A STUDY ON ANEMIC CONDITION PREVALENT IN TRIBAL WOMEN OF KERALA

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Abstract:

Anemia is one of the major hidden problems that affects both old and young alike. Although anemia is more of a manifestation of iron deficiency than disease itself, it reduces vitality among old and has detrimental impact on children's children and physical development. Pocket studies in India have confirmed the prevalence of anemia among tribal women and children who bear the harshest brunt of the problems due to their physical, geographic, economic, and environmental isolation. This evidence is, however, limited to particular districts or tribes. There is a dearth of pan-India literature. The present study aimed at giving a snapshot of the prevalence of anemia among women in tribal regions across India. The result shows the regional disparity in not only prevalence of anemia but also predictors of anemia in various states. Along with type of diet given to children or consumed by women, the use of modern (hormonal) contraception such as pills, injections, and IUDs among women also come out as significant predictors of anemia. Hence, it can be said that an umbrella approach may not work to tackle the problem of tribal anemia and there is an urgent need for differentiated, multi-pronged approach at the grass root level with tribal culture at its focal point.

Introduction:

A healthy citizen contributes to the development of a country. Tribes are considered as the primitive groups who are backward and have a shyness to contact with the community for their health services. Hence, there is a need to look into their health status. The study aimed to assess the prevalence of anemia among tribal women of Kasaragod district, Kerala. Anemia remains a major public Health problem, affecting one third of all adults and almost two billion people. Defined broadly as a condition associated with lower than normal Haemoglobin concentration Anemia impairs the circulation of oxygen in the blood, which in turn has detrimental effects on maternal and birth outcomes, suboptimal child growth, impaired learning and reduce work productivity and income earning during adulthood. Such effects compounded across the entire populations lead to significant economic losses, through foregone domestic product (GDP) and treatment costs. A healthy citizen contributes to the development of a country. Tribes are considered as the primitive groups who are backward and have a shyness to contact with community for their rights and services. Hence health care system should take efforts to reduce health problems among tribes and reduce their vulnerability to anemia. The statistics shows that tribal populationcontributes to an important portion of the whole population.2 India is the home to almost half of the tribal population of the world. Tribals are characterized by a distinctive culture, primitive traits, and socio-economic backwardness. Around 75 of these groups are called primitive tribal groups due to

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preagriculture level of knowledge, extreme backwardness, and dwindling population. One fourth of India's poorest people are Schedule Tribes (ST), even though they are only 8% percent of India's population.1 In terms of the tribal population Gujarat is in fifth number of having more number of tribal populations after Madhya Pradesh, Maharashtra, Odisha and Rajasthan respectively. 14.75% of total Gujarat's population belongs to tribal population it is nearly about 8,917,174 persons, as per the census of 2011.

Methods:
The tribal settlements of Karadukka block panchayath of Kasaragod district were selected randomly as the setting, and the design adopted was a descriptive survey design. A descriptive survey was undertaken among 445 tribal women in the reproductive age group from the selected tribal settlements, and hemoglobin level was assessed using hemoglobin strip apparatus and classified as nonanemia, mild, moderate, and severe anemia based on World Health Organization classification. Analysis was done using SPSS Version 16. Frequency and percentage distribution was done for identifying the prevalence of anemia.

Results:
The study found that the majority (89%) of the tribal women had anemia in which 62% and 11% of tribal women had moderate and severe anemia, respectively.Among tribal women, the majority have anemia which is an indicator of health status. To provide them with good health status, government and health professionals have to identify the causes and interfere in that through various promotive and therapeutic activities.

A healthy citizen contributes to the development of a country. Tribes are considered as the primitive groups who are backward and have a shyness to contact with the community for their rights and services. Healthcare system should take efforts to reduce health problems among tribes and reduce their vulnerability to become a backward group. The statistics shows that tribal population contributes to an important portion of the population both in India and Kerala. According to 2011 census report, there are 104,281,034 scheduled tribes (ST) in India, and in Kerala there are 484,839 ST which includes 246,636 females. Among 1,302,600 population in Kasaragod district, there are 29,283 ST (Census of India, 2011). Reviews show that studies had been conducted in many parts of India to identify health problems among tribal women. Balarajan and Fawzi had done a cross-sectional study to identify the changing patterns in anemia among women in India. The samples were selected from National Family Health Survey (NFHS) 1998/99 and 2005/2006. The sample size was 80,851 from NFHS 2 and 112,714 women from NFHS 3. The study found that there was 10% increase in the relative risk of anemia over time in Kerala. Toteja *et al*. have done a similar study to identify the prevalence of anemia among pregnant women and adolescent girls in 16 districts of 11 states of India. The sample included 6923 pregnant women and 4337 adolescent girls. The overall prevalence of anemia was found to be 84.9% in pregnant women and 90.1% in adolescent girls. Agarwal (2013) conducted a cross-sectional survey to identify the poor condition of tribal women in Orissa, India. The sample was selected from NFHS 3 registers. The study found that 74% were anemic. Balgir studied the prevalence of anemia in the coastal regions of Odisha. The samples were 180 pregnant women who attended two major hospitals of coastal Odisha. It was found that 71.15% of women were anemic. Sreelakshmi conducted a study among tribal women of age 15–45 years in Palakkad district, Kerala, to determine the prevalence of anemia among 348 tribal women. The results showed that 78.32% was found to be anemic. All these reviews show that anemia is a common problem among women in reproductive age group. Hence, the researcher was interested to study the prevalence of anemia among tribal women.

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The aim of the study was to determine hemoglobin level among tribal women which would provide an insight to their health status and make the policy makers for devoting to reduce the mortality and morbidity issues. The objective of the study was to identify the prevalence of anemia among tribal women of Kasaragod district.

The study has adopted a quantitative survey approach and descriptive survey design to identify the prevalence of anemia among tribal women. Cluster sampling was used for selecting the settings and samples. The minimum sample size needed for the study was calculated using the formula:

$Z_{1-\alpha} = 1.96$

$P = 0.6$ (proportion of samples who are assumed to have anemia; taken from pilot study)

$d = 0.05$

The estimated sample size was 367; however, by considering 20% attrition, it was decided to take 440 samples. The samples included in the study were 445. The tribal settlements of Karadukka block panchayath of Kasaragod district were selected randomly as the setting. The tribal women of age group 18–45 years residing in the tribal settlements of Kasaragod district was the population under study and the sample included 445 tribal women residing in the tribal settlements of Karadukka block panchayath of Kasaragod district. The data collection tools used were background information and hemoglobin strip apparatus. Tool 1 background information included two sections: section A – demographic proforma consisting of items such as age, marital status, age of marriage, years of marital life, number of pregnancies, age of first pregnancy, number of deliveries, number of children, type of family, educational status, occupation, category of tribe, yearly family income, and personal habits; and section B – physiological parameter which included hemoglobin in gram percentage. Tool 2 was hemoglobin strip apparatus to measure hemoglobin level. Content validity and language validity of tool 1 were established. The reliability of tool 2 was done using interrater reliability and was found to be 1. Administrative permission was taken from Dean Manipal College of Nursing, Manipal, Institutional Ethics Committee, Kasturba Hospital, Manipal, and from the tribal department of Kasaragod and Trivandrum. Informed consent was taken from the participants, and confidentiality of the information was assured. Data collection was done for the willing participants who met the eligibility criteria and were asked to assemble in the community hall in their respective colony. The participants were interviewed to obtain the demographic data. Hemoglobin level of the samples was estimated using hemoglobin strip apparatus and was recorded. Data were analyzed using descriptive statistics using SPSS Inc., acquired by International Business Machines Corp. New Orchard Road Armonk, New York, US. Descriptive statistics and frequency and percentage distribution were used to describe sample characteristics and anemia.

Among the 445 tribal women who participated in the study, most (41.6%) of the participants were in the age group of 36–45 years, and considering occupation most (51.5%) are unemployed. The majority (80.7%) of the participants were married and most (59.6%) of them were married at the age of 18–25 years. Most (35.5) of them become pregnant one to two times, and the majority (87.2%) become pregnant at the age of 18–25 years. Most (38.4%) of them had undergone one to two deliveries and 40.2% of them have one to two children. Most (77.3%) of them had a yearly family income less than 6000 INR and 38.9% had high school education. Tribal women were included in mavilan (53.7%) and malavettuvan (46.3%) subcaste of ST group. Most (45.4%) of them were having bad habit of pan chewing.

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Prevalence of anemia

According to World Health Organization, the hemoglobin level was categorized into nonanemia, mild anemia, moderate anemia, and severe anemia.The study found that the majority (62%) of participants had moderate anemia and 11% had severe anemia. Only 11% of participants were nonanemic.

This study showed that most (62%) of the participants had moderate anemia and 11% had severe anemia The findings of the above study support a descriptive study conducted to assess the prevalence of anemia among the reproductive age group women in Sampla block of Haryana which found that 48.9% of women in the reproductive group were anemic, and among those 27.6% were moderately anemic (Verma *et al.*, 2014). A cross-sectional survey was done in Wayanad district of Kerala to identify the prevalence of anemia among tribal women in reproductive age group (15–45 years). The study found that majority of the samples were anemic (96.5%) and among those 55.9% were moderately anemic.

Conclusion

The study was conducted using cluster random sampling and covered all the willing participants in selected settings which is a strength of the study, and the limitations of the study were study samples were restricted to selected panchayats of Kasaragod district, hence the generalization is limited. The hemoglobin level was assessed using hemoglobin strip apparatus by considering the convenient use in community settings and the reliability of hemoglobin strip apparatus was assessed only by interrater reliability method. Future research can be undertaken in a larger population to increase the generalizability of the findings and a follow-up study can be conducted on the same population by providing interventions to improve the hemoglobin level.The present study assessed the hemoglobin level of tribal women. The researchers believes and found that health education given on anemia while have significant improvement on knowledge of the tribal women regarding anemia. The observation check list on signs and symptoms of anemia score was 44% of tribal women are suffering from any forms of anemia in that 30% is suffering from moderate to severe anemia. The tallquist paper method of haemoglobin result was 40% of women have moderate to severe anemia.

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