looks as below – "The sample size was determined using the formula for population proportion, employing the prevalence of 8.8% (p) for PIH as reported by Haque <i>et al.</i> , 7 with a confidence level of 95% (Z=1.96) and a margin of error of 4.4% (d). The estimated sample size was 160." Basically, the samples were recruited conveniently based on the inclusion criteria. The recruitment process was described in lines 82-86 and also in lines 120-122. We have delineated the measurement elaborately (lines 95-97). Which looks as below – "BP was measured on the left arm in a sitting position using an aneroid sphygmomanometer (Model: ALPK2, model no. 500V) with a standard adult cuff size. Two readings were taken five minutes apart, and the average was calculated. Height was recorded in centimetres using a measuring tape, with participants standing upright without shoes. Weight was measured in kilograms using a calibrated digital scale (Tanita, model no. HA-680), with participants barefoot and without any additional items."
10. Is the discussion section critical and comprehensive about the main message of the manuscript? = No 10a. Limitations such as such small sample size should be mentioned in the discussion.	We have mentioned this in the Discussion section (lines 156-162). Which looks as below "To our knowledge, this is the first study to report on the status of PIH among working pregnant women. However, several limitations should be addressed in future research. First, the assessment of respondents' hypertension history relied on a single question, which may have led to an overestimation of PIH. Second, the sample size was inadequate, and nonprobability sampling was used, thus

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	<p>limiting the ability to detect associations and affecting the generalisability of the findings. Third, the family history of chronic disease might introduce recall bias suggesting that the reported data may underestimate the actual scenario. Therefore, future nationally representative research is crucial.”</p>
<p>Reviewer’s recommendation: Revisions Required</p>	
<p>Reviewer’s name: B: Mithila Faruque</p>	
<p>ORCID: 0000-0002-4731-2824</p>	
<p>Date assigned: 27-Aug-24</p>	
<p>Date submitted: 10-Sep-24</p>	
<p>Do you have any conflict of interest with the author/s? No</p>	
<p>Do you wish to be disclosed to the author? Yes</p>	
<p>2. Is the title appropriate? = No 2a. The title needs a little change by keeping either 'associated factors' or 'risk factors', not both associated risk factors. Line 2: The title may be modified as suggested either ‘pregnancy induced hypertension and its associated factors.....’ or ‘pregnancy induced hypertension and its risk factors.....’. Similarly, modify in the line 30 & 86.</p>	<p>As advised, we have revised the title as suggested. Now it looks like below: “Pregnancy-induced hypertension and its risk factors among pregnant garment workers attending an urban health centre in Bangladesh” Also modified the subsequent lines.</p>
<p>4. Are the study objective(s) clearly stated and logical? = No 4a. Prevalence can't be identified with a conveniently chosen sample in a purposively selected study place. Line 30: The word ‘prevalence’ is not appropriate here, needs to be replaced by ‘proportion’ and the action verb needs to be changed. This study aims to identify or to find out or to estimate the proportion of PIH and its risk factors among The same word ‘prevalence’ needs to be replaced in line 39 (result section).</p>	<p>Since the proportion (measured out of 1) is not commonly reported in the prevalence study we kept is as “Prevalence”. However, we understand the question of generalizability raised by the reviewer and mentioned that limitation in the Discussion section. We also mentioned “Hypertension” instead of PIH.</p>
<p>6. Are the methods described in sufficient detail so that the study could be reproduced? = No 6a. The methodology is not fully scientifically sound. The operational definition of PIH is missing. The total number of women garment workers are also obscured to match the number of pregnant women attended within the specified period. The calculated sample size is 140, but why the sample size is 150 in the final analysis - no explanation given. Sample selection criteria (inclusion) are not mentioned clearly.</p>	<p>We revised the “Methods” section and addressed the recruitment process and operational definition elaborately. We do not have any record of total number of women garment workers. We have described based on the data we have as below in lines 120-122 “During the data collection period, 161 pregnant workers aged 18 or older attended the centre for antenatal care. Of these, 150 who were at least 20 weeks into gestation, had no history of hypertension, and provided consent were included in the final analysis.” We have revised the sample size calculation, which is 160 (lines 88-91). However, we were able to interview 150 during the period of data collection. The inclusion criteria were further described in lines 84-88.</p>
<p>Reviewer’s recommendation: Revisions Required</p>	
<p>Reviewer’s name: D: Anonymous</p>	
<p>ORCID: NA</p>	
<p>Date assigned: 10-Sep-24</p>	
<p>Date submitted: 19-Sep-24</p>	
<p>Do you have any conflict of interest with the author/s? No</p>	
<p>Do you wish to be disclosed to the author? Yes</p>	
<p>6. Are the methods described in sufficient detail so that the study could be reproduced? = No</p>	

REVIEW COMMENTS	AUTHOR RESPONSE
<p>6a. 1. The authors state "We selected the health centre of a garment factory in the Adamjee Export Processing Zone, Narayanganj because it is easily accessible." Please elaborate on "easily accessible." And what is an urban garment health center? Is it a health centre that is associated with a garment factory? In other words, is there a clinic that is for factory workers only?</p> <p>2. How did you select pregnant women? Was it systematic random sampling? Convenience sampling?</p> <p>3. How did you identify if a woman was pregnant? Self-report? Clinic records</p> <p>4. How did you assess the 20 weeks gestation? Self-report? Or was it based on clinician records from the medical centre?</p>	<p>We re-wrote the sample recruitment process and described where the health centre is situated. To avoid confusion, we removed the terms "urban" and "easily accessible" (lines 82-86).</p> <p>We selected the pregnant women conveniently and described them in lines 82-86.</p> <p>This is based on the clinician records from the health centre. We mentioned in line 84.</p> <p>This is based on the clinician records from the health centre. We mentioned in line 84.</p>
<p>8. Are statistics used appropriately and described fully? = No</p> <p>8a. Please consider employing Poisson regression with robust variance rather than logistic regression. Logistics is most appropriate for case-control studies. https://bmcmmedresmethodol.biomedcentral.com/articles/10.1186/1471-2288-3-21</p> <p>If unable to reanalyze the data, then presenting estimates as prevalence odds ratios would be more appropriate. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5135596/</p> <p>Reviewer's recommendation: Revisions Required</p>	<p>We tried to calculate Poisson regression and failed to come up with a valid conclusion. However, we did a stepwise backwards approach of logistic regression as suggested by the editor (Table 2 in the manuscript).</p>
Editor's comments	
Editor's name: M Mostafa Zaman	
ORCID: 0000-0002-1736-1342	
<p>1. The selection of a multivariate model for adjustment of the ORs should be revisited. I suggest using a stepwise approach to select the variables.</p>	<p>We have done a stepwise backwards approach, and the revised model is presented in Table 2.</p>
Editor's decision: Revisions Required	
ROUND 2	
Editor's name: M Mostafa Zaman	
ORCID: 0000-0002-1736-1342	
Comments sent to author (Date: 13-Nov-24)	Date: 16-Nov-24
<p>1. How did you know that the hypertension was pregnancy-induced? You have measured the BP once after 20 weeks of gestation to identify pregnant women with hypertension. This provides a prevalence estimate at that point in time. How did you know that those women did have hypertension before 20 weeks, even before becoming pregnant?</p>	<p>Basically, we verbally asked a question to the participants whether they had any previous history of hypertension and found none for everyone.</p>
<p>2. The author's response to the comment of one reviewer on the sample size estimation is conflicting with the revised manuscript. The revised manuscript is more reasonable than the response.</p>	<p>As this measurement is not meticulous, so we have addressed this in the discussion section as a limitation of the study (lines 155-156).</p>
<p>3. The multiple logistic regression results are presented for one variable only (Family history of PIH). Why are data for other variables not presented? Without other variable data, it appears to be a univariate analysis.</p>	<p>We revised the response to the sample size determination of the previous reviewer.</p>
<p>4. Please follow the criteria for a brief article: 200-word abstract and 1500-word main text, and submit by 16 November.</p>	<p>We have done a stepwise backwards approach in logistic regression. 7 models were generated and the last model showed only two variables, where family history of PIH showed significant. We have shared the output tables. We need help in this regard and are ready to revise as per your guidance.</p>

REVIEW COMMENTS	AUTHOR RESPONSE
Editor's decision: Revisions Required	
ROUND 3	
Editor's name: M Mostafa Zaman	
ORCID: 0000-0002-1736-1342	
Comments sent to author (Date: 16-Nov-24)	Date: 16-Nov-24
1. Now you have two variables which look good. However, age could be added as a mandatory variable. Retry the model selection using age as a continuous variable.	We have re-run the analysis considering age as a continuous variable. Therefore, the OR (95% CI) for age in univariate analysis changed to 1.2 (1.0 – 1.4). For the adjusted model differences have been found. Table 2 has been revised accordingly.
2. Remove "pregnancy-induced" from the title and elsewhere. You must provide evidence that their BP was normal before pregnancy and the first 20 weeks of pregnancy.	We have removed PIH throughout the manuscript and replaced it with only hypertension (see the track change file attached).
Editor's decision: Revisions Required	
ROUND 4	
Editor's name: M Mostafa Zaman	
ORCID: 0000-0002-1736-1342	
Comments sent to author (Date: 16-Nov-24)	Date: 17-Nov-24
1. Could you use age as the obligatory variable in the multiple logistic regression?	We have re-analysed keeping age (continuous) as an obligatory variable in the model. Now the aOR changes. Therefore, we separate the Table 2. The univariate OR was kept in Table 2 and the multivariate OR was kept in new Table 3. The necessary texts have been revised accordingly (lines 37 and 139).
Editor's decision: Revisions Required	

B. Editorial decision	Date: 18-Nov-24
Final decision: Accepted subject to editorial clarifications.	

Editorial Clarification	
Editor's name: M Mostafa Zaman	
ORCID: 0000-0002-1736-1342	
Comments sent to author (Date: 20-Nov-24)	Date: 21-Nov-24
1. Provide a full form of FH throughout the document	FH was replaced by "Family history" throughout the manuscript
2. Remove the sample size formula and describe it in the text. Add references on how to consider the value of the margin of error.	Removed the sample size formula and described in the text. Also added a reference for determining the margin of error. See below – https://aos.usm.my/docs/Vol_1/09_14_ayub.pdf .
3. Discuss the wider confidence interval in Table 3 in the Discussion section	Mentioned in Discussion section as limitation.
4. Discuss the national prevalence of hypertension among this group and also the hypertension prevalence of garment workers in the discussion section with references.	Mentioned in the discussion section.