

# Review of: "Factors Associated with Contraceptive Use Among Migrant Female Head Porters in the Kumasi Metropolis"

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Potential competing interests: No potential competing interests to declare.

**TITLE:** FACTORS ASSOCIATED WITH CONTRACEPTIVE USE AMONG MIGRANT FEMALE HEAD PORTERS IN THE KUMASI METROPOLIS: CROSS SECTIONAL STUDY.

## COMMENT TO THE AUTHORS

The title is brief explaining what to be studied, study subject, objective and study design.

The manuscript describes the demographic, socio-economic and health-related predictors of Contraceptive use among female head porters in Ghana.

The fourth and fifth paragraphs of the "Introduction" section well depict the justification behind this study.

The abstract, introduction, method and result were presented well. However, the study used convenient sampling method and applied analytic cross sectional study. The authors mentioned "there is no adequate statistic to come up with sampling-farm that will yield to probability sampling method. At the same time, authors mentioned that female head porters (FHP=better to use abbreviations once written in full for the first time) live in clusters, for the sake of security. Using these clusters as sampling unit, it would have been better the sampling method used probability sampling method (random samples from conveniently selected clusters) for the result to be inferred to the wider study population and avail itself for better predictive analysis. This could have been done as the clusters/groups have leaders as reported on the "population" under study method. Also, there is no justification "why" and "how" the four clusters selected by the researchers, which could give us whether this could be considered representing the study population or help us understand how far this piece of work is scientific, as rigorous analytic method is used on the data collected  
**(multivariate logistic regression analysis: I hope you mean binary logistic regression analysis as you are dealing with dichotomous outcome variable=contraceptive use)**

The data has internal validity as long as it measures what it has to measure for the specific sample population studied with minimum bias incurred, but difficult to say it has external validity as the sampling method used was convenient (nonprobability) inferring to the wider study population. It is also advisable to indicate those factors that showed statistical significance, particularly while presenting on the abstract. However, factors not showing statistical significance but having clinical significance can be presented under result and discussed under discussion. Also, data collection was done using both closed and open ended questions, but no mention how the open ended questions were handled. Additionally, there is no pre-test conducted to test the tool or there is nothing that mentions whether the tool is standard validated tool that has been used elsewhere, before this study. Finally, the ethical clearance is well written, but it did not indicate the data storage and security issues, which is very critical.

## Result

Result section should strictly present the result rather than trying to discuss it, which should be moved to discussion section.

## Specific comments below

### 1. Title page

- Concise and well written, but be consistent in writing the names of the authors
- Please write the full name of the authors

### 2. Abstract: briefly summarized introduction, problem statement, research question, methodology, main findings, conclusion and recommendations

- Please link ideas and make it flow when writing statements and/or related paragraphs using the write transitional word/phrase (to connect ideas before and/or after );

Example: Despite the widespread use of modern contraceptives globally, literature on contraceptive utilization among underserved populations like migrant female head porters is relatively scarce. The factors affecting modern contraceptive use among migrant female head porters remain largely unexplored.

Background should summarize the problem and adequately justify the study.

## Suggested:

"Teenage girls have a high tendency to engage in unprotected sex, multiple sex partners and prostitution in Ghana, where about 17% of pregnancies are unwanted. There are also limited studies on contraceptive utilization among underserved populations like migrant FHP. As the result, factors affecting modern contraceptive use among these populations remain largely unexplored. Therefore, this study aimed to examine...(can continue as already written)

- Advisable also to use active voice to report your findings; Example: The study involved two hundred (200) migrant FHPs, who were conveniently sampled for the survey.

Suggested: Two hundred migrant female head porters were enrolled in this study using convenient sampling method.

- Findings: Mention the level of significance as indicated earlier.

a. Conclusion: it did not came-out clearly in the abstract. Rather than just saying "Findings have policy implications for improving contraceptive uptake among migrant female head porters";

**Suggested** taking from the main manuscript conclusion section: **"This study identified ethnicity, having valid national health insurance subscription, knowledge of the HIV status, and multiple sexual partners as predictors of contraceptive use among studied female head porters"**[caution is needed in making such conclusion inferring to target population from

convenient sample that is highly prone for bias].

- a. Recommendation: instead of saying, "The study recommends free NHIS subscription for female head porters and regular testing for HIV among head porters. Government and non-governmental organizations should focus on developing the potentials of northern Ghana such as the shea industry to create sustainable jobs for the teaming youth. The Ministry of gender, children, socialprotection should design programs to equip head porters with employable skills so they can exitthe trade".

**Suggested:** "It is recommended that the government scales up efforts towards promoting contraceptive use through establishing a mechanism for free subscription to the National Health Insurance Scheme, regular testing for HIV/AIDS and targeted interventions (i.e. targeting ethnic groups with low contraceptive use)".

- a. Key words: try to use MeSH on Demand for key words:<https://meshb.nlm.nih.gov/MeSHonDemand>

1. Introduction: should briefly summarize global, regional and national/local (inverted funnel approach) pattern of modern contraceptive (MC) use among women in reproductive age in a way it indicates the low (22%) level of contraceptive coverage in Ghana, highlighting the lack of/few information regarding the MC use among the target population (Female head porters/FHPs), justifying the need for this particular study. It is advisable first to define contraceptive use and unmet need.

**Suggested:** rephrasing the first paragraph:

"The contraceptive prevalence rate (CPR) measures the percentage of women who are currently using one form of contraception or another (Cahill et al., 2017; UN, 2015) OR "[SH2] *The percentage of women aged 15-49 years, married or in-union, who are currently using, or whose sexual partner is using, at least one method of contraception, regardless of the method used*" (WHO: *Global Health Observatory, 2023*)

The United Nations Sustainable Development Goal (SDG) five (5) recognizes gender equity as a fundamental human right. Realizing this goal is hinged on achieving SDG 3 which stresses universal access to sexual and reproductive healthcare services including family planning (Alatinga et al. 2021). Likewise, the right to health includes the right to control one's body and sexual and reproductive freedoms. *Whereas*, unmet need for contraceptive services limits women's chances to pursue their careers and compete with men, hence widening the inequality gap (Cahill et al., 2017)..

The unmet need for family planning is defined by WHO as, "women who are fecund and sexually active but are not using any method of contraception, and report not wanting any more children or wanting to delay the next child" (WHO: *The Global Health Observatory, 2023*). In addition, same source emphasizes unmet need is a right based measure that helps determine how well a country's health system and social condition support the ability of women to realize stated preference to delay or limit births. [Please re-check this definition as couples MC use is also used as indicator too. See alternative WHO definition].

The last paragraphs of the introduction clearly indicated the need for the study and justification behind. My concern is there are similar studies were referenced at the end as indicated below. So, it is better to clearly indicate the gap that these literatures did not address that your study is addressing (added value?) when looking factors associated with contraceptive use?? As stated under the following references you used on your manuscript:

Agyemang-Duah, W., Owusu-Ansah, J. K., & Peprah, C. (2019). Factors influencing healthcare use among poor older females under the Livelihood Empowerment Against Poverty program in Atwima Nwabiagya District, Ghana. *BMC*

*Research Notes*, 12(1), 320.

Alatinga, K. A., Allou, L. A., & Kanmiki, E. W. (2021). Contraceptive use among migrant adolescent girl head porters in Southern Ghana: Policy implications for sexual and reproductive health education and promotion. *Children and Youth Services Review*, 120, 105651.

Boamah, E. A., Asante, K. P., Mahama, E., Grace, M., Ayipah, E. K., Adeniji, E., & Owusu-Agyei, S. (2014). Use of contraceptives among adolescents in Kintampo, Ghana: A cross-sectional study. *Open Access Journal of Contraception*, 5(7).

Kporku, M. A. (2014). Female Head-Porter Access to Contraceptive use Services in Ejura Municipality, Ghana. Published dissertation submitted to the School of Graduate Studies, Kwame Nkrumah University of Science and Technology.

## 1. Method

- **Population:** just write about the population number, distribution and characteristic. Most of the other writings should move to "Sampling" section.

**Suggested:**

"There are no accurate statistics on migrant female head porters in Ghana. But, it was estimated about 40,000 head porters live in the streets of Kumasi and Accra alone. Head porters live in groups or clusters, each group (if you can, indicate estimated # in each group/cluster) having a leader. Young girls between the ages of 12 and 30 years from northern Ghana evade major cities. Many of them lack decent places to sleep and can be found sleeping in uncompleted buildings, shacks, kiosks and verandas at night and are vulnerable to rape, prostitution, and unwanted pregnancies.

- **Sampling:** should focus on the sampling approach/procedure and sample size

**Suggested:**

"Probability sampling method cannot be used as there was no accurate statistics on migrant female head porters to establish a sampling frame. Four clusters of groups in the Kumasi Metropolis, Race Course, Kejetia, Adum, and the Central Business District were identified conveniently?. Two hundred (200) migrant female head porters living in these groups, aged 12-49 years, were enrolled in the study using a convenient sampling method."

Please indicate the total number who were contacted and those consented? Did all those consented got interviewed? Clarify.

- **Data collection:** most of the explanation on the process of data collection written under the "Sampling" section must be moved under "data collection section"

#### **Suggested**

"The Kayayei business is well-regulated, and one cannot get them to answer questions without the consent of their superiors. The president of the Kayayei association of Ghana was contacted and the study objectives were explained prior to the data collection. After her approval, she referred the team to the chairman of the Kayayei association in Kumasi. The chairmen then contacted the leaders of the four clusters informing them of the intended research.

Pre-tested?? data collection tool was used to collect data from the female head porters. The tool has both open and closed ended questions. The questionnaires were written in English and translated into Twi (local Ghanaian language). Two graduate students and one teaching assistant from the Department of Planning, KNUST were recruited and trained for a week on the study objectives, data collection tools and data collection process. The questionnaires were discussed extensively with them to know what information is required. The tool was administered by the trained data collectors. Consent forms were read and explained to head porters and their thumb-prints were taken before the commencement of the data collection process. Questionnaire administration was carried out on Sundays at the places of residence of head porters when they are free from work and performing house chores. Each questionnaire administration lasted for about thirty minutes."

- **Data Analysis:** variables to be measured, type of analysis (Analytic CSS), analytic tool used, level of significance and measure of association to be used need to be described/indicated.

**Suggested:** Re-write to make it more clear- the descriptive and analytic section of the data analysis.

"The questions sought to ascertain the predictors of contraceptive use among migrant female head porters. It measured variables like demographic characteristics, socio-economic and reproductive health variables. Given unique identities the data was coded, entered, cleaned and analyzed. Analyses of the quantitative data were done using SPSS (version 16). Descriptive data analysis was conducted to describe the socio-demographic characteristics of the female head porters using frequencies, percentage and mean/media, depending on the type of the variable of interest that were presented in the form of tables, charts, and graphs.

Bivariate (better if you mention this) analysis were carried out, and on selected variables a binary logistic regression analyses were carried out. The variables showing a P-value of  $\leq 0.2$  (this is an example but depends on what you set as cut point) in the bivariate analysis were selected to be included in the bivariate logistic regression. The bivariate logistic regression model was run and adjusted odds ratio (AOR) and 95% CI were used to measure the association of demographic, socio-economic, and health-related variables with modern contraceptive use. The level of significance was set at  $\alpha \leq 0.05$ .

- **Ethical Clearance:** include confidentiality and data safety issue as indicated earlier.

1. **Results:** better to describe the major finding before the table/ summarize only pertinent findings, then refer the reader to the table.

- **Table-1**

**Suggested:** you can add to what you have summarized under the Table-1 with the comment given taking into consideration:

"About 98% of the female head porters (FHP) were aged 12-30 years old; and 57.5% had no formal education, about 72% had 110-399 ETB monthly income, while only 4% had monthly income of > 600 ETB. Of all the FHP, 36% were not enrolled in the NHIS and 44% of those enrolled had no active status?? (checkout this as we cannot talk about active status unless FHP is enrolled; and the denominator should be those enrolled=128).... (Table-1)"

**Avoid discussing results as commented earlier** (highlighted in red):

The majority of the respondents rated themselves as good (51.5%), fair (27.5%) and very good (21%). This implies that, respondents viewed their general health and functional state as okay and that they do not need to seek healthcare. The evaluated need for healthcare which represents a health professional's judgment of an individual's health status and as to whether the person needs medical attention was not ascertained.

Data from the field survey indicates that the majority of head porters earn between GH¢110 & GH¢399 (71%) per month. About 20% of respondents fall within GH¢ 400.00-599.00 amonth, and 4% earn GH¢600.00 and above.

The low earnings reflect the low standard of living among the head porters which may affect their ability to afford and utilize contraceptives.

- The 62% who contracted STI not indicated on the table (better to include it as it is pertinent finding).

An overwhelming number (97%) of respondents affirmed they have had unprotected sex in the past month. Furthermore, 62% admitted they have contracted sexually transmitted diseases. ..."

- You are discussing (highlighted in red) rather than just presenting the result: reserve this for discussion under discussion section

"This exposes the vulnerability of female head porters to the risk of unplanned pregnancy and STI. The reasons given for the use of contraceptives were to prevent pregnancy (59%) and to prevent STIs (41%). Furthermore, female head porters who were married, revealed that they used contraceptives more when they were single...

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The majority of respondents agreed they have registered for the National Health Insurance card. However, when asked about the validity status of the NHIS card, 56% had renewed their cards with 44% of respondents having expired cards. In Ghana, the possession of a valid NHIS card makes health care accessible and affordable.

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#### • Table-2 results

Better you clarify what the P-value stands for: whether it is from the bivariate analysis (that need to be done before going the logistic regression analysis) or from the binary logistic regression analysis? First doing the bivariate analysis is the recommended approach, to show how you have selected the variables included in the logistic regression analysis and to show which variables remained significant on final analysis.

It is also advisable to indicate on your result that "Age" and "educational level" did not show significant association with modern contraceptive use among the FHP, as it is different finding from your referred literatures that you need to discuss and give possible explanation later under discussion section.

Careful interpretation of the result is required (for all the variables in the logistic regression analysis with sub-categories this is actually required) as we do not have complete picture. Also you have to consider the wide CI and issue of precision too.

#### 1. Discussion:

- **Give a brief summary** of what the objective of the study and a summary of the major findings. Then, discuss results by comparing and contrasting with other studies.

#### **Suggested:**

This study aimed to assess the major predictors of modern contraceptive use among FHPs and use the findings to design relevant policies and programs in order to address major challenges and improve the life of FHPs in Ghana. Our study revealed that Ethnicity, having a valid NHIS card, knowledge of their HIV status and having multiple sexual partners as factors associated with contraceptive use among FHPs in the studied areas (**not forgetting my comments on external validity/generalizability and statistical significance**)

- The interpretation of association need to be corrected:

"Head porters who did not have valid national health insurance cards were 0.395 times more likely to utilize contraceptive services compared to those who did have valid NHIS cards" need to be **corrected**.

*"The odds of using modern contraceptives among head porters who did not have valid national health insurance cards was 39.5% of the odds of modern contraceptive use among women with valid NHIS cards."* OR

*"Not having valid NHI decreases the odds of using modern contraceptives by 60.5% as compared with having valid NHI; **use similar descriptive statement for other pertinent findings too**).*

STI result discussed but not indicated on table-1 (commented before)

- No references were cited to the finding for NHIS and knowledge of HIV-status comparing with other research findings as predictors.
- General: when relating findings with other studies a bit detail of pertinent information about the referenced literatures is helpful.

#### 1. Tables & Figures

Table and figure heads should be properly titled: subject, date and study area

Table-1: better to include median age and STI data (62%)

Table-1 foot note: write "key" first then the foot notes using smaller fonts like 10

Table-2: try to put it in one page or move all HIV information on the next page

Footnote: same comment as table-1

#### 1. References

- Number it
- Use consistent style
- Include literature on NHIS and contraceptive use to be used under discussion
- Try to limit and reduce literatures referenced not used in the manuscript

**Conclusions:** well written and the abstract should just give brief summary of this as suggested above. (With consideration of comments provided, of course.)

Generally, the authors did very good job considering the limited available data/information about FHPs in the study areas/Ghana. But, need to properly address the comments and clearly state the limitation of the study. I would have preferred the bivariate analysis done and unadjusted OR (UOR) presented along with the adjusted OR (AOR) for better clarity.

The results of the study are discussed to some extent under discussion; population, sample and data collection and analysis sections are a bit mixed up. The authors are strongly advised to take note of the comments and suggestion to adjust these. Finally, the result of this study (convenience sampling) should be carefully interpreted when trying to generalize to the study population.

Therefore, the manuscript needs proper edition and at times justifications for sections indicated, to be ready for public consumption.

