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Exploring Types Of Anaemia And Sickle Cell Anaemia In Indigenous Women: A Comprehensive Study

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1) **ABSTRACT:** The majority of people with sickle cell anaemia (SCA), a genetic blood condition, are of African and tribal heritage. Red blood cells with aberrant hemoglobin are present, which gives them a crescent form and makes them more likely to clog blood vessels. Due to the socio- economic constraints, that restricted access to the healthcare, and, in tribal women among those affected by SCA experience particular difficulties in the management and treatment of the disease. This article provides a thorough examination of review articles that concentrate on SCA in tribal women and various types of anaemia. The chosen publications provided information on this population's specific prevalence, clinical symptoms, complications, and management techniques. They also look at how cultural traditions, conventional treatments, and social determinants of health affect the overall well-being of tribal women with SCA.

The authors of these review articles stress the importance of implementing health-care interventions that are sympathetic to cultural norms, expanding access to health-care facilities, and raisingknowledge about SCA in tribal populations. They also go over the significance of earlydetection, ongoing observation, and thorough treatment to enhance the quality of life for tribal women with SCA. The articles also discuss the various anaemia's that affect tribal populations, such as thalassemia, iron deficiency anaemia, and other inherited hemoglobin diseases. For these particular kinds of anaemia, they stress the significance of proper diagnosis, suitable therapy, and tailored interventions to reduce complications and enhance outcomes. In conclusion, the evaluated publications shed light on the difficulties faced by tribal women who have SCA and the several forms of anaemia that are common in tribal groups. They contribute to the existing knowledge base and offer recommendations for healthcare professionals, policymakers, and researchers working towards improving the health outcomes of tribal communities affected by SCA and various types of anaemia.

[KEYWORDS: sickle cell anaemia, anaemia, literature review, counselling, awareness.]

2) **INTRODUCTION**: literature review's main goal is to provide a succinct descriptionof sickle cell anaemia, including how it spreads both within families of patients and throughthe efforts the government has done to avoid the condition. Evaluating the knowledge of individuals who live in remote areas, their methods for gaining awareness, and their methods for tacklingthe core causes of the problem.

Sickle cell anaemia is firstly documented in 1910 by a physician named James Herrick. He described a 20 year old college student who was severely anaemic blood sample of the student showed the shape of red blood cells as a‘sickle’ shape while in general blood cells are round in shape it willhelp the blood to smooth flow in the body[(8)].In 1940s evidence for the hereditary nature of SCA was developed in 1949 it was noticed by Linus Pauling and his team, the results from his study was published in a paper with the title of “sickle cell anaemia: a molecular disease it was the first demonstration of “a change produced in a protein molecule by anallelic change in a single gene”.

The researcher covered the government's plan to screen 7 crore people by 2025–2026 inthis article.The government implemented focused screening and setup and implemented interventions to guarantee the success of this mission. It works under the NHM, where the funds are splitup [9].

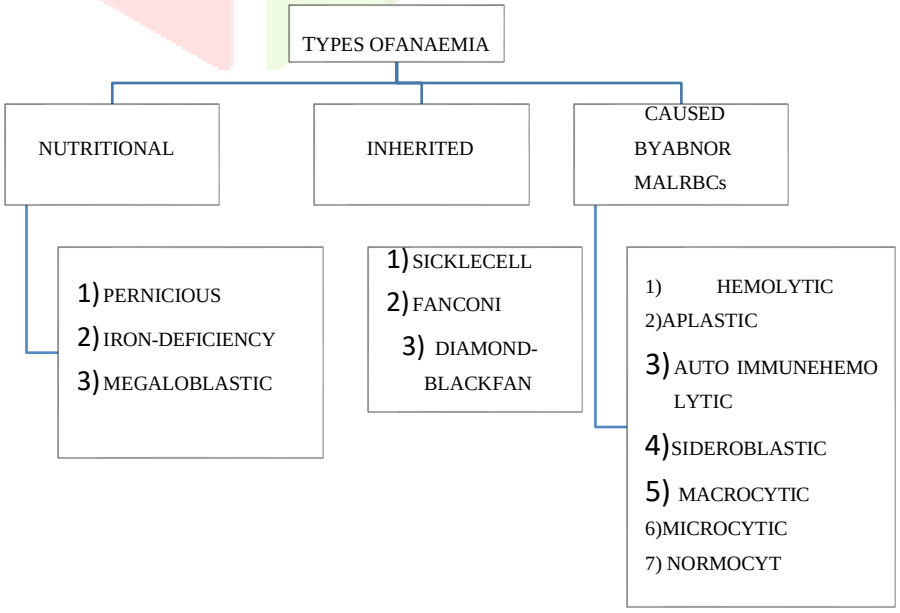
The researcher covered the government's issuance of SCD cards for the tribal in this article.These cards will be useful for learning regarding anaemia status. They are also helpful in storing the history of the person with the condition and their heirlooms if they plan to get married.Premarital counselling will be provided as part of this programme to eradicate SCD [10]. The research study focused on how SCD became an inheritable condition among Indian females. Traditional healers who are familiar with the signs of sickle cell anaemia are helping those who live in neighbour-hoods. Traditional rulers and healers who will lead the citizens of their region need to receive the required education on SCD as well as training [11]. The study looked at how sickle cell disease spreads within families in Madhya Pradesh rural areas. The goal of this research is to test the patients and give them the necessary care. In order to identify the records of sickle cell anaemia among couples and aid in the early detection of SCA in their children, sickle cell sufferers were given genetic counseling cards as part of their treatment[12]. The objective of the research is to figure out the prevalence of sickle cell disease in India.According to survey data collected in a prior study in this field that focused on children under the age of 18, the prevalence rate for sickle cell disease in India was 9.2% (95% CI: 8.5-10.0%)while the rate for the population as a whole was 0.8%(95%CI: 0.6-1.0%)[13].This study was a thorough account of tribes in the Indian states of Gujarat and Madhya Pradesh screening newborns for sickle cell disease. 122 infants in Gujarat and 6 infants inMadhya Pradesh were found to have sickle cell disease, which causes painful symptoms and severe anaemia that necessitates blood transfusions[14]. The study found that sickle cell disease is a significant factor in the rise in affected birth rates globally. In India,73% of the population has SCD. This study implies that moreSCD education initiatives need to be carried out in tribal areas[15]. This study was conducted to better understand the maternal, societal, and householdfactors that affect children's anaemia. The results of this study indicate that anaemia affectschildren through their mothers, which results in low birth weight, which has long-term effectson children who are undernourished. The study advised the government to take steps for proactive treatments, including providing prenatal care for women and

monitoring children's nutrition[16]. The purpose of the study was to evaluate the impact of a multi factorial nursing intervention on tribal members' understanding about sickle cell anaemia. The tribal community's knowledge gap about sickle cell illness was filled by this study. Individual counselling sessions have produced excellent awareness-raising effects. As a result of these findings, it is imperative to promote awareness, encouragement, and genetic counselling in order to lessen the burden of disease[17].

This study focused on the way people receive the information on SCD which was given by the media in various ways.The media plays an important role in providing proper information tothe people. Media representation influences how people think about how terrible a condition is[18].

This study was carried out to evaluate the rapid screening procedure for SCD for adults and newborns. Hemotype sickle cell is a quick and inexpensive point-of-care test. In addition,findings showed that point-of-care diagnosis is appropriate and popular[19]. According to this study, nearly all of the aetiology Of anaemia is preventable by incorporating healthy eating habits into people's lives. However, due to a lack of understanding about anaemia, it has become a significant burden on tribal groups around the world. Due to fewer meals during pregnancy, women had a greater chance of getting maternal anaemia[20]. The researcher offered his experience of counselling inherited hemoglobinopathies during a sickle cell screening initiative. This will inform the tribal people about the genetic illnesses that cause SCD. The lower literacy rate and bad socioeconomic situations among indigenous people are a problem for raising awareness, the researcher discovered during the study. Before organizing or carrying out any counselling sessions in tribal societies, it is important to have a thorough awareness of tribal factors[21].

3) **TYPES OF ANAEMIA**: Anaemia occur when there is decrease in number of healthy blood cells in the body which cause severe pain, body ache, fatigue, dullness. Most severe type of anaemia is caused by iron deficiency, sickle cell anaemia. Duration of anaemia is short-term and mild,while others last for lifetime,untreated anaemia may be life-threatening [1].



Classification of anaemia based on artificial learning: Anaemia classified on the following methods is a)artificial neural networks b)support vector machines c)naïve bayes d)ensemble decision tree. Those models are tested with a data of 1663 samples and use of 25attributes,which shows 12 types of anaemia. The study was conducted to identify the types of anaemia among pregnant women in Baghdad territory. The results from the study are 236 pregnant women affected with anaemia as followsin first trimester [10.8%], second trimester [16.2%], and third trimester [28.4%].The forms ofanaemia was found in this study is – mild [35.5%], moderate [15.7%], severe anaemia[4.2%].Most occurred type of anaemia is micro cytic& hypochromic anaemia[2]. This study was conducted to do characterization on types of anaemia prevalent in the age group of children between 1-19 years in India. The number of samples from the study is 2862children age [1-4], this track down the types of anaemia as iron deficiency anaemia [36.5%], folate or vitamin B12 deficiency anaemia[18.9%],dimorphic [13.5%],anaemia of inflammation [6.5%][3]. Anaemia effect is more in males compared to females, the sample taken were 500 cases, 320caseswere males, and 180 were females. Of those male cases 320, 98 [30.63%] were had mild anaemia, 189 cases [59.6%] had moderate anaemia and 33 cases [10.31%] had severe anaemia.The sample population age lies in where males are51% are in{0-4},46% were in {5-12}are anaemic in developing countries.While in female maximum proportion is(41.22%)in 6-10 age.The further scope the study is to management of underlying etiology[4].

SICKLECELLANAEMIAAMONGTRIBALWOMEN:

This study is conducted to identify HPLC [high performance liquid chromatography] patterns in sickle cell anaemia patients. While Haemoglobin S (hbs) presence in the blood results to a genetic disorder as a variant. This research focused on different types of haemoglobin and itspresencepercentageinsicklecellcaseswereashaemoglobindisease,sickle alpha-thalaseemia S, sickle- beta thalassemia, Hbc- beta thalassemia. The studied population is total of 58 in that females with sickle cell trait are 43.1%. Females who have sickle cell disease is49.4%among total 83 participants[5]. This research is focused on testing of sickle hemoglobinopathy as a part of antenatal.Women's withsickle cell anaemia needs specific attention as compared to men with sickle cell disease, dueto its severe complications in women. One third of pregnant women with SCD have a higher chance of neonatal death, abortion. To know the pattern of the sickle cell disorder neonatal screening is proven beneficiary in many countries. As part of "sumandeep vidyapeeth's sickle project" the study finds out the profile of 125 female patient's having SCD was taken.In that 125 female patient's out of 119 had sickle cell trait remaining 6 had sickle cell disease. Results from the study are there is a significant less complications to women who have sickle cell trait in pregnancy compare to women who have sickle cell disorder[6]. This research studied about KAP (knowledge, attitude, practice) on sickle cell anaemia inpatients who had sickle cell symptomsin Bardoli tehsil. Only 16 % of study populations knew correct symptoms of SCA. The knowledge of taking medicated treatments result more significant in females rather than males. Prevalence rate of sickle gene was tested in tribal communities of Gujarat- bhils, dhodias, dublas, panchmahal, naikas, dhanka, koli, vasava,gamit,bariya,vaghari,varli,kukn,halpati,chaudari.Thistribalpopulationcontributes15%o f the total of Gujarat. Data collection was done by interview mode, collected results are 276cases, of which 264 [96 %]

had sickle cell trait, which 12 [4%] had sickle cell disease, among9% of participants know that sickle cell anaemia as a hereditary disease[7].

CONCLUSION: In conclusion, the review articles by many writers on sickle cell anaemia in tribal women and the different forms of anaemia offer insightful information on these crucial medical subjects. These articles give light on the prevalence, signs, and treatment of sickle cell anaemia in this particular demographic while highlighting the special difficulties tribal women confront in regard to the condition. The authors examine the socio-cultural causes of the greater frequency of sickle cell anaemia in tribal women, highlighting the necessity for focused interventions and education campaigns to successfully address this problem. Additionally, the papers by different writers on the many types of anaemia provide a thorough overview of the numerous anaemia's, including iron-deficiency anaemia, vitamin-deficiency anaemia, and hemolytic anaemia, among others. The writers explain each type's etiology,symptoms,and diagnostic procedures, providing a comprehensive grasp of these disorders.This knowledge is critical for healthcare providers to effectively diagnose and treatanaemia patients ,as well as for researchers to create creative prevention and management measures. Overall, these review articles are useful resources for health-care professionals,researchers,and individuals seeking information on sickle cell anaemia and the many kinds ofanaemia among tribal women. The ideas and discoveries of the authors add to the current body of knowledge in these disciplines, allowing for a better understanding of the diseases and supporting the creation of focused therapies. These articles have the potential to enhance overall health outcomes and quality of life for persons affected by these disorders by emphasizing the importance of awareness,early detection,and effective management.

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