

CHAPTER 3

ANTHROPOLOGY

Doctoral Theses

01. ADHIKARY (Priyanka)
Beneath the Surface: An Anthropological Study of Interactions Between NGO Professionals and Women Victims of Gender-Based Violence in Delhi.
Supervisor : Dr. M. Kennedy Singh
Th 24334

Abstract
(Not Verified)

Violence against women is a threat to our society. The root of violence against women is so deeply embedded into the fabric of society to such an extent that many women who are victimized feel that they are at fault. Gender-based violence involves violence targeted towards an individual or groups on the basis of their gender. A number of Indian NGOs working on the issue of gender-based violence against women have taken up certain goals and mandate aim at providing necessary assistance, service (socio-psychological, legal) and counseling women victims/survivors and their families. The present study is an attempt to explore the pattern of interaction between NGO professionals and women victims of gender-based violence and vice versa. The research is completely based on qualitative research methods. The primary concern was to collect the case studies and another focus was to assess the interactional process. A total number of 40 victims and 11 professionals were included in the study. Data have been analyzed and interpreted by using the symbolic interactionist approach, feminist approach, and Foucauldian concept of power. Patriarchal norms were internalized among counselors and other professionals that influenced the interaction. Beside this, the power dynamic was present between professionals and victims that located professionals in higher position. Biased and judgmental outlook were prevalent among professionals about victims. Mix perspectives have been seen among victims about counselors' behavior during counselling. The dissertation contributes to existing research in role and activities of NGOs in preventing the problem of violence against women, particularly, how interaction can act as a significant facet to gain insight on the efficacy of counseling to safeguard women. The kind of interactional approach used in the dissertation can be applied in developing public policy for women and girls. Strategic interaction can act as a tool to advance public policy.

Contents

1. Introduction 2. Research methods and techniques 3. Profile of the NGO 4. Mechanisms of interaction with victims 5. Perspectives of victims towards counsellors and other professionals 6. Conclusion 7. References. 8. Appendices.

02. ANJALI KUMARI
Assessment of Nutritional Status, Metabolic Syndrome and their Associated Risk Factors among the Adult Santals of Selected Rural and Urban Areas of Jharkhand.
Supervisor : Prof. Gautam K. Kshatriya
Th 24904

Abstract
(Verified)

Background: Malnutrition is highly prevalent among Indian populations. Being economically and socially disadvantaged groups, tribal communities of India are at higher risk to suffer with the threat of malnutrition. Few studies have been conducted so far with respect to metabolic syndrome and malnutrition in tribal communities of India. Aim: The present study attempts to assess the nutritional status, metabolic syndrome, and their associated risk factors among the adult Santals of selected rural and urban areas of Jharkhand. Materials and Methods: A cross-sectional study was undertaken among 602 Santal participants (n=226 males; n=376 females) which include 301 Santals (n=135 males; n=170 females) from selected rural areas and 297 Santals (n=91 males; n=206 females) from selected urban areas of the state of Jharkhand. The present study was conducted among adult Santals from Hazaribag, Ranchi and Dumka districts of Jharkhand. Anthropometric, body composition, physiological and biochemical variables were measured. The collected data was entered and analyzed using SPSS version 16.0 software. Descriptive statistics, t-test, chi-square, correlation, PCA, discriminant function analysis and logistic regression analysis were used to analyze the data collected in the present study. Results: The present study showed higher proportions of underweight Santals in rural areas (30.8%) than urban areas (27.9%) of Jharkhand. Similarly, 15.1% and 13.8% of overweight Santals were found in rural and urban areas respectively. Conversely, 6.1% of obese Santals were found in urban areas which were higher than rural areas. Higher proportions of moderate anaemia were observed among Santals in rural areas (52.5%) than urban areas (47.1%). High prevalence of metabolic syndrome (10.6%) was observed among 188 adult Santals. MetS were higher (17.2%) in urban areas than rural areas (5%) of Jharkhand. Conclusion: The present study highlighted triple burden of undernutrition, overnutrition and metabolic syndrome among the adult Santals of selected rural and urban areas of Jharkhand.

Contents

1. Introduction 2. Area of people 3. Materials and methods 4. Results 5. Discussion
6. Summary and conclusion. References. Annexures. List of Publications.

03. BINDUSHAW (Gurindapalli)
Consanguineous Marriages and Genetic Disabilities in Capital Region of Andhra Pradesh.
Supervisor : Prof. M.P. Sachdeva
Th 24338

Abstract
(Not Verified)

Andhra Pradesh is one of the states which have been following consanguineous marriages through many generations. The aim of this study was to identify and correlate the relationship between consanguineous marriages and genetic disabilities in Capital Regional Developmental Authority (CRDA) region of Andhra Pradesh. The current study is to analyse the effect of consanguineous marriages on the 1000 individuals who are identified with genetic conditions and retrospectively analyse them for a history of consanguinity and genetic disability occurrence in their families. The data was collected from special schools and medical institutions which provide aid to genetically disabled individuals in their respective ways. Out of the 1000 individuals, 281 were females and 719 were males. 48.9% individuals received normal education and 39.5% received special education and only 11.6% were not educated. 529 individuals revealed their caste and 471 individuals did not reveal their caste. The study identified 32% of 1000 individuals with parental consanguinity, 85% individuals with a family history of consanguinity and 48% individuals with family history of genetic conditions, almost similar to those in the current population. The difference between the individuals with and without a family history of consanguinity and the individuals with and without a family history of disabilities was observed to have a very high statistical significance ($\chi^2=68.40$, p value<0.1). The individuals with positive family history of consanguinity showed a significantly higher association with the occurrence of genetic disabilities in

their families when compared with those individuals without positive family history of consanguinity. There is a need for more studies with relatively larger sample size to explore the association of consanguinity and genetic disabilities in the regions where consanguinity is highly prevalent. Such studies may lead to a change in the lawmaking process by making it mandatory to study individuals' genetic history before they choose consanguinity.

Contents

1. Introduction 2. Literature review 3. Materials and methods 4. Results and discussion 5. Conclusion. References. Annexure. Publications.

04. DAS (Dibyajyoti)
Anthropological Study on the use of Bamboo among the Mishings of Upper Assam, India.
 Supervisor : Dr. Indrani Chattopadhyaya
Th 24339

Abstract (Not Verified)

We are aware of the fact that the environment in which we reside is a complex system constitutes of living (biotic) and non-living (abiotic) components. In the category of non-living components we can also think about the society and culture of the living components. Both these components; the living and the non-living are linked with each other either directly or indirectly in many ways. There is a complex relation between the needs of humans and fulfilment of those needs. This complex relation can only be understood by observing the cultural practices of every human society living in different eco-zones all around the globe. In this research an attempt has been made to understand the correlation between the Mishings of Upper Assam and the use of Bamboo. The North Eastern regions hold the maximum share of bamboo production in the country not only in terms of quantity but in terms of variety as well. The Mishings of Assam is directly or indirectly dependent upon bamboo for their livelihood just like many other communities of the region. Starting from agriculture, housing, food, weaving, basketry, economy etc. the role of bamboo is significant among the tribe. The use of bamboo among the community was immense, however, it is decreasing day by day and there is a need to understand the reason behind the decrease and it is also important to understand the social change that has been taking place. Documenting the bamboo products available within the tribe is necessary because as time passes these products may also get extinct along with the usages of bamboo. Therefore, to understand the above mentioned factors it was felt that there is a need to study the phenomena.

Contents

1. Introduction 2. Methodology and data collection 3. The mishing ethnography 4. Demographic and socio-economic profile of the study area 5. Bamboo and the mishings 6. Bamboo: A means of conservation 6. Conclusion. Bibliography. Glossary. Appendix.

05. JOHAR (Pushpendra)
Anthropological Study of the Social Structure in Kashmir with a Focus on Houseboat-Hanjis.
 Supervisor : Dr. Avitoli G Zhino
Th 24335

Contents

1. Introduction 2. Methodology 3. Mapping the hydrosocial territory: Ethnographic descriptions from the nigeen lake 4. A historical outline of the social structure in the Kashmir vally 5. Complementary identities, dichotomous constructions 6. Evolution of an artefact, birth of a caste 7. Caste and cultural production: A case of houseboat-hanjis 8. Conclusion. Bibliography. Glossary. Annexures.

06. KAMEIH (Gangaina)
Study of Genomic Diversity among the Selected Tribes of Manipur.
 Supervisor : Prof. Gautam Kumar Kshatriya
Th 24343

*Abstract
(Verified)*

The origins and migration histories of the populations of Manipur are not clearly understood, owing to their diversified myths of origin and lack of historical scripts. The present populations viz., Rongmei, Inpui, Thadou and Vaiphei are recognized tribal groups of Manipur. The objectives of the present study are (i) to assess the extent of genetic heterogeneity among Rongmei, Inpui, Thadou and Vaiphei tribes of Manipur, (ii) to find out their ancestry using the available datasets from the populations across the world and (iii) to examine whether northeast India as a corridor or a barrier for human migrations. For the present study eight Alu Insertion-Deletion polymorphisms (Alu InDels), namely ACE, APO, D1, FXIIB, PLAT, PV92, mt-NUC and CD4; six unlinked RFLPs, namely ESR (Pvu II), NAT (Kpn I), PSCR (Taq I), T2 (Msp I), LPL (Pvu II) and HOXB4 (Msp I); three linked RFLP sites in DRD2 gene, namely Taq I 'A', Taq I 'B' and Taq I 'D'; and three linked RFLP sites in β -globin gene, namely Hb7 (Hinc II), Hb8 (Hinc II) and Hb9 (Hinf I) were analysed. The findings reveal that the four study populations belonging to the Naga and the Kuki tribes are genetically different but both the groups show proximity with Southeast Asian populations and Northeast populations. Therefore, it contradicts the Israelite origin theory of the Kukis given by Khuplam Milui Lenthang (Haokip 2010) which may be attributed to the influence of the protestant missionaries who came to Manipur and Mizoram and were inclined to afford more respect to the Old Testament. Though the data here are not robust to make concrete inferences on the various evolutionary histories, they do support the view of Cordaux et al. (2004) that Northeast India acted as a barrier in early human migration.

Contents

1. Introduction 2. Area and people 3. Materials and methods 4. Results 5. Discussion 6. Summary and conclusion. References. Annexures.

07. MAHAJAN (Nupur)
Estimating the Risk of Malnutrition and Metabolic Syndrome among the Adolescents of Kukana Tribe of District Valsad, Gujrat.
 Supervisor : Prof. Gautam K. Kshatriya
Th 24332

*Abstract
(Verified)*

This study attempts to estimate the risk of malnutrition and metabolic syndrome (MS) along with its components among adolescents of a tribal community in district Valsad, Gujarat, with underlying objectives a) To understand the sexual dimorphism of anthropometric, physiological, body composition and biochemical variables among Kukana adolescents of district Valsad, Gujarat. b) To estimate the sex- and age-wise distribution of malnutrition through nutritional anaemia, body mass index, waist hip ratio, waist circumference (WC), fat mass index, percent body fat and upper arm muscle area by height among

Kukana tribal adolescents, c) To map the prevalence of MS and its components among Kukana adolescents, d) To identify the significant predictors of MS in them. A cross-sectional study was conducted on a total of 601 Kukana adolescents aged 14 to 18 years including 281 males and 320 females. A semi-structured proforma was used to collect general demographic information along with anthropometric measures, physiological parameters, segmental body composition variables and adiposity indices for all the participants by using standardized techniques and instruments. Lipid profile tests, fasting blood glucose estimation and haemoglobin analysis was done. Sex-wise mean differences for various biological variables found to be statistically significant. The prevalence of nutritional anaemia in the studied population was recorded as 61.5%. Overall prevalence of underweight was highest (45.9%) among the studied adolescents on the basis of Cole et al (2000) BMI cut-off. High prevalence among Kukana individual was observed for indicators such as low high-density lipoprotein cholesterol-c (95.9%), elevated WC (25%), high blood pressure (16.9%) and high triglycerides (9.5%). Overall prevalence of MS was observed to be 5.5% as per de Ferranti's metabolic risk score. Significant predictors were WC and HDL-c for MS in Kukana adolescents. The prevalence of MS in metabolically healthy adolescents indicate towards an urgent need for assessment of risk factors of several non-communicable disease in tribal adolescents.

Contents

1. Introduction 2. Area and people 3. Materials and methods 4. Results 5. Discussion 6. Summary and conclusion. References. Annexures. List of publications.

08. MAMTA KUMARI

Genes Nutrition and Vitamin B₁₂ Deficiency: A Study among North Indian Population.

Supervisor : Dr. Naorem Kiranmala Devi
Th 24337

Abstract (Not Verified)

Background: Vitamin B₁₂ is an essential micronutrient required in humans for maintaining proper health in all ages. Deficiency of vitamin B₁₂ has been linked to numerous factors including, dietary, environmental and genetics. However, evidence for the holistic basis of vitamin B₁₂ status is poorly understood. Aim: Present study aims at understanding the causes and consequences of vitamin B₁₂ deficiency Material and Methods: study was done in two phases i) Population based Cross-sectional study ii) Family based study. Ethical approval for both studies was obtained from the Ethical Committee, Department of Anthropology, University of Delhi. 1512 participants of either sex in age 30-65 years were recruited in the cross-sectional study. 42 transgenerational families having individuals up to third generation were recruited for the familial study. 5ml of fasting blood samples were collected. Dietary, household, lifestyle and socioeconomic data were collected through interview schedule. Somatometric measurement were taken, estimation of vitamin B₁₂, folate and homocysteine were done on serum/plasma samples. Molecular analysis including MTHFR gene polymorphism and GWAs pertaining to FUT2 (rs 485186, rs 16982241 and rs10421500) TCN1 (rs 526934) and MMAA (rs 4835011) were done. Statistical analysis was done SPSS version 20.0. Results: Present study reported a high prevalence of vitamin B₁₂, folate deficiency and high homocysteine posing it as a major public health concern. Individuals of all ages and sex were affected by the deficiency predominantly males are at more risk. Candidate gene FUT2, and MTHFR showed genetic predisposition for the deficiency. Familial aggregation of the micronutrient deficiency was well evident from the current study. Environmental factors contribute significantly in the causation of deficiency. Conclusion: Community based behavioral change and communication therapy could play a role of preventive and cost-effective strategy at intermediate state of deficiency.

Contents

1. Introduction and Review of literature 2. Area and people 3. Material and methods 4. A: Distribution of vitamin B₁₂ folate and homocysteine status. B: Association of gene polymorphisms with vitamin deficiency 5. A: Validation and inheritance pattern of vitamin B₁₂ folate and homocysteine B: Role of nutrition, lifestyle and other socio-economic factors in the causation of vitamin B₁₂ deficiency C: Familial segregation of anaemia, dyslipidaemia and obesity 6. Discussion 7. Summary and conclusion. References. Annexures. List of publication.

09. MISHRA (Jyoti)

Folate Metabolism and Immune Regulation in Preterm Premature Rupture of Membranes: A Hospital based Genetic and Epigenetic Study from North India.

Supervisors : Dr. K.N. Saraswathy and Prof. Manju Puri

Th 24905

*Abstract
(Not Verified)*

Preterm PROM acts as a major reason for causing one third of preterm births leading to perinatal and neonatal complications. Addressing preterm birth is essential for accelerating progress towards Millennium Development Goal 4. The aim of the present study is to understand the pathophysiology of PPROM via folate metabolism and immune regulation through genetic and epigenetic mechanisms. Further, the role of folic acid supplementation, vitamin B₁₂ and homocysteine in the progression and outcome of pregnancy is also analysed. There are two study designs i.e. case control and follow up study design. The study includes 135 PPROM cases and 145 controls. Data on demographic, clinical and reproductive profile were obtained from all the women. Fasting blood sample (~5ml) was drawn followed by serum folate, vitamin B₁₂ and plasma homocysteine level estimations (1st, 2nd and 3rd trimesters in the follow up study). Further the genetic (MTHFR C677T, IL-10 A2849G, IL-17 G197A), epigenetic (global DNA methylation and MTHFR gene specific methylation), immunological marker analysis (IL-10, IL-17, β-hCG, T regulatory cells (Tregs), B cells, T cells, and NK cells) was done. Present study has emerged with a panel of risk factors for PPROM which include hyperhomocysteinemia, imbalance of pro (IL-17) and anti-inflammatory (IL-10) cytokines, aberrant global and MTHFR gene specific methylation patterns at the foetal front, steep decline in the T regulatory cells. Also, PPROM seems to be a risk factor for Low birth weight babies. Further, excessive folic acid intake causing imbalance in the folate and vitamin B₁₂ levels and also inability of high folate to reduce homocysteine levels has been found in the present study. Thus there is a need to revisit the folic acid supplementation program in pregnancy. There is a need to carefully screen pregnant women early in their pregnancies for folate, vitamin B₁₂, homocysteine and immune regulatory markers.

Contents

1. (a) Introduction (b) Review of literature 2. Materials and methods 3. Results 4. Discussion 5. Summary and conclusions. References. Annexures. List of publications and conferences attended.

10. MISHRA (Kulbhushan)

Early Farming Communities of Middle Ganga Plain: An Archaeological Investigation.

Supervisor : Dr. Manoj Kumar Singh

Th 24336

Abstract
(Verified)

The middle Gangetic plain, a central part of Indo-Gangetic plains, occupies a significant position in the history and archaeology of India. Archaeological researches conducted during the last several decades have widened our understanding of the dispersal of farming-based settled village societies, covering most parts of the country, which have been divided into two cultural groups. i.e. Neolithic cultures and Chalcolithic cultures. On the basis of techno-cultural traits, both groups of cultures have been often regarded as 'Early Farming Cultures' in the literature of archaeology. These researches further created a new research interest in the history and archaeology of the middle Ganga plain in reconstructing the chronology and different cultural dynamics of early farming communities and provided a logical quest to examine the role of this region in the origin and development of agriculture which has been regarded as pivotal to our understanding of the history of humanity. The main objective of this study is to understand the origin and development of farming practices in this region with a multidisciplinary perspective and to examine the role played by this region in the origins of agriculture which has been regarded as crucial to our understanding of the history of mankind. The study explicitly affirmed the independent origins of agriculture in the mid-Ganga plain and safely situate this region among the earliest centers of rice farming in Asia. In addition, the currently available information from archaeology, genetic analysis, and ethnography of wild rice harvesting, and rice rituals indicated a deep ancestry of wild rice in the mid-Ganga plain. The study also provides a tantalizing hint that the wild rice harvesting in the natural habitats must have triggered the process of rice cultivation indigenously.

Contents

1. Introduction 2. Geographical and environmental settings of middle Ganga plain 3. Antecedent stage of early farming: Palaeolithic background and Mesolithic records 4. Early farming communities: Sites, context and synthesis of archaeological records 5. Pottery traditions of early farming communities: Archaeological evidence and ethnographic observation 6. The origins of agriculture: Middle Ganga plain in perspective 7. Discussion and conclusion. References. List of paper published and paper presentations.

11. MOTI LAL
Genetic Association Study of Type 2 Diabetes Mellitus among the Aggarwals of Delhi.
 Supervisor : Prof. M.P. Sachdeva
Th 24341

Abstract
(Not Verified)

Type 2 diabetes mellitus (T2DM) is a chronic, complex and multifactorial heterogeneous group of metabolic disorders which is affected multiple gene and environment factors and its prevalence increasing steadily all over the world. Type 2 diabetes is mainly characterised by hyperglycaemia. Hyperglycaemia in T2DM consequence of complex interplay between insulin resistance (sensitivity) and abnormal insulin secretion. It is well reported in various studies that T2DM increases with obesity and age; in fact obesity is one of the important factors of the development of diabetes, moreover changing lifestyle and environment factors also play a key role in the development of T2DM in addition to genetic factors. Genetic factors play important role in the pathogenesis of diabetes and thus are an essential element of understanding the cause of the disease and possible method of prevention. The Present study is attempt to understand the association of T2DM with Genetic variants like ZFAND6 (rs11634397), BCL11A (rs243021), ANK1 (rs516946) and KLF14 (rs972283) among the Aggarwals community of Delhi. Somatometric, Physiological and biochemical data were collected. 5 ml intravenous blood sample were collected from the both case and control group. Regarding genetic variables all the 372 individuals are analysed and for the selected molecular markers. Genotype and allele frequency of the four selected SNPs

were calculated and compared the T2DM individuals with controls. In the present study, the genotypic distribution of rs11634397 (ZFAND6), rs243021 (BCL11A), rs516946 (ANK1) and rs972283 (KLF14) were found to be consistent with HWE ($p>0.05$). Further, in present study has investigated the association of selected SNPs with T2DM under different inheritance models and it was observed that the selected SNPs showed non-significant associations ($p>0.05$) with T2DM under additive, dominant, co-dominant, recessive and over - dominant models even after adjusting for potential covariates.

Contents

1. Introduction 2. Literature review 3. Area and people 4. Materials and methods 5. Results 6. Discussion 7. Summary and conclusion. Reference. Annexure. Publication.

12. NEWMEI (Masan Kambo)

Reproductive Performance and Cardiovascular Adversities: A Genetic and Epigenetic Study among the Liangmai Tribal Women of Manipur.

Supervisor : Dr. P.R. Mondal

Th 24331

Abstract (Verified)

Dyslipidemia acts as one of the contributing risk factors to the onset of cardiovascular diseases (CVDs). Pregnancy complication is a major public health concern among the tribal women of India and women who have history of pregnancy complications has higher risk for cardiovascular diseases later in life. Moreover, limited studies are available on tribal communities of North-eastern part of India hence the present study is an attempt to understand association (if any) between Bad Obstetric History (BOH) and genetic variants FTO rs9939609, MTHFR C677T, ACE I/D and MC4R rs17782313 with dyslipidemia independently and also in combination among the Liangmai tribal women of Manipur. Present study included 340 ever married Liangmai tribal women in the age group from 18 to 65 years. Data on demographic profile, somatometric measurements, and reproductive profile were collected. Intravenous fasting blood sample (5ml) was drawn followed by serum lipids, glucose estimations, DNA extraction and genotypic analysis of FTO rs9939609, MTHFR C677T, ACE I/D and MC4R rs17782313 variants was performed using PCR- RFLP method. The literacy rate of Liangmai women was found to be more than 75%. The sex ratio is balanced which is expected in a tribal community. In all the selected polymorphisms only DD genotype of ACE I/D rs4646994 posed an increased risk for Bad Obstetric History (BOH) though not significant and all the mutant genotype of the selected polymorphism showed no association with BOH. The gene-gene interaction analysis (MDR analysis) reveals that the interaction of ACE I/D rs4646994 and MC4R rs17782313 gave the best model in predicting the incident of BOH. Selected polymorphisms showed a significant association of more than 2-fold increased risk for cardiovascular variables. The present finding thus conclude that BOH plays a pivotal role in early detection and identification for the susceptibility for CVDs among the Liangmai women.

Contents

1. Introduction and Review of literature 2. Area and people 3. Materials and methods 4. Results 5. Discussion 6. Summary and conclusion. References. Annexures.

13. RANJAN (Astha)

Genetic Association Study of Single Nucleotide Polymorphisms Influencing Lung Function in Population of Ranga Reddy District of Telagana.

Supervisor : Dr. Vipin Gupta

Th 24340

Abstract
(Verified)

Background Measurement of lung function indicates the physiological condition of the airways and lungs. The maximal attainment and subsequent decline of lung volumes determine the risk of developing chronic obstructive pulmonary disease (COPD). Approximately 384 million people are suffering from COPD worldwide, reflects high epidemiological burden of COPD. The risk factors for COPD include tobacco smoking, air pollutants, biomass fuel exposure, and genetic markers. There are limited number of genetic studies on lung volumes conducted in India. Thus, the present study aimed to study the epidemiology of adverse lung function and to validate genetic polymorphisms related to lung volumes in study population. Study Objectives To study the prevalent risk factors of adverse lung volumes in the study population. To explore the prevalence of “potential” COPD in the study population. To study the associations between the genetic variants and lung volumes. To explore the associations of studied genetic polymorphisms with metabolic and lifestyle factors (such as systolic blood pressure, diastolic blood pressure, overweight/obesity, smoking status, pack-years of smoking, tobacco chewing and alcohol intake status) Materials and Methods The study included 752 samples (392 males & 360 females) from the Andhra Pradesh Child and Parents Study (APCAPS) cohort. Spirometric and demographic data were taken from APCAPS study. DNA was extracted from available biological samples and subjected to genotyping on Sequenom iPLEX MassSpectrometry platform. Results ‘Potential’ COPD was highly prevalent in the study population (31.25%) where females were more affected than males. The genetic variant on CFDP1 gene (rs2865531) was found to be positively associated with FEV1 and FVC among females and combined population. The studied factors, i.e. anthropometric and demographic factors, were significantly associated with lung function among the studied population.

Contents

1. Introduction 2. Aims and objectives 3. Literature review 4. Materials and methods 5. Results 6. Discussion 7. Summary and conclusion. References. Bibliography.

14. RUPALIKA

One Carbon Metabolic Pathway and Anemia: A Study among BHIL Tribal Population of Rajasthan, India.

Supervisor : Dr. Naorem Kiranmala Devi
Th 24906

Abstract
(Not Verified)

Background: More than 60% people in India suffer from anemia. Supplementation of iron as a state policy for decades has not brought about significant decline in its incidence. Which indicates that iron deficiency alone cannot account for the high incidence of anemia therefore other nutritional and environmental variables need to be taken into account. Aim : The aim of the study was to understand the role of nutrition and genes in the causation of anemia among Bhil tribal population of Rajasthan India. Material and Methods: Total 303 participants of either sex in age group ≥ 25 to ≤ 65 years were studied. 5ml of fasting blood samples were collected. Biochemical, hematological including estimation of Vitamin B12, folate, lipid, homocysteine, CBC and HPLC was done. Molecular analysis were done on extracted DNA samples. Results: Present study reported the higher prevalence of hyperhomocysteinemia, Vitamin B 12 deficiency followed by folate deficiency. Anemia was found to be higher among females as compared to that of males. All the individuals with macrocytic anemia were vitamin B 12 deficient. Prevalence of Beta thalassemia was found to be higher followed by sickle cell anemia and Hb D. Conclusion : iron deficiency is not only cause of anemia, its can also be contributed by the micronutrient deficiency and some genetic factors like hemoglobinopathies.

Contents

1. (a) Introduction (b) Review of literature 2. Area and people 3. Materials and methods 4. (a) Distribution of vitamin b12, folate and homocysteine (b) Distribution of MTHFR c6777T gene polymorphism with respect to hyperhomocysteinemia, vitamin b12 and folate deficiencies (c) Anemia and nutritional deficiency in terms of vitamin b12 and folate (d) Anemia with somatometric (BMI, WC, WHR, WHtR) and biochemical (Lipid) variables (e) Distribution of hemoglobinopathies 5. Discussion 6. Summary and conclusion. References. Annexures. List of Publications.

15. SAHAL (Kalyani)

Water and Mining: An Anthropological Study of Khetri Chopper Mining Region in Jhunjhunu District, Rajasthan.

Supervisor : Dr. M. Kennedy Singh

Th 24333

*Abstract
(Not Verified)*

In the modern era of industrialization and urbanization, human-environment relations are continuously altered by human's unquenchable thirst for water to cater the needs of development projects. Mining sector is one such arena requiring large amounts of water for different processes like ore extraction, crushing and grinding. Water has become the central theme in many controversies pertaining to mining projects at national as well as international level where issues related to its appropriation, pollution and depletion of natural water resources spring up. All these problems raise important questions for anthropological analysis of consequences of large-scale mining operations. For this study, the dual field sites - Khetri Nagar where the KCC (Khetri Copper Complex) mining project is operational and Chanwara village where the water-resourcing unit of KCC is located in Jhunjhunu district of Rajasthan (India) had been chosen. This study traces the journey of this region from being water abundant to water scarce and uses longitudinal approach to look at the changes in water availability in last fifty years since inception of KCC mines in 1967. This paper tries to examine the reasons for water shortage and also the underlying politics of water sharing between the villagers and mining company. The data for this study was collected through ethnographic fieldwork employing the standard anthropological tools and techniques of data collection namely participant observation, interview and case studies along with secondary data. This study is significant in contemporary time when water conflicts have been reported between different user groups from all over the world.

Contents

1. Introduction 2. Research methodology and data collection 3. Ethnographic profile of the study area 4. Water management in khetri copper complex project 5. Tracing water scarcity 6. Water in everyday life at khetri nagar 7. Summary and conclusion. References. Glossary. Annexure.

16. SINGH (Beishamayum Deben)

Social Conflict and Unrest: An Anthropological Study among Students in Manipur.

Supervisor : Dr. M. Kennedy Singh

Th 24342

Contents

1. Introduction 2. Literature review and theoretical framework 3. Methodology 4. Conflict and social unrest in Manipur 5. Students' perspectives on current social conflicts 6. Students' involvement and their experiences in social conflicts 7.

Impacts, management and aspiration for better society 8. Summary and conclusion. References. Abstract. Abbreviation . Glossary. Appendices. List of paper publication.

17. THOUMAN (Singlai)
Appropriation of Water: A Study among the Mongmi Nagas of Manipur, India.
 Supervisor : Dr. Indrani Chattopadhyaya
Th 24330

Abstract
(Not Verified)

Mankind has landed in 21st century, a modernity without modernism (Jonathan Friedman, 1999). Every nation is after escalating their GDPs as growth indicator. But ‘Growth for growth’s sake is the ideology of cancer cell’ says Edward Abbey. We are building our development on quicksand of economic growth while giving less importance on environment and society. We need an introspective look on how we appropriate resources. Scientists have debated over global warming and climate change as ‘a hoax’ but definitely not over the ‘ecological overshoot’. Humanity has been in ecological overshoot since 1970s. Population’s demand on an ecosystem exceeds its capacity to regenerate. And, water is at the heart of all ecosystems. Moreover, out of 2.5% of fresh water, only a fraction of 0.3% (Gleick, 1996) is accessible for a 7.6 billion (2018) human population. What was oil in 20th century is now water in 21st century. In the light of this concern, Appropriation of water was studied from the angle of ecological anthropology through cultural domain analysis. Objectives To study appropriation on the hinges of culture-nature interaction through human agency To understand traditional environmental knowledge (TEK) on Water Resources and its embedded layers in water To suggest the future directions on water. Methods and techniques Used multi-sited ethnographic method of fieldwork and undertook cultural domain analysis on water, employing free-listing, interview probes and snowballing techniques of data collection. Findings and Conclusion To cope up with high altitude, Mongmi Nagas have a traditional method of water management system called uiyok (social forestry), a concept that hinges on the premise of ‘trees mean water’ and also appropriation depicts the linkage of identity and resources.

Contents

1. Introduction 2. Theoretical perspective 3. Fieldwork and methodology 4. Area and people 5. Ethnographic profile: A compendium on mongmi nagas 6. The hydrological landscape 7. The political ecology of water 8. Appropriation of water: The cultural dimension 9. Appropriation of water: An analysis. Summary and conclusion. Field scenario and the fieldwork experience. Bibliography. Annexures. List of publications.

18. WAHENGBAM (Anand Kumar Gyanendra Singh)
Screening and Molecular Characterization of β -Thalassemia among the Lohanas of Jamnagar District, Gujrat.
 Supervisor : Dr. Benrithung Murry
Th 24344

Abstract
(Not Verified)

β -Thalassemia poses a significant health burden in India and Lohana community has the highest prevalence frequency. The aim of the present study is to undertake β -Thalassemia carrier screening and molecular characterization in the Lohana community among the marriageable age or recently married individuals of both sexes with the following objectives: To assess the knowledge, attitude, and practice among the Lohanas with respect to β -Thalassemia. Screening for β -Thalassemia carrier status and their molecular characterization. To understand the clinical implications of β -Thalassemia carrier status with special reference to anemia. The present study was carried out between the age group of 15-30 years Lohana community. Qualitative data was captured using a structured interview schedule and blood

samples (5ml) were collected for hematological and molecular analysis. The cross-sectional study (n=398) reveals that both in rural and urban residents, 32% of the population is unaware of β -Thalassemia. The highest prevalent mutations for β -Thalassemia are IVSI-5 (G>C) (35.71%) followed by IVSI-1 (G>T) (21.43), codon 15 (G>A) (19.05%), 619 bp deletion, codon 30 (G>C) (7.14% each), codon 16 (-C) and codon 41/42 (-TCTT) 4.76% respectively. More than 60% of the individuals in the study are found to be anemic. The differences between β -Thalassemia carriers and normal individuals based on the morphology of red blood cells are found to be as well as the mean MCV level for males and females were found to be statistically significant. Theoretically-based educational interventions for behavioral change or health behavior improvement will contribute to the improvement of right attitude towards β -Thalassemia. Moreover, premarital screening programs and genetic counseling to the carriers and their family members will immensely contribute to the prevention of this disease.

Contents

1. Introduction 2. Materials and methods 3. Results 4. Discussion 5. Summary and conclusion. References. Appendices. Publications.