Determinants Of Anemia in Pregnancy: An Ecological Study In All States of India

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Screenshot of Approval

Dr. Rohini Ruhil

To: Sidharth Kumar

Sat 18/06/2022 11:49

Dear Sidharth
You have done a good job.
Your draft dissertation is approved.
Best Wishes
Dr Rohini Ruhil
Asst. Prof.,
IIHMR Delhi.

Introduction

- Anemia is a major public health issues among pregnant women, in India.

- Anemia basically is a condition in which the number of red blood cells or their oxygen-carrying capacity is definitely insufficient for all intents and purposes to meet physiologic needs. vary with age, sex, attitude, smoking and pregnancy status.

- Anemia in pregnancy is defined as haemoglobin (Hb) concentration is less than 11 g/dl.

- Major causes of anaemia for all intents and purposes depend on actually such as intake, food and its nutritional status, environment, social-economic and educational status, which is definitely fairly significant.

- Other common factors such as infections like malaria and hook worm, dietary deficiencies of other nutrients, malabsorption, blood loss, acquired immune deficiency syndrome (AIDS) and genetic defects like sickle cell disease, metabolic disorders, and repeated pregnancy can all cause or contribute to the condition.

Types of Anaemia

- Anemia is classified as mild, moderate, or severe based on the concentrations of hemoglobin in the blood.
- Mild anemia
- Moderate anemia
- Severe Anemia

  (Source: DHS, https://dhsprogram.com/pubs/pdf/fr130/12chapter12.pdf)

Determinants of Anaemia in Pregnancy

- **Parasitic infection, additional diet during pregnancy, consuming tea/coffee immediately after food, meat consumption, previous heavy menstrual blood flow, and occupational status of women were significant factors associated with anemia among pregnant women.**

General Objective:

- To analyse the Determinants of anemia in pregnancy in India.

Specific Objective:

- To study the Correlation between MPI, Literacy and tobacco consumption with anemia in all women and anemia in pregnant women.

- **Study Design:**

It is a cross sectional study. Study design based on the secondary data. The data collected from various sources like National Family Health Survey(NFHS), National Multidimensional Poverty Index Baseline Report(NITI Ayog) , published articles, books, newspaper and magazines.

- **Study Area:**

All States & UTs of India

- **Duration Of Study:**

3 Months

- **Study Population:**

All women & Pregnant women/Reproductive age group (15-49 years) who are anemic, and using tobacco in India.

Data Collection Method:

- Data Regarding pregnant women age 15-49 years who are anaemic is obtained from NFHS-5.

- Data regarding headcount ratio of MPI is obtained from NITI Ayog, National Multidimensional Poverty Index Baseline Report 2016-17.

- Data regarding Percentage of women currently using tobacco in any form are obtained from Global Adult Tobacco Survey (Second Round, India Report 2016-17)

Data Analysis:

- MS Excel-2010 was used to plot scatted diagrams of correlation between variables and correlation coefficient was calculated.

Fig-1 : Correlation between Pregnant women who are anaemic VS Headcount Ratio
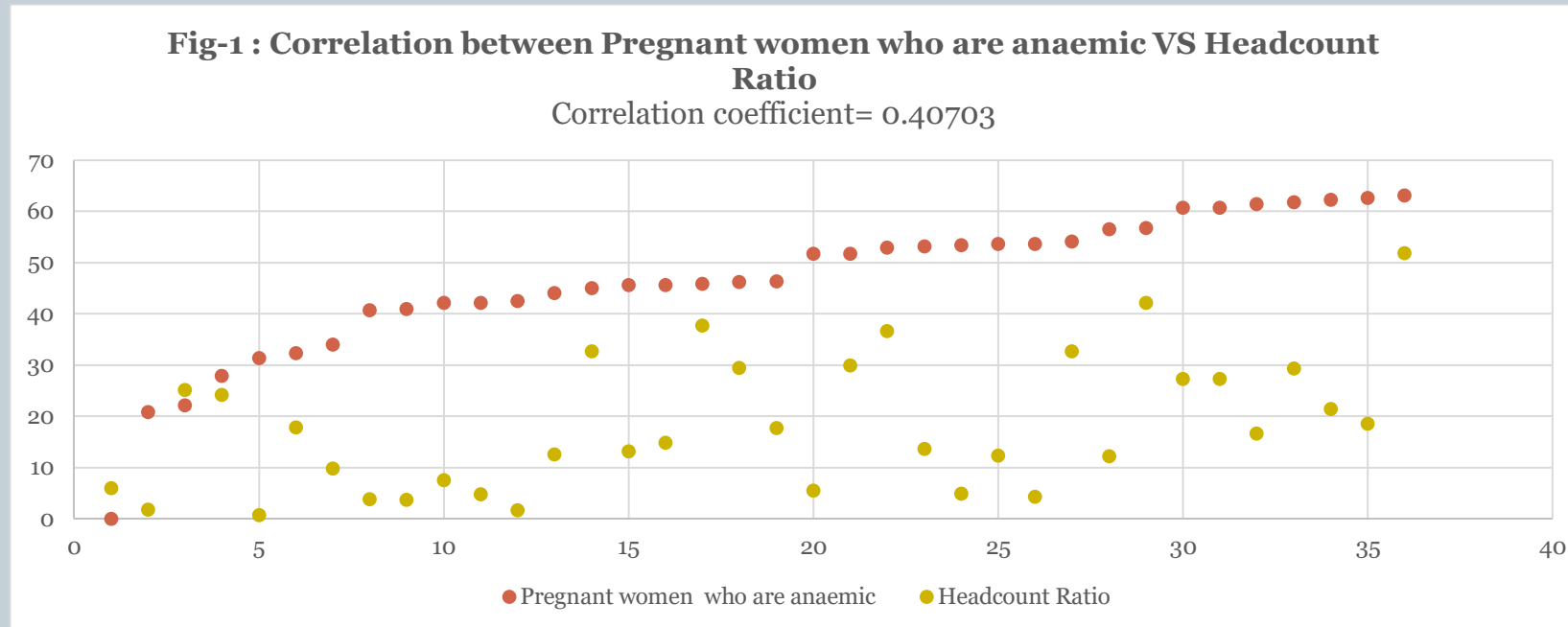Correlation coefficient= 0.40703

Figure-1 shows that the states who are high in headcount ratio of MPI (Multidimensional Poverty Index) have higher percentage of anaemia in pregnancy in women. (Correlation Coefficient is 0.40703)
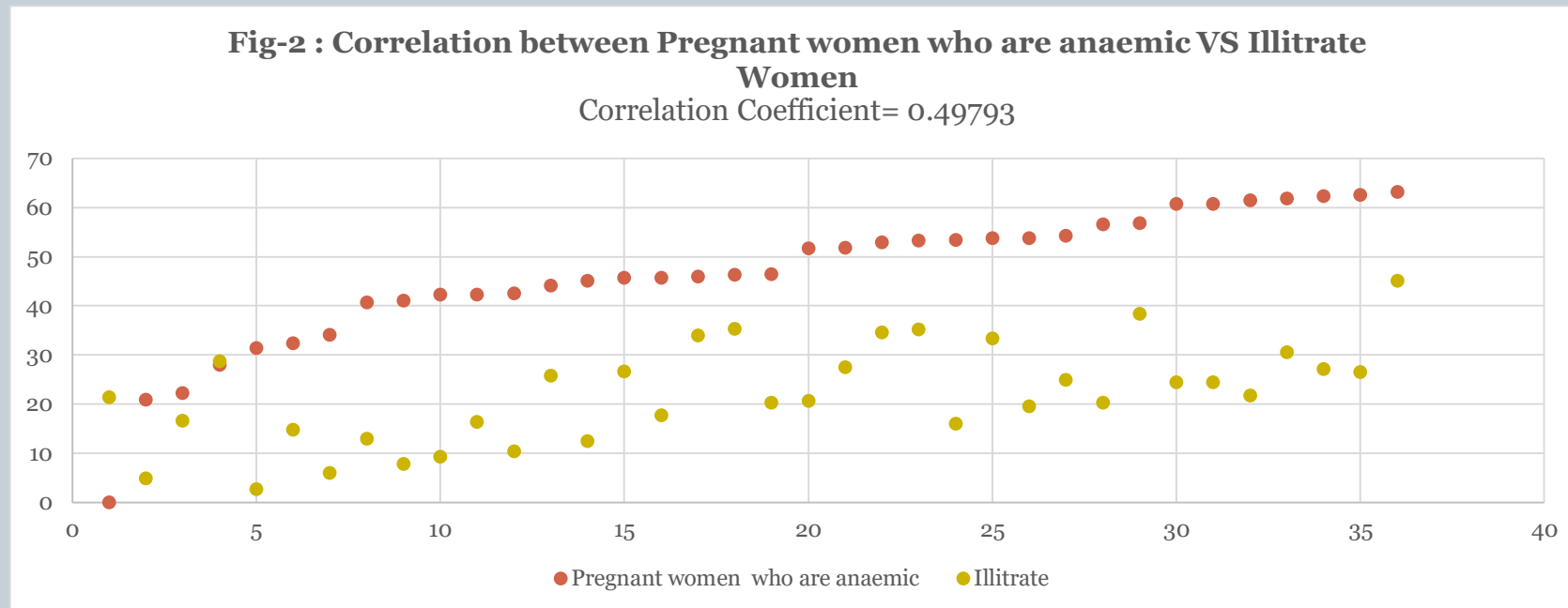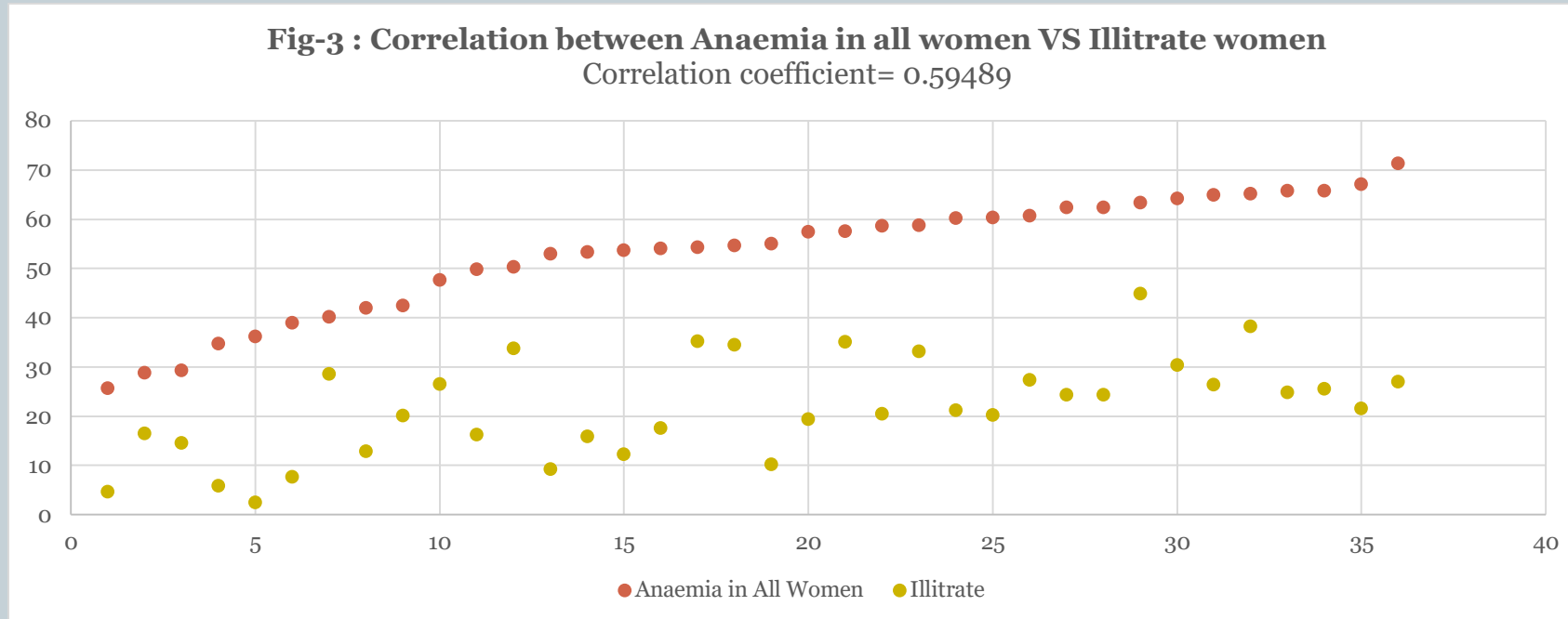
Fig-2 : Correlation between Pregnant women who are anaemic VS Illitrate Women
Correlation Coefficient= 0.49793

Figure-2 shows that the states with higher percentage of women illiteracy also have higher percentage of anaemia in pregnant women. (Correlation Coefficient is 0.49793)

Results

Fig-3 : Correlation between Anaemia in all women VS Illitrate women
Correlation coefficient= 0.59489

Further illiteracy is correlated with anaemia in all women in general as shown in **figure-3**. The anaemia can also be linked to women's education level demonstrates that as schooling decreases , the percentage of women with anaemia increases. (Correlation Coefficient is 0.59489)

Fig-4 :Correlation between pregnant women who are anaemic VS women who are using tobacco
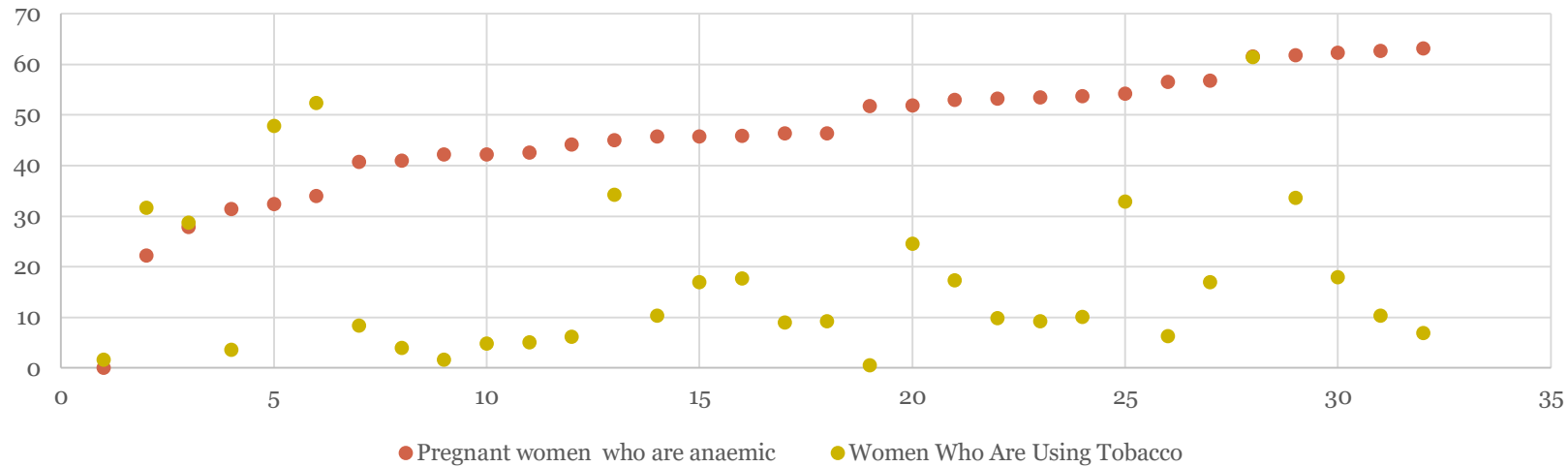
Correlation coefficient= 0.03733943

Figure-4 shows that the women of all states who are consuming more tobacco have higher risk of anaemia in women. (Correlation Coefficient is 0.03733943)

- Women who were older or younger, belong from low income families, being ethnic minorities were at high risk of anemia. The prevalence of anemia was among women in the first trimester, higher than non-pregnant women and women in the third trimester. The prevalence was significantly higher in Pregnant women than Non-pregnant women.

- The risk of anemia in non-working women was significantly higher than working women. Considering that chronic diseases may have a certain impact on pregnant women's metabolism.

- hypertension, diabetes and thyroid diseases were also related to a higher anemia risk in pregnant women.

- There are substantial differences in genetic background, culture, socioeconomic levels, climate and geographic features of the residential area, lifestyle, and dietary pattern among pregnant women also effect in anemia during pregnancy

- Some women in India of reproductive age lack the knowledge of prenatal health care and are not willing to improve their nutritional status and seek health care services

- The pregnant women's Residence, previous heavy menstrual flow, age, parasitic infection, food taboo, and tea/coffee consumption immediately after meals were significant predictors of anemia among pregnant women

Results shows that anaemia in pregnancy increases by increase in multidimensional poverty index(MPI), illiteracy in women & increasing in tobacco consumption amount women

There is a need for inter sectorial coordination between different vertical programmes run by the government of India. so apart from this policy initiatives there is a need for inter sectorial coordination by the government like from poverty to poverty allegation programmes ,from illiteracy to literacy programmes & from tobacco consumption to tobacco control programmes by the government

Needs to adopt the holistic approach to address & reduce the anaemia in pregnant women and those women who are anaemic in India

References

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- This is a secondary research and the findings were submitted to IIHMR, Delhi.

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What did you learn (skill/ topic)?

- Work on secondary data such as NFHS, National Multidimensional Poverty Index Baseline Report(NITI Ayog) , published articles, books, newspaper and magazines.

- Review of literature.

- Run correlation analysis etc.

- Data analysis.

Overall self comments on Dissertation

- The study findings will be helpful in planning prevention and planning of programmes that would focus more on populations most affected.

- The outcome of the study will be a report, and publications in peer reviewed journals.