



ASSOCIATION BETWEEN THE POST-TEST LEVEL OF Hb% AMONG TRIBAL PREGNANT MOTHERS WITH THEIR SELECTED DEMOGRAPHIC AND OBSTETRIC VARIABLES AT SELECTED PRIMARY HEALTH CENTRES AT BHUBANESWAR, KHORDHA DISTRICT, ODISHA.

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ABSTRACT

A Randomization Quasi - experimental studies layout with Pre-check & Post-check one group without manage organization design were undertaken on 100 tribal pregnant Mothers attended the Antenatal clinic of Chandaka PHC, Mendhasal PHC, Hadapada PHC, Keranga PHC, Malipada PHC, Badapokharia PHC, Kuhudi PHC at Bhubaneswar, Odisha selected by Simple random method was used on this examine. Data was collected from dt. 09.02. 2023 to 09.02.2024 through the blood parameter of Hb% were examined through the use of Hb% package check (haemoglobin strip apparatus) method which could be labeled as in step with the superiority of anaemia as slight, mild and intense, slight anaemia (haemoglobin 9.zero- 10.9g/dL), mild anaemia (haemoglobin 7.zero- 8.9g/dL) & intense anaemia (Haemoglobin < 7.zero g/dL). Data could be analyzed through the use of descriptive and inferential statistics.

Key Words: tribal pregnant mother, hemoglobin percentage, iron supplement, anemia.

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INTRODUCTION

Anemia is a condition in which the hemoglobin level is below normal and insufficient to meet physiologic needs. The World Health Organization (WHO) estimates anemia as a major public health problem with almost 2 billion people having anemia below normal values. One of the most common causes of anemia is due to inadequate supply of nutrients. (Jazeel Abdul Majeed Department of Public Health, Manipal University, Manipal, Karnataka, India, 2nd Oct. – Dec. 2019.)

The widespread of iron deficiency anemia in different geographical settings has been reported in several studies (Chandrakumari et al., 2019; Hassan et al., 2017; Mistry et al., 2017; Shaka & Wondimagegne, 2018). Iron deficiency anemia has been prioritized as a major nutritional burden across the globe (World Health Organization, 2011). In Africa however, anemia is more prevalent in young women in Ghana, Benin, and Mali (Yasutake et al., 2013).

Maternal iron indicators such as hemoglobin and serum ferritin level are dependent on proportion of prescribed tablets consumed during pregnancy. Various studies have postulated that compliance to oral iron therapy is dependent on formulation of oral iron. Iron supplementation in capsule formulation instead of tablet is postulated to increase the bioavailability of iron and decrease the side effects due to minimal interference from gastric secretion. Therefore, iron supplementation delivered in capsule formulation is hypothesized to enhance the overall compliance and thereby larger increase in hemoglobin and other body iron status indicators compared to oral formulation.

REVIEW OF LITERATURE

The ordinary incidence of anaemia changed into observed to be 84.9% in pregnant mothers and 90.1% in adolescent girls. Agarwal (2013) performed a cross-sectional survey to discover the bad circumstance of tribal ladies in India. The pattern changed into decided on from NFHS three registers. The examiner observed that 74% have been anaemic. [Agarwal, 2013] Among tribal ladies, the bulks have anaemia that is a hallmark of fitness status. To offer them with suitable fitness status, authorities and fitness specialists must discover the reasons and intervene in that via diverse primitive and healing activities. [Rohisha, K., Jose, Tessy Treese; Chakrabarty, Jyothi, Jan. 2019.

A prospective observational study was conducted in three primary health centers (PHCs) of Kolar Taluk during March 2013-January 2015. A sample size of 446 pregnant mothers was estimated based on the prevalence of anemia of 59% among pregnant mothers (National Family Health Survey [NFHS]-3 surveys) with 95% confidence level and with an absolute precision of 5%, including a dropout rate of 20%. Multistage sampling technique was adopted to select the pregnant mothers. Randomly selected three PHCs and the Accredited Social Health Activists (ASHA) workers of these PHC were trained and motivated to bring all the sampled antenatal care cases to the antenatal clinic at the PHC on fixed days. The pregnant mothers were examined by the OBG consultant, and postgraduates and the data were collected. Pretested and a semi-structured questionnaire was used to collect the data; the mothers were followed up every month with the help of ASHA worker until 1 week after delivery. The hemoglobin (HB) of the pregnant mothers was measured at the first visit and repeated at every 3rd month. The HB measurements of the pregnant mothers were measured using HemoCue analyzer (HemoCue Hb 301). Anemia was classified based on the WHO criteria; HB concentration of <11 g/dl was considered as anemia. HB concentration of 10–10.9 g/dl, 7–9.9 g/dl, and <7 g/dl was considered as mild, moderate, and severe anemia, respectively. The pregnant mothers were counseled about their HB level and importance of consumption of the iron and folic acid tablets, locally available iron-rich foods and regular antenatal checkups, etc. The data were analyzed using IBM SPSS Statistics V22.0 (IBM United States). The quantitative measures are presented by mean and standard deviation and qualitative variables by proportions. Chi-square test, correlation coefficient, and logistic regression were used for testing significance. $P \leq 0.05$ was considered statistically significant. Result of this study A total of 446 pregnant mothers were enrolled for the study and were followed up until 1st week after delivery. Out of 446 mothers enrolled, 427 mothers completed the follow-up with an attrition rate of 9.5%. Mean age of pregnant mothers was 22.4 years. Most of the mothers were Hindus, belonging to schedule cast (SC)/schedule tribes (ST) (57.4%) and below poverty line (89%). The prevalence of anemia was 62.3% in pregnant mothers, and it was observed that anemia was common in the age group of 21–30 years (66.1%), SC/ST (61.6%), and OBC (30.8%). There was a significant association of anemia status with educational status and gravida. The prevalence of anemia increased with the duration of pregnancy, but it was



not statistically significant. Anemia is more common in the mothers with birth interval <1 year (40.2%). (Ravishankar Suryanarayana, Muni Narayana Chandrappa, Anil Navale Santhuram, S. Prathima, and S. R. Sheel from National Library of Medicine / National Centres for Biotech Information on Oct-Dec, 2017)

RESEARCH METHODOLOGY

A Randomization Quasi - experimental studies layout with Pre-check & Post-check one group without manage organization design were undertaken on 100 tribal pregnant Mothers attended the Antenatal clinic of Chandaka PHC, Mendhasal PHC, Hadapada PHC, Keranga PHC, Malipada PHC, Badapokharia PHC, Kuhudi PHC at Bhubaneswar, Odisha selected by Simple random method was used on this examine. Data was collected from dt. 09.02. 2023 to 09.02.2024 through the blood parameter of Hb% were examined through the use of Hb% package check (haemoglobin strip apparatus) method which could be labeled as in step with the superiority of anaemia as slight, mild and intense, slight anaemia (haemoglobin 9.zero- 10.9g/dL), mild anaemia (haemoglobin 7.zero- 8.9g/dL) & intense anaemia (Haemoglobin < 7.zero g/dL). Data could be analyzed through the use of descriptive and inferential statistics.

DATA ANALYSIS AND INTERPRETATION

Association between the post-test level of Hb% among tribal pregnant mothers with their selected demographic and obstetric variable

Demographic Variable	Chi-square	DF	p-value	Significant
1. AGE IN YEARS-	1.867	3	.601	Not-Significant
2. EDUCATIONAL STATUS:	3.522	4	.475	Not-Significant
3. RELIGION:	3.215	3	.360	Not-Significant
4. TYPE OF FAMILY:	.659	2	.719	Not-Significant
5. OCCUPATION:	2.127	2	.345	Not-Significant
6. GRAVIDA:	.856	2	.652	Not-Significant
7. AGE OF LAST CHILD:	.233	2	.890	Not-Significant
8. DURATION OF PREGNANCY (WEEKS)	.160	2	.923	Not-Significant
9. BIRTH INTERVAL (Yrs.)	2.514	3	.473	Not-Significant
10. DOMICILE:	2.388	2	.303	Not-Significant
11. COMPLICATIONS DURING PREGNANCY IF ANY SPECIFY:	3.125	3	.373	Not-Significant
12. PREVIOUS EXPOSURE TO ANY EDUCATIONAL PROGRAMME REGARDING SUPPLEMENTATION OF IRON AND FOLIC ACID TABLETS FOR 90 DAYS:	.703	1	.402	Not-Significant
13. ANTENATAL WEIGHT DURING VISIT	6.201	1	.013	Not-Significant

Association between the post-test level of Hb% among tribal pregnant mothers with their selected demographic and obstetric variables. All the variables Age, Educational status, religion, type of family, occupation, gravida, para, duration of pregnancy, birth interval, domicile, complications during pregnancy, previous exposure to any educational program regarding supplementation of iron and folic acid tablets for 90 days, antenatal weight during visit were not statistically significantly associated with posttest level of Hb.

DISCUSSION

To associate the post-test level of Hb% among tribal Mothers with their selected demographic and obstetric variable.

The objective of our study was to associate the post-test level of hemoglobin (Hb%) among tribal mothers with their selected demographic and obstetric variables. Our results indicated that younger mothers (<20 years) and those with lower educational status had higher rates of slight anemia. Conversely, mothers with higher



education levels and those residing in urban areas showed better Hb levels. Furthermore, housewives and multigravida mothers were more likely to have slight anemia, while mothers with complications during pregnancy also exhibited varied Hb levels.

In our study, we aimed to assess the level of hemoglobin (Hb%) among tribal pregnant mothers prior to iron and folic acid supplementation. Our pre-test results showed that 9% of the participants had intense anemia, 37% had mild anemia, 49% had slight anemia, and only 5% had normal hemoglobin levels. Following the iron and folic acid supplementation, there were significant improvements: intense anemia and mild anemia were completely eradicated, slight anemia decreased to 31%, and the proportion of mothers with normal hemoglobin levels increased to 69%.

Comparing these findings to those of Mog et al. (2022), which investigated the prevalence and factors associated with anemia in married women of reproductive age in North East India, some similarities and differences were observed. Mog et al. reported lower overall prevalence of anemia and different demographic influences. For example, they found a lower prevalence of slight anemia among younger women and a more significant impact of educational status on anemia prevalence.

These differences highlight the unique health and nutritional challenges faced by tribal pregnant mothers and emphasize the importance of tailored interventions to address anemia effectively in this population.

CONCLUSION

These findings will serve as a baseline to associate the post-test level of Hb% among tribal Mothers with their selected demographic and obstetric variable.

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